

HALLIBURTON

iCem[®] Service

TERRA ENERGY LTD.

For: Terra

Date: Sunday, September 17, 2017

GM 532-5 Production

API# 05-045-23505

Sincerely,

Grand Junction Cement Engineering

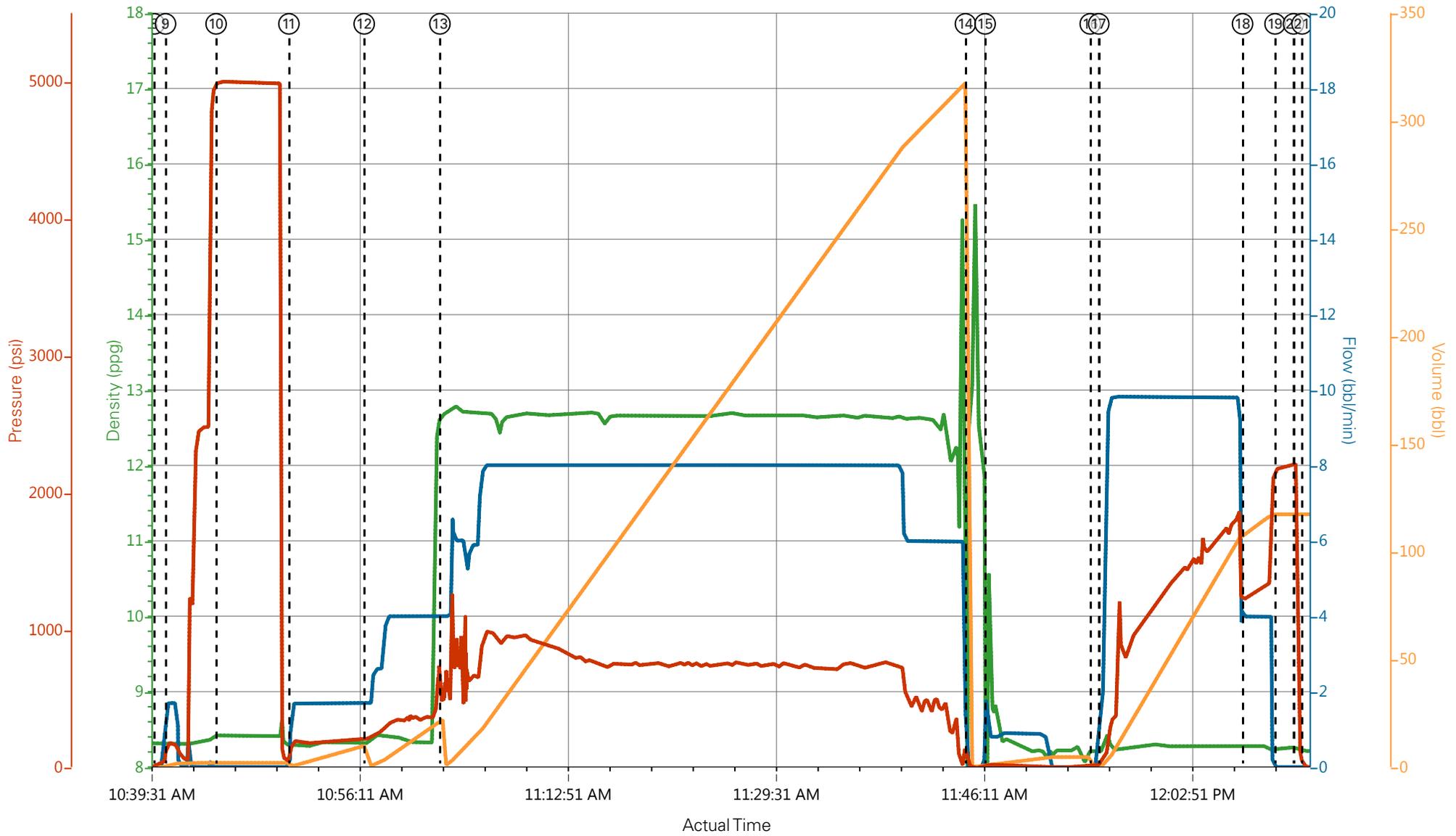
1.0 Real-Time Job Summary

1.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	Pass-Side Pump Pressure (psi)	Downhole Density (ppg)	Combined Pump Rate (bbl/min)	Pump Stage Total (bbl)	Comments
Event	1	Call Out	9/17/2017	01:00:00	USER					REQUESTED ON LOCATION @ 0700
Event	2	Pre-Convoy Safety Meeting	9/17/2017	02:30:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	9/17/2017	02:45:00	USER					1 F550, 1 PUMP TRUCK & 1 660 BULK TURCK
Event	4	Arrive At Loc	9/17/2017	05:00:00	USER					RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	9/17/2017	05:30:00	USER					MET WITH COMP REP AND WENT OVER NUMBERS AND JOB PROCEDURE. WALKED AROUND LOCATION AND COLLECTED WATER SAMPLE (PH- 7, CHLORIDES- 0, TEMP- 61F). COMP REP WAS OFFERED SDS FOR ALL CHEMICLES USED BY HES.
Event	6	Pre-Rig Up Safety Meeting	9/17/2017	06:00:00	USER					ALL HES PRESENT
Event	7	Pre-Job Safety Meeting	9/17/2017	10:27:08	USER					ALL HES AND RIG CREW PRESENT
Event	8	Start Job	9/17/2017	10:40:00	USER					TD 7305', TP 7299.8', SJ 34.1', OH 8.75'', CSG 4.5'' 11.6#, MUD 9.8 PPG. RIG CIRCULATED WELL @ 10 BPM WITH 800 PSI FOR APPROX 1 HRS.
Event	9	Prime Pumps	9/17/2017	10:40:53	USER	174.00	8.30	1.00	2.0	8.33 PPG FRESH WATER
Event	10	Test Lines	9/17/2017	10:44:56	COM6	4999.00	8.42	0.50	0.5	ALL LINES HELD PRESSURE AT 4999 PSI
Event	11	Pump Spacer 1	9/17/2017	10:50:46	COM6	201.00	8.35	2.00	10.2	8.33 PPG FRESH WATER (10 BBL)
Event	12	Pump Spacer 2	9/17/2017	10:56:48	COM6	212.00	8.32	4.00	20.3	8.4 PPG MUDFLUSH III (20 BBL)
Event	13	Pump Cement	9/17/2017	11:02:52	COM6	569.00	12.58	8.00	307.0	NEOCEM CEMENT 880 SKS (308 BBL), 12.5 PPG, 1.96 FT3/SK, 9.35 GAL/SK
Event	14	Shutdown	9/17/2017	11:44:56	USER					END OF JOB
Event	15	Clean Lines	9/17/2017	11:46:31	USER					WASH UP PUMPS AND LINES TO THE PIT

Event	16	Drop Top Plug	9/17/2017	11:54:56	USER					PLUG WENT, VERIFIED BY CO REP
Event	17	Pump Displacement	9/17/2017	11:55:37	COM6	1950.00	8.33	10.00	102.5	8.34 PPG FRESH WATER (112.7 BBLS) 3 BAGS BE6, 1 GAL MMCR & 11 SKS KCL
Event	18	Slow Rate	9/17/2017	12:07:08	USER	1230.00	8.38	4.00	10.0	SLOW RATE TO 4 BPM PER CO REP TO LAND PLUG
Event	19	Bump Plug	9/17/2017	12:09:44	USER	2174.00	8.34	4.00	112.5	LAND PLUG AT 1350 PSI, BROUGHT UP TO 2175 PSI
Event	20	Check Floats	9/17/2017	12:11:12	USER					FLOATS HELD, 1 BBL BACK TO TRUCK
Event	21	End Job	9/17/2017	12:11:54	USER					GOOD RETURNS THROUGHOUT, PIPE WAS RECIPROCATED
Event	22	Post-Job Safety Meeting (Pre Rig-Down)	9/17/2017	12:15:40	USER					ALL HES PRESENT
Event	23	Pre-Convoy Safety Meeting	9/17/2017	12:30:00	USER					ALL HES PRESENT
Event	24	Crew Leave Location	9/17/2017	12:45:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENT, CHRIS SMITH AND CREW

TEP - GM 532-5 - 4.5" PRODUCTION



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

- ① Call Out n/a;n/a;n/a;n/a
- ② Pre-Convoy Safety Meeting n/a;n/a;n/a;n/a
- ③ Crew Leave Yard n/a;n/a;n/a;n/a
- ④ Arrive At Loc n/a;n/a;n/a;n/a
- ⑤ Assessment Of Location Safety Meeting n/a;n/a;n/a;n/a
- ⑥ Pre-Rig Up Safety Meeting n/a;n/a;n/a;n/a
- ⑦ Pre-Job Safety Meeting 8.33;0;6;0
- ⑧ Start Job 8.3;0;28;0
- ⑨ Prime Pumps 8.3;1.7;17
- ⑩ Test Lines 8.42;0;4999;



HALLIBURTON | iCem® Service

Created: 2017-09-17 08:10:53, Version: 4.2.393

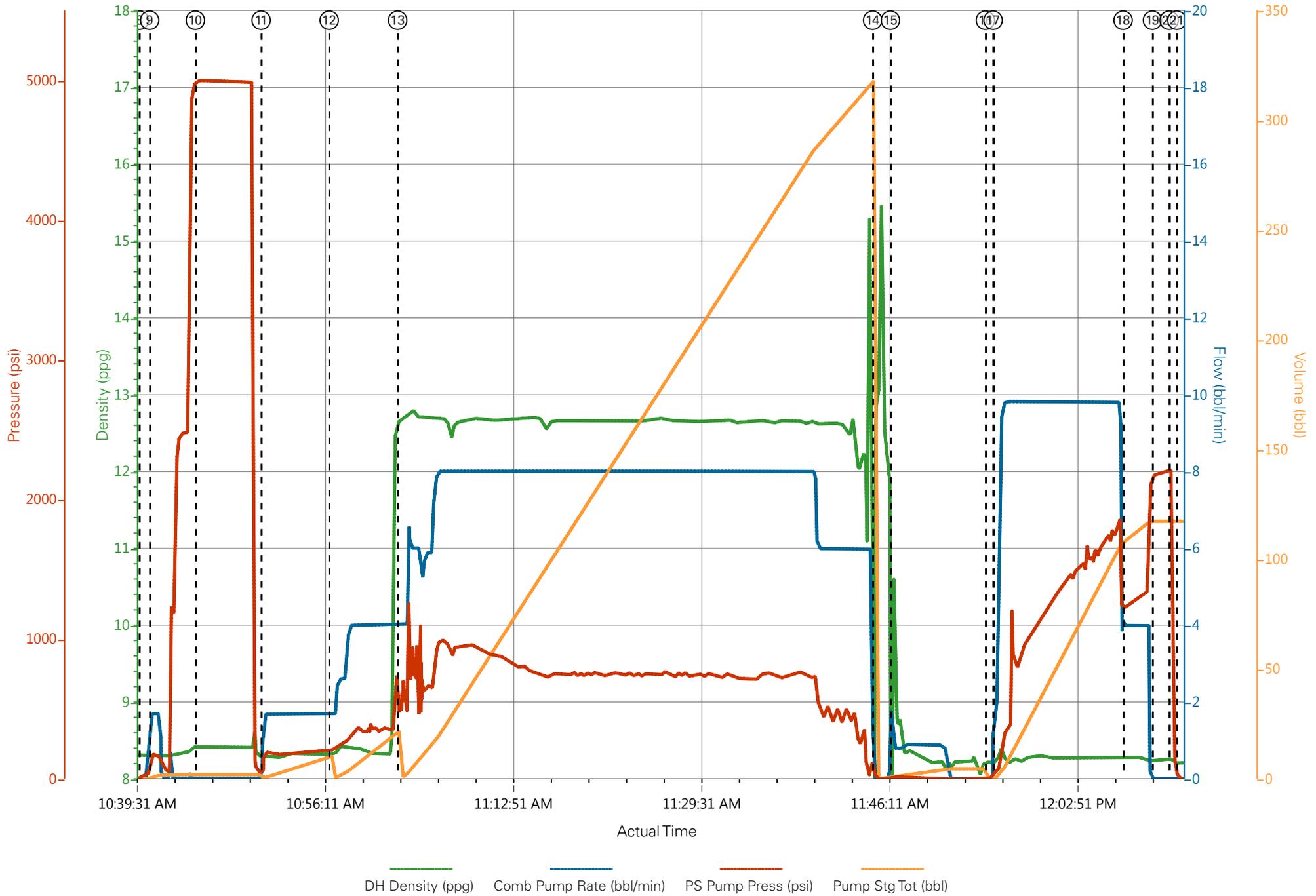
Edit

Customer: TERRA ENERGY LTD.
Representative: KARL

Job Date: 9/17/2017
Sales Order #: 904301366

Well: GM 532-5
ELITE 8: C.SMITH/ D.PORTER

TEP - GM 532-5 - 4.5" PRODUCTION



Job Information

Request/Slurry	2416687/1	Rig Name	H&P 271	Date	13/SEP/2017
Submitted By	Patrick Ealey	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Terra Energy Partners	Location	Garfield	Well	GM 532-5

Well Information

Casing/Liner Size	4.5 in	Depth MD	7308 ft	BHST	90°C / 194°F
Hole Size	8.75 in	Depth TVD	6691 ft	BHCT	54°C / 129°F
Pressure	3980 psi				

Drilling Fluid Information

Mud Supplier Name	Baroid	Mud Trade Name	BARADRIL-N	Density	9.2 lbm/gal
--------------------------	--------	-----------------------	------------	----------------	-------------

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>	<u>Cement Properties</u>		
						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		

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 2416687/1

Thickening Time - ON-OFF-ON

15/SEP/2017

Test Temp (°F)	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)
129	3980	36	4:58	5:01	5:40	6:15	4	46	15	4

Total sks = 880

Composite:

CS2515 tr#812 390 sks

CS2517 TR#1513 390 SKS

CS2518 TR#4549 100 SKS

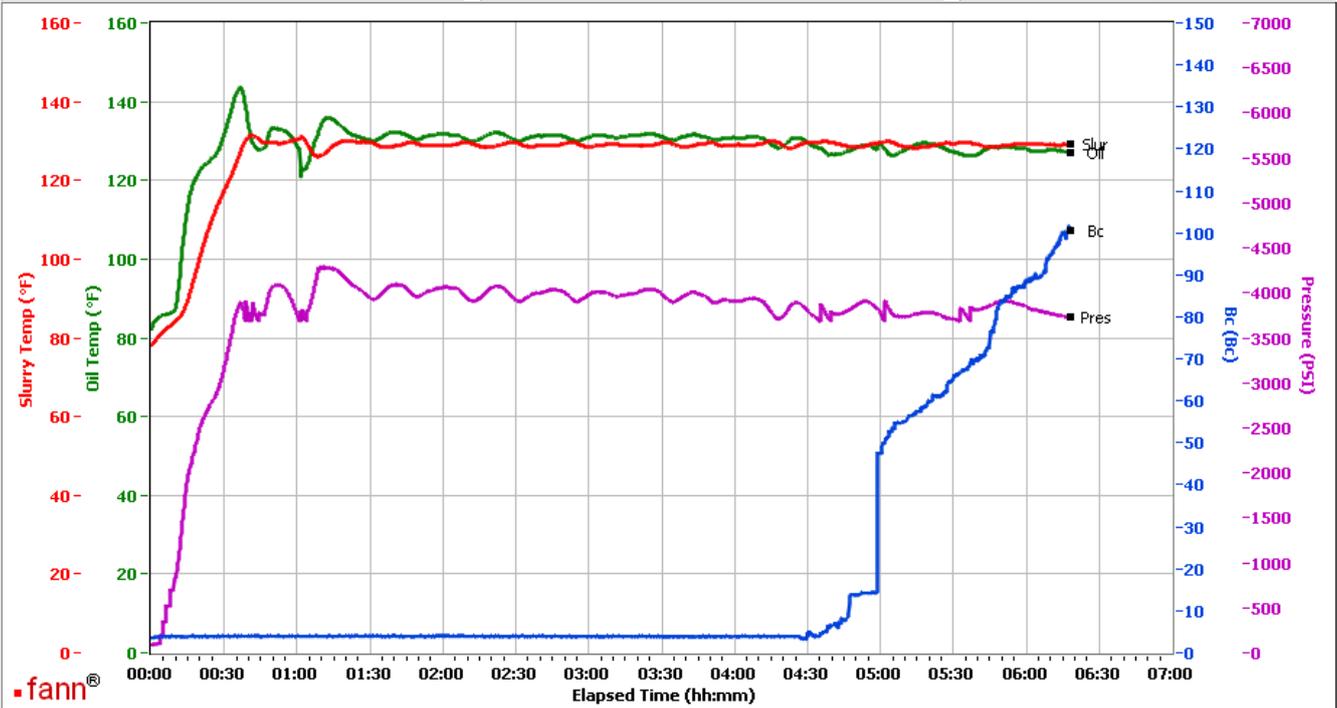
Deflection: 4 – 4

Grand Junction Colorado

Fields	Values
Project Name	GJ2416687-1 TERRA PRODUCTION BULK PR
Test ID	34860313
Request ID	GJ2416687-1
Tested by	DEBA
Customer	TERRA ENERGY PARTNERS
Well No	GM532-5
Rig	H&P 271
Casing/Liner Size	4.5"

Fields	Values
Job Type	PRODUCTION CASING
Cement Type	HOLCIM TYPE I/II
Cement Weight	Standard
Test Date	09/15/17
Test Time	04:29 AM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.507

Events	Results
30.00 Bc	04h:58m
40.00 Bc	04h:58m
50.00 Bc	05h:01m
70.00 Bc	05h:40m
100.00 Bc	06h:15m
00h:30m	3.89
01h:00m	3.98
01h:30m	3.86



Data File C:\Documents and Settings\M290\Local Settings\Temporary Internet Files\Content.IE5\4TIJ89YN\GJ2416687-1 TERRA PRODUCTION BULK PRIMARY[1].tdms

Comments COMPOSITE: CS2515 TR#812 390 SJS , CS2517 TR#1513 390 SKS AND CS2518 TR#4549 100 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.