

# HALLIBURTON

iCem<sup>®</sup> Service

## **TERRA ENERGY PARTNERS**

**For: Terra**

Date: Wednesday, September 27, 2017

**SR 42-12 Production**

API# 05-045-23305

Sincerely,  
Grand Junction Cement Engineering

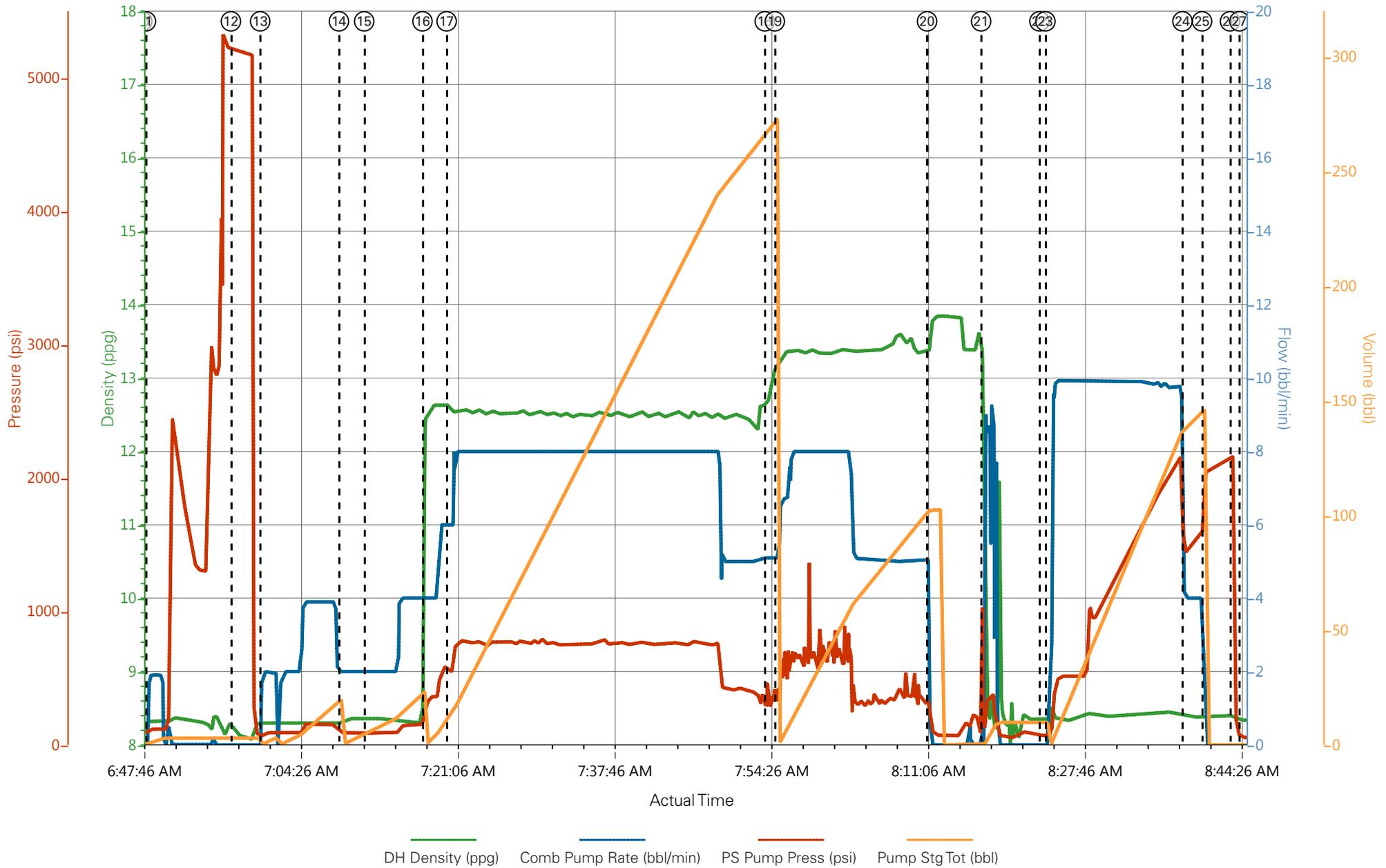
## 2.0 Real-Time Job Summary

### 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	9/26/2017	22:00:00	USER					ON LOCATION TIME CHANGED FROM 4:00 TO 3:00 REQUESTED TIME
Event	2	Pre-Convoy Safety Meeting	9/27/2017	00:15:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	9/27/2017	00:30:00	USER					
Event	4	Arrive at Location from Service Center	9/27/2017	02:15:00	USER					RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	9/27/2017	02:20:00	USER					MET WITH COMPANY REP DISCUSSED JOB PROCEDURE, SDS OFFERED
Event	6	Pre-Rig Up Safety Meeting	9/27/2017	02:35:00	USER					ALL HES PRESENT
Event	7	Rig-Up Completed	9/27/2017	04:37:06	USER					1-ELITE, 1-660 BULK TRAILER, 1-FIELD SILO, 4.5QL PLUG CONTAINER, 2" PUMP IRON, 4" SUCTION HOSE
Event	8	Pre-Job Safety Meeting	9/27/2017	05:00:07	USER					ALL HES AND RIG CREW PRESENT
Event	9	Other	9/27/2017	05:02:46	USER					WATER: TEMP-58, CL-0, PH-7. RIG CIRCULATED 1.5 HOURS 487GPM, 858PSI
Event	10	Start Job	9/27/2017	06:47:52	USER	8.29	0.00	5.00	0.0	TD-9552', TP-9542', SJ-29.82', CSG-4.5" 11.6# P110, OH-8.75", SCSG-9.625" 32.3#, MUD-9.7PPG. CASING RECIPROCATED THROUGH JOB.
Event	11	Prime Pumps	9/27/2017	06:48:15	USER	8.33	2.00	108.00	3.0	FRESH WATER
Event	12	Test Lines	9/27/2017	06:57:17	COM5	8.34	0.00	5204.00	3.0	VERIFIED NO LEAKS ON LINES
Event	13	Pump Fresh Water	9/27/2017	07:00:24	COM5	8.34	4.00	127.00	20.0	FRESH WATER AHEAD
Event	14	Pump Mud Flush III	9/27/2017	07:08:46	COM5	8.40	4.00	151.00	20.0	MUD FLUSH III
Event	15	Check weight	9/27/2017	07:11:27	COM5					WEIGHT VERIFIED BY PRESSURIZED MUD SCALES

Event	16	Pump Lead Cement	9/27/2017	07:17:39	COM5	12.50	8.00	780.00	273.0	NEOCEM LEAD, 790SKS, 12.5PPG, 1.94CF/SK, 9.6GAL/SK
Event	17	Check weight	9/27/2017	07:20:13	COM5					WEIGHT VERIFIED BY PRESSURIZED MUD SCALES
Event	18	Check weight	9/27/2017	07:54:02	COM5					WEIGHT VERIFIED BY PRESSURIZED MUD SCALES
Event	19	Pump Tail Cement	9/27/2017	07:55:06	COM5	13.30	8.00	709.00	81.6	THERMACEM TAIL, 265SKS, 13.3PPG, 1.73CF/SK, 7.81GAL/SK
Event	20	Shutdown	9/27/2017	08:11:17	USER					
Event	21	Clean Lines	9/27/2017	08:17:02	COM5					CLEANED AND BLEW AIR BACK THROUGH LINES TO PIT
Event	22	Drop Top Plug	9/27/2017	08:23:14	USER					PLUG AWAY
Event	23	Pump Displacement	9/27/2017	08:23:52	COM5	8.40	10.00	2180.00	147.4	KCL DISPLACEMENT, 1GAL MMCR AND 3-1#BE6 ADDED
Event	24	Slow Rate	9/27/2017	08:38:26	USER	8.41	4.00	1444.00	137.2	SLOW RATE LAST 10 BBLs
Event	25	Bump Plug	9/27/2017	08:40:31	COM5	8.40	4.00	1609.00	147.4	PLUG BUMPED 1609 PSI
Event	26	Check Floats	9/27/2017	08:43:30	USER	8.40	0.00	2168.00	0.0	FLOATS HELD 1 BBL BACK
Event	27	End Job	9/27/2017	08:44:30	USER	8.34	0.00	6.00	0.0	RETURNS THROUGH JOB
Event	28	Post-Job Safety Meeting (Pre Rig-Down)	9/27/2017	08:50:00	USER					ALL HES PRESENT
Event	29	Rig-Down Completed	9/27/2017	10:00:00	USER					
Event	30	Pre-Convoy Safety Meeting	9/27/2017	10:15:00	USER					ALL HES PRESENT
Event	31	Crew Leave Location	9/27/2017	10:30:00	USER					THANK YOU FOR CHOOSING HALLIBURTON, ANDREW BRENNECKE AND CREW

# TEP - SR 42-12 - 4.5" PRODUCTION



- ① Call Out      ③ Crew Leave Yard      ⑤ Assessment Of Location Safety Meeting      ⑦ Rig-Up Completed      ⑨ Other      ⑪ Prime Pumps      ⑬ Pump Fresh Water
- ② Pre-Convoy Safety Meeting      ④ Arrive at Location from Service Center      ⑥ Pre-Rig Up Safety Meeting      ⑧ Pre-Job Safety Meeting      ⑩ Start Job      ⑫ Test Lines      ⑭ Pump Mud Flush I



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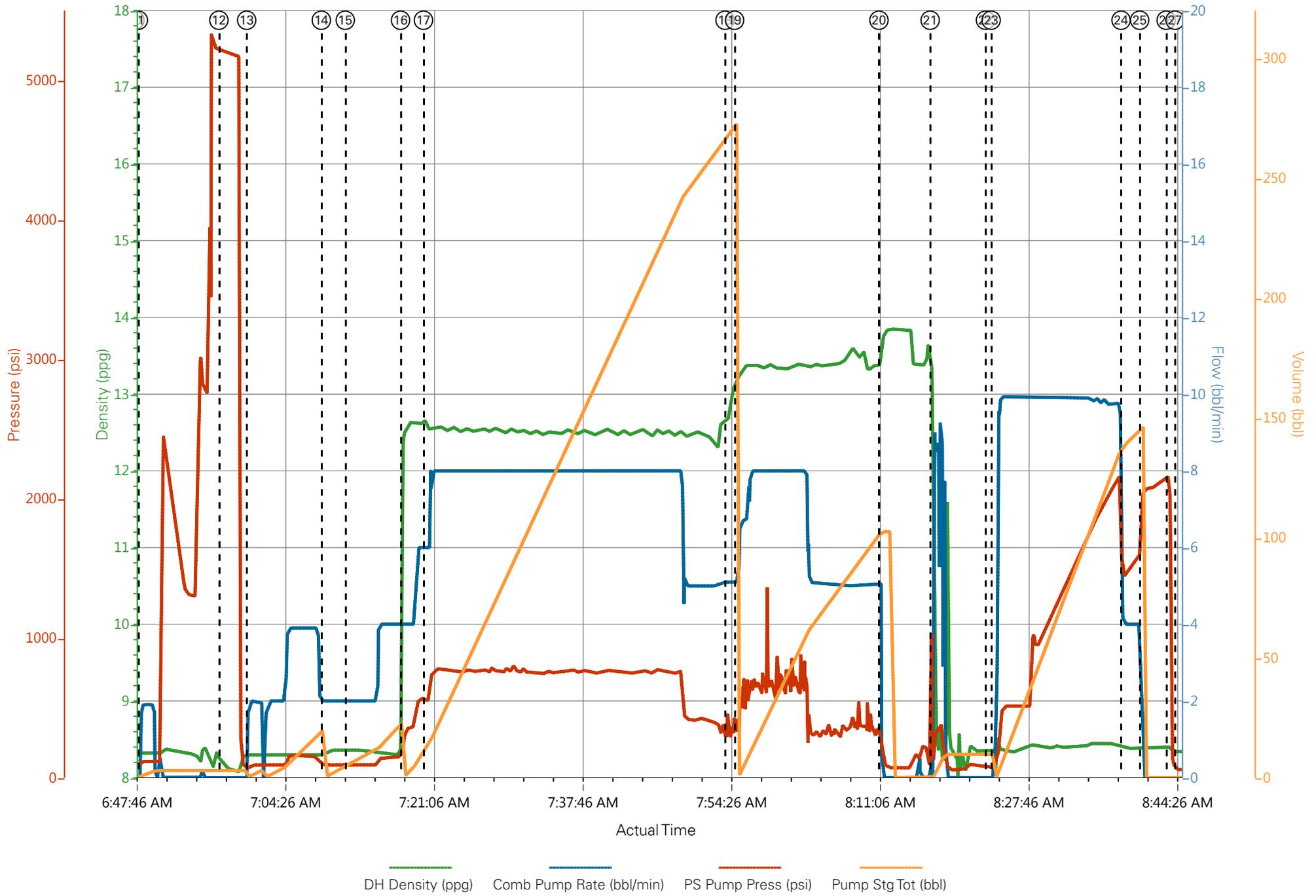
Created: 2017-09-27 03:23:15, Version: 4.2.393

Customer : TERRA ENERGY PARTNERS  
 Representative : JOSH PHILLIPS

Job Date : 9/27/2017 3:57:20 AM  
 Sales Order # : 904323199

Well : SR 42-12  
 ELITE#1 : A.BRENNECKE/A.ANGELO

# TEP - SR 42-12 - 4.5" PRODUCTION



### Job Information

<b>Request/Slurry</b>	2418900/1	<b>Rig Name</b>	H&P 318	<b>Date</b>	24/SEP/2017
<b>Submitted By</b>	Patrick Ealey	<b>Job Type</b>	Production Casing	<b>Bulk Plant</b>	Grand Junction
<b>Customer</b>	Terra Energy Partners	<b>Location</b>	Garfield	<b>Well</b>	SR 42-12

### Well Information

<b>Casing/Liner Size</b>	4.5 in	<b>Depth MD</b>	9569 ft	<b>BHST</b>	115°C / 239°F
<b>Hole Size</b>	8.75 in	<b>Depth TVD</b>	9327 ft	<b>BHCT</b>	76°C / 169°F
<b>Pressure</b>	5830 psi				

### Drilling Fluid Information

<b>Mud Supplier Name</b>		<b>Mud Trade Name</b>		<b>Density</b>	
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### 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>		
						Slurry Density	12.5	lbm/gal
						Slurry Yield	1.941	ft <sup>3</sup> /sack
						Water Requirement	9.623	gal/sack
						Total Mix Fluid	9.623	gal/sack
						Water Source	Fresh Water	
						Water Chloride		

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# Operation Test Results Request ID 2418900/1

## Thickening Time - ON-OFF-ON

25/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)
169	5830	47	3:39	3:40	3:49	4:36	18	57	15	18

Total sks= 790

Composite:

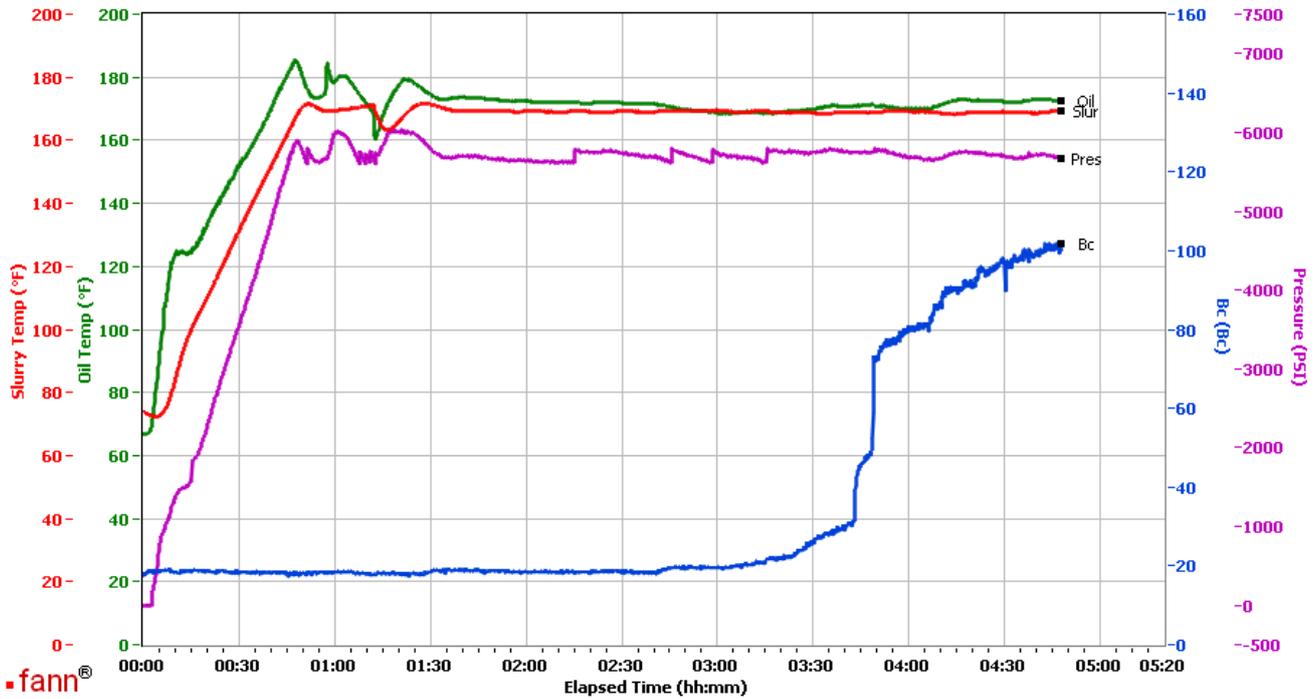
CS2639 TR# 8678 395 sks

CS2640 TR#2878 395 sks

No deflection

### Grand Junction Colorado

Fields	Values	Fields	Values	Events	Results
Project Name	GJ2418900-1 TERRA PRODUCTION BULK CO	Job Type		30.00 Bc	03h:39m
Test ID	34890483	Cement Type	HOLCIM TYPE I/II	40.00 Bc	03h:43m
Request ID	GJ2418900-1	Cement Weight	Standard	50.00 Bc	03h:48m
Tested by	DEBA	Test Date	09/25/17	70.00 Bc	03h:49m
Customer	TERRA ENERGY PARTNERS	Test Time	12:29 PM	100.00 Bc	04h:36m
Well No	SR 42-12	Temp. Units	degF	00h:30m	18.63
Rig	H&P 318	Pressure Units	PSI	01h:00m	18.31
Casing/Liner Size	4.5"	SW Version	2.1.0.507	01h:30m	18.65



Data File C:\Documents and Settings\M290\Local Settings\Temporary Internet Files\Content.IE5\CDER4HUV\GJ2418900-1 TERRA PRODUCTION BULK COMPOSITE LEAD[1].tdms

Comments COMPOSITE: cs2639 TR#8678 395 SKS AND CS2640 TR#2878 395 SKS

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### Job Information

<b>Request/Slurry</b>	2418901/1	<b>Rig Name</b>	H&P 318	<b>Date</b>	24/SEP/2017
<b>Submitted By</b>	Patrick Ealey	<b>Job Type</b>	Production Casing	<b>Bulk Plant</b>	Grand Junction
<b>Customer</b>	Terra Energy Partners	<b>Location</b>	Garfield	<b>Well</b>	SR 42-12

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<b>Pressure</b>	5830 psi				

### Drilling Fluid Information

<b>Mud Supplier Name</b>		<b>Mud Trade Name</b>		<b>Density</b>	
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### Cement Information - Tail Design

<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	<b>Cement Properties</b>	
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						Water Chloride	

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# Operation Test Results Request ID 2418901/1

## Thickening Time - ON-OFF-ON

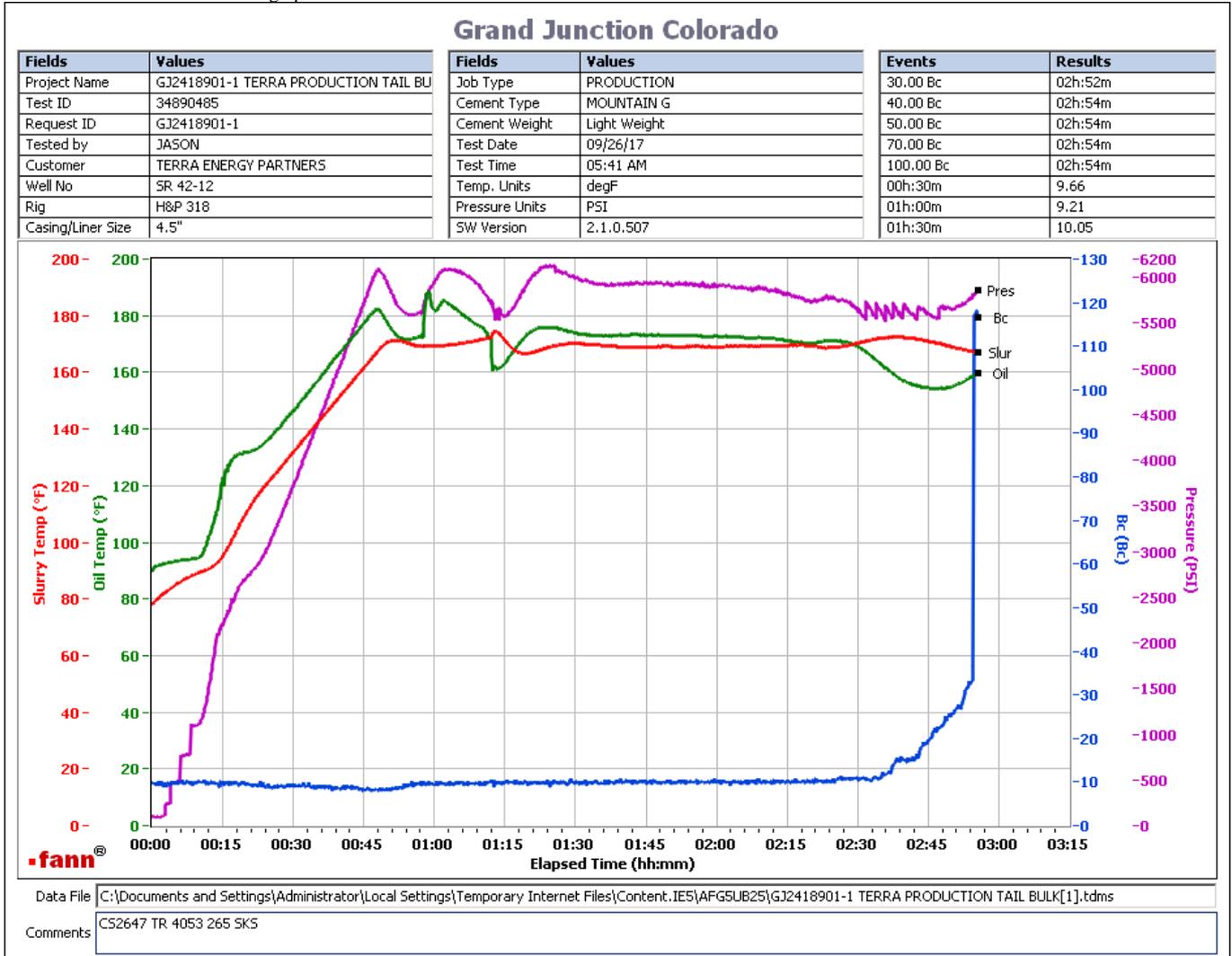
26/SEP/2017

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)
169	5830	47	2:52	2:54	2:54	2:54	10	57	15	10

265 sks tail

CS2647 TR 4053 265 SKS

no deflection was recorded on the graph 10Bc--- > 10Bc



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