

# HALLIBURTON

iCem<sup>®</sup> Service

## **WPX ENERGY ROCKY MOUNTAIN LLC-EBUS**

**For: Mark Mewshaw**

Date: Sunday, June 12, 2016

**GM 322-9 Production**

API# 05-045-22531-00

Job Date: Sunday, June 12, 2016

Sincerely,

**Grand Junction Cement Engineering**

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## 1.0 Real-Time Job Summary

### 1.1 Job Event Log

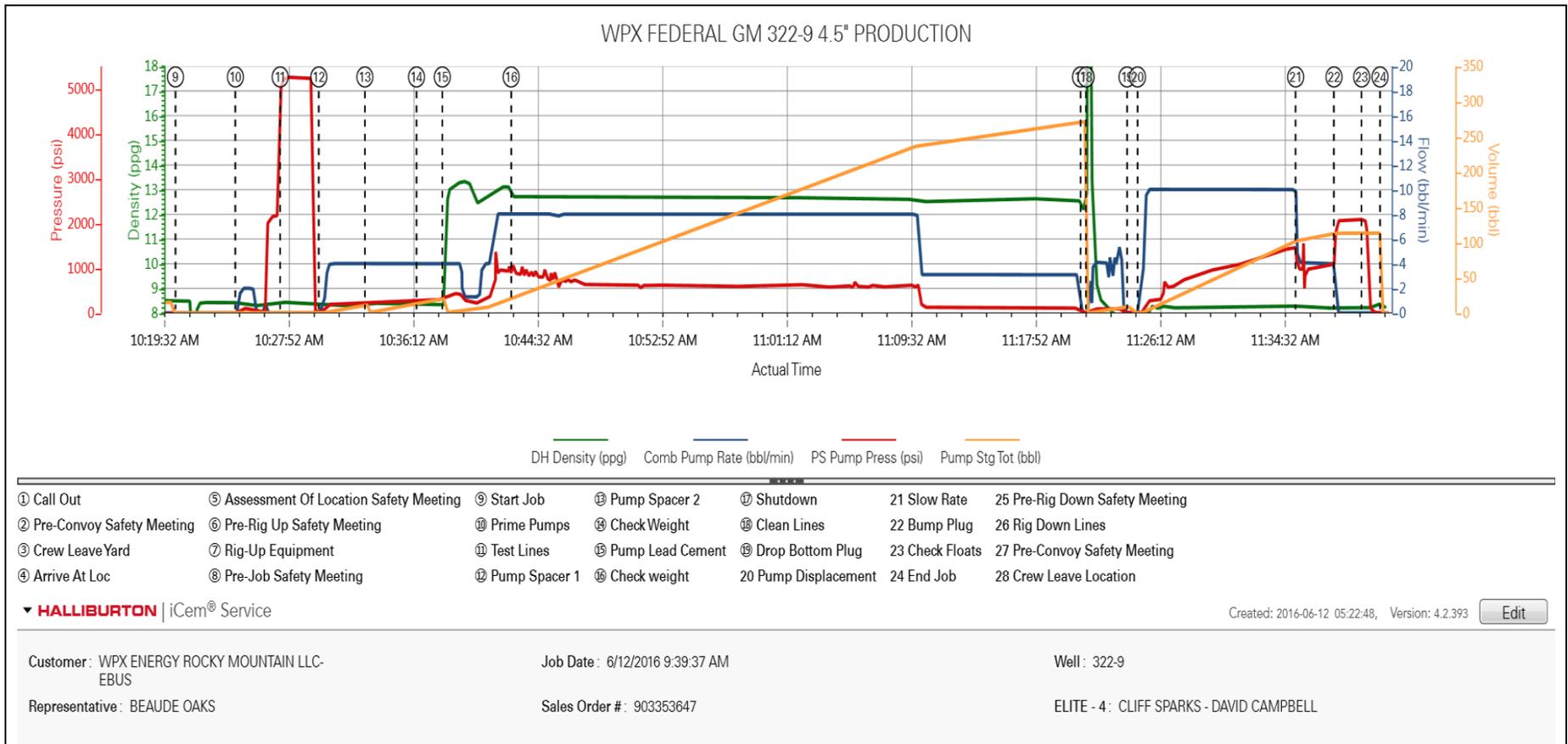
Type	Seq. No.	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	PS Pump Press <i>(psi)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	6/11/2016	23:00:00	USER					REQUESTED ON LOCATION 6-12-16 @ 0800
Event	2	Pre-Convoy Safety Meeting	6/12/2016	01:45:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	6/12/2016	02:00:00	USER					1 - 550 PU AND AN ELITE PUMP LEFT THE YARD TOGETHER
Event	4	Arrive At Loc	6/12/2016	03:30:00	USER					ARRIVED 4.5 HOURS EARLY AND CASING CREW WAS JUST GETTING STARTED
Event	5	Assessment Of Location Safety Meeting	6/12/2016	03:45:00	USER					MET WITH CO REP TO GO OVER NUMBERS AND JOB PROCEDURE. CUSTOMER OFFERED SDS. DID A WALKAROUND OF LOCATION COLLECTING WATER SAMPLE. ( 68F, PH 6, CHL 0) COULD NOT SPOT TRUCKS IN UNTIL CASING CREW WAS RIGGED DOWN DUE TO TIGHT LOCATION
Event	6	Pre-Rig Up Safety Meeting	6/12/2016	09:00:00	USER					ALL HES PRESENT
Event	7	Rig-Up Equipment	6/12/2016	09:15:00	USER					CASING CREW FINISHED @ 0900 AND WE SPOTTED IN AND RIGGED UP RIGHT AWAY WHILE RIG WAS CIRCULATING
Event	8	Pre-Job Safety Meeting	6/12/2016	10:00:00	USER					MET WITH RIG CREW AND

										WENT OVER JOB PROCEDURE. ALL HES PRESENT	
Event	9	Start Job	6/12/2016	10:20:26	COM5						TD 6965', SJ 6955', FC 6928' SJ 27', OH 8.75", MW 10.1, VIS 65 SURF 1044' 9.625" CASING 4.5" P110, 11.6#. CIRC RATE 540 GPM AND 790 PSI
Event	10	Prime Pumps	6/12/2016	10:24:26	COM5	8.34	2	130	2		2 BBLS FRESH WATER
Event	11	Test Lines	6/12/2016	10:27:26	COM5					5272	TESTED TO 5272 PSI. TESTED GOOD AND KO'S FUNCTIONING
Event	12	Pump Spacer 1	6/12/2016	10:30:01	COM5	8.34	4	230	10		10 BBLS FRESH WATER
Event	13	Pump Spacer 2	6/12/2016	10:33:06	COM5	8.4	4	280	20		20 BBLS MUDFLUSH III
Event	14	Check Weight	6/12/2016	10:36:34	USER	12.7					12.7 PPG
Event	15	Pump Primary Cement	6/12/2016	10:38:17	COM5	12.7	8	660	266.4		800 SKS ( 266.4 BBLS) 12.7 PPG, 1.87 FT3/SK, 8.74 GAL/SK
Event	16	Check weight	6/12/2016	10:42:54	COM5	12.7					12.7 PPG ADJUSTED HPVT TO MATCH
Event	17	Shutdown	6/12/2016	11:21:00	COM5	12.7	3	120	166.4		END OF CEMENT
Event	18	Clean Lines	6/12/2016	11:21:23	USER	8.34	3	35	10		10 BBLS FRESH WATER TO TANK
Event	19	Drop Bottom Plug	6/12/2016	11:24:07	COM5						PLUG WENT. WITNESSED BY BEAUDE.
Event	20	Pump Displacement	6/12/2016	11:24:49	COM5	8.4	10	1520	107.4		107.4 BBLS FRESH WATER WITH MMCR IN FIRST 10 AND BE-6 IN FIRST 30. KCL THROUGHOUT
Event	21	Slow Rate	6/12/2016	11:35:24	COM5	8.4	4	1080	97		SLOWED TO 4 BBLS/MIN TO LAND PLUG

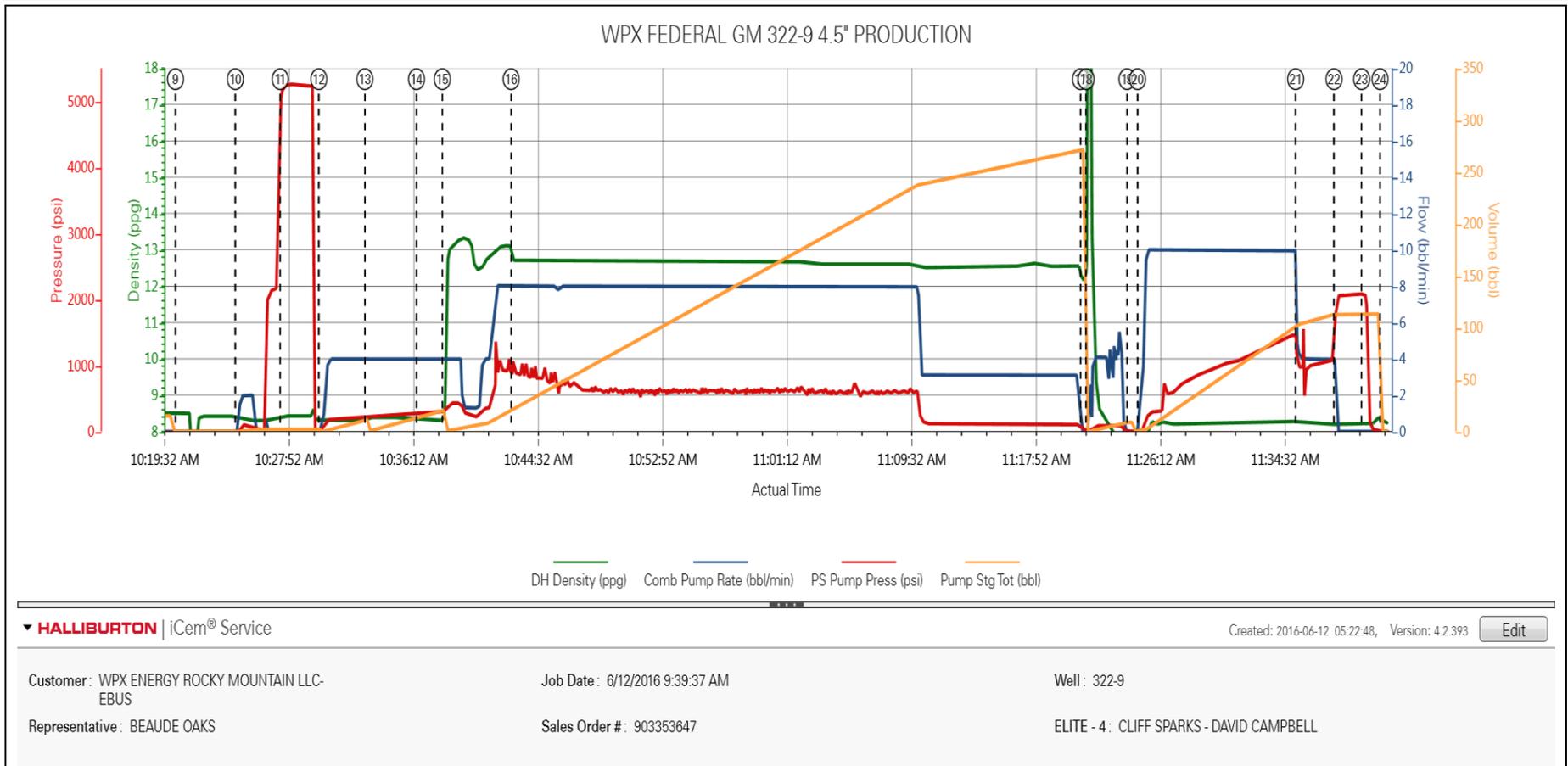
Event	22	Bump Plug	6/12/2016	11:37:58	COM5	8.4	4	1080	107.4	LANDED AT 1080 PSI AND WENT TO 2080 PSI AND HELD FOR 5 MIN
Event	23	Check Floats	6/12/2016	11:39:49	COM5	8.4		2080		FLOATS HELD 1.5 BBLS BACK TO TRUCK
Event	24	End Job	6/12/2016	11:41:03	COM5					TOP OF CEMENT 2085'. GOOD RETURNS. FLOW OUT SLOWED ACROSS THE SHAKERS TOWARDS THE END OF DISPLACEMENT
Event	25	Pre-Rig Down Safety Meeting	6/12/2016	11:45:00	USER					ALL HES PRESENT
Event	26	Rig Down Lines	6/12/2016	11:55:00	USER					
Event	27	Pre-Convoy Safety Meeting	6/12/2016	13:15:00	USER					ALL HES PRESENT
Event	28	Crew Leave Location	6/12/2016	13:30:00	USER					THANK YOU FOR USING HALLIBURTON CEMENT. CLIFF SPARKS AND CREW

2.0 Attachments

2.1 CHART WITH EVENTS.png



2.2 CHART WITHOUT EVENTS.png



### Job Information

<b>Request/Slurry</b>	2323212/2	<b>Rig Name</b>	H&P 318	<b>Date</b>	05/JUN/2016
<b>Submitted By</b>	Evan Russell	<b>Job Type</b>	Production Casing	<b>Bulk Plant</b>	Grand Junction
<b>Customer</b>	WPX Energy, Inc.	<b>Location</b>	Garfield	<b>Well</b>	GM 322-9

### Well Information

<b>Casing/Liner Size</b>	4.5 in	<b>Depth MD</b>	6949 ft	<b>BHST</b>	89°C / 192°F
<b>Hole Size</b>	8.75 in	<b>Depth TVD</b>	6568 ft	<b>BHCT</b>	53°C / 127°F
<b>Pressure</b>	3900 psi				

### Drilling Fluid Information

<b>Mud Supplier Name</b>	Baroid	<b>Mud Trade Name</b>	BARADRIL-N	<b>Density</b>	9.9 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>	<u>Cement Properties</u>	
NeoCem GJ1						Slurry Density	12.7 lbm/gal
						Slurry Yield	1.869 ft <sup>3</sup> /sack
						Water Requirement	8.744 gal/sack
						Total Mix Fluid	8.744 gal/sack
8.74	gal/sack	Fresh Water	Lab	12.03.13			
		Bentonite Wyoming - PB	Bulk Blend	07.06.16	Tank 17	Water Source	Fresh Water
		Econolite (Powder - PB)	Bulk Blend	07.06.16	U052815	Water Chloride	
		Na2SO4 (Sodium Sulfate) Salt	Bulk Blend	07.06.16	02-05-16		
		HALAD-344 (PB)	Bulk Blend	07.06.16	15073140		
		NaCl (Sodium Chloride) Salt	Bulk Blend	07.06.16	Tank 14		
		HALAD-567	Bulk Blend	07.06.16	08115-139		
		Fe-2 (citric acid)	Bulk Blend	07.06.16	G84M308K5B		

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# Operation Test Results Request ID 2323212/2

## Thickening Time

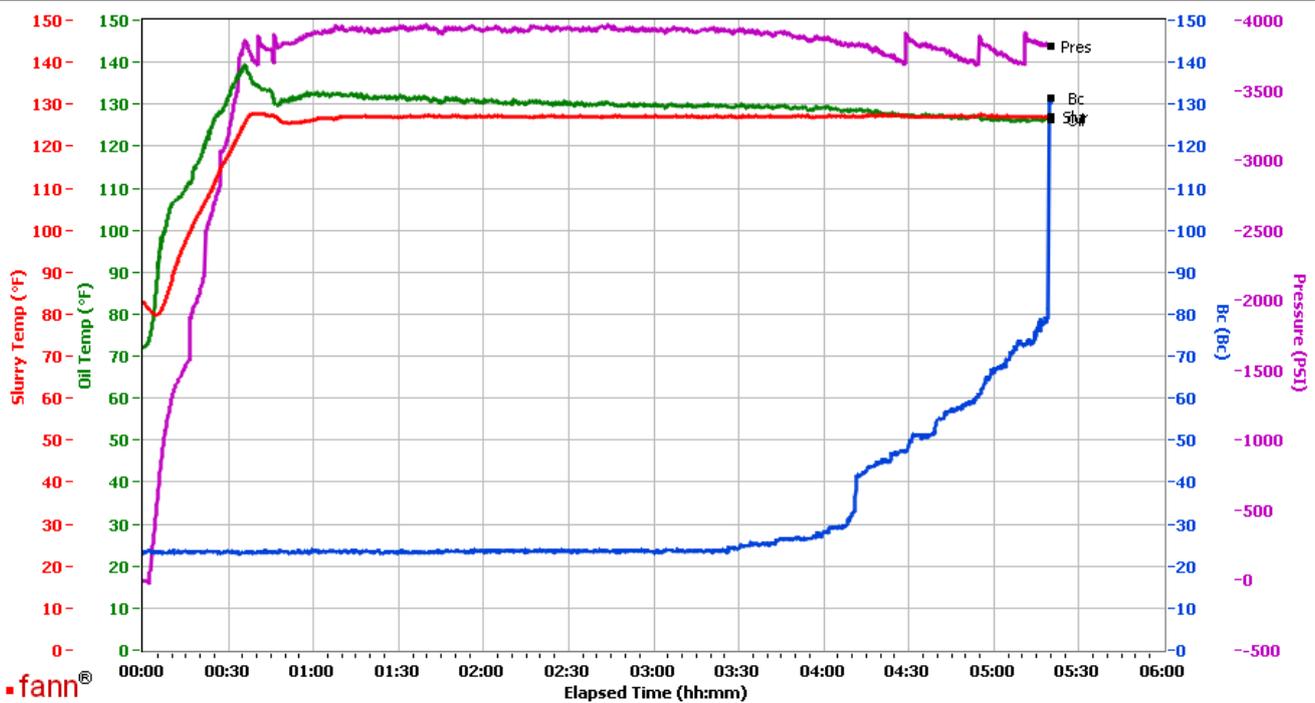
**08/JUN/2016**

Temp (°F)	Pressure (psi)	Reached in (min)	Start BC	30 Bc (hh:mm)	40 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	100 Bc (hh:mm)
127	3900	35	23	4:08	4:11	4:30	5:05	5:19

800 Total Sacks  
CS0462 TR 8677 400 SKS

### Grand Junction, Colorado

Fields	Values	Fields	Values	Events	Results
Project Name	GJ2323212-2 TERRA PRODUCTION BULK PR	Job Type	PRODUCTION	30.00 Bc	04h:08m
Test ID	GJ2323212-2 TERRA	Cement Type	NEOCEM	40.00 Bc	04h:11m
Request ID		Cement Weight	Light Weight	50.00 Bc	04h:30m
Tested by	JASON	Test Date	06/07/16	70.00 Bc	05h:05m
Customer	TERRA	Test Time	10:20 PM	100.00 Bc	05h:19m
Well No	GM 322-9	Temp. Units	degF	00h:30m	23.71
Rig	H&P 318	Pressure Units	PSI	01h:00m	23.59
Casing/Liner Size	4.5	SW Version	2.1.0.507	01h:30m	23.06



Data File: C:\Documents and Settings\M290\Local Settings\Temporary Internet Files\Content.IE5\K9Y20P2R\GJ2323212-2 TERRA BULK PRIMARY[1].tdms  
 Comments: CS0462 TR 8677 400 SKS

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**Operation Test Results Request ID 2323212/1**

**Thickening Time**

**07/JUN/2016**

Temp (°F)	Pressure (psi)	Reached in (min)	Start BC	30 Bc (hh:mm)	40 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	100 Bc (hh:mm)
127	3900	35	8	3:29	4:03	4:16	4:22	4:22

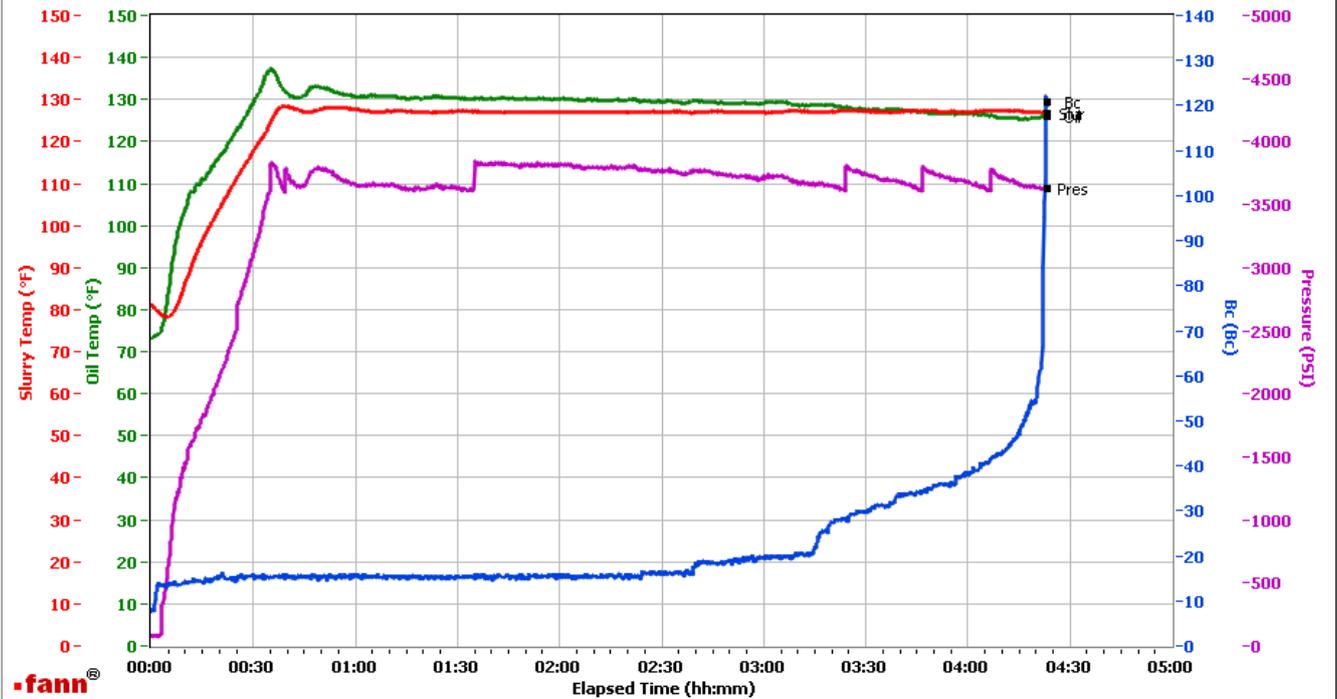
800 Total Sacks  
CS0461 TR 8658 400 SKS

**Grand Junction Colorado**

Fields	Values
Project Name	GJ2323212-1 TERRA PRODUCTION BULK PR
Test ID	GJ2323212-1 TERRA
Request ID	
Tested by	JASON
Customer	TERRA
Well No	GM 322-9
Rig	H8P 318
Casing/Liner Size	4.5

Fields	Values
Job Type	PRODUCTION
Cement Type	NEOCEM
Cement Weight	Light Weight
Test Date	06/07/16
Test Time	09:11 PM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.507

Events	Results
30.00 Bc	03h:29m
40.00 Bc	04h:03m
50.00 Bc	04h:16m
70.00 Bc	04h:22m
100.00 Bc	04h:22m
00h:30m	15.04
01h:00m	15.59
01h:30m	15.37



Data File C:\Documents and Settings\Administrator\Desktop\Test Data\GJ2323212-1 TERRA BULK PRIMARY.tdms  
 Comments CS0461 TR 8658 400 SKS

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