

# HALLIBURTON

iCem<sup>®</sup> Service

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

**For: Mark Mewshaw/Lynn Cass**

Date: Tuesday, July 19, 2016

## **FEDERAL GM 422-9 Production**

API# 05-045-22528-00

Sincerely,

**Grand Junction Cement Engineering**

## 2.0 Real-Time Job Summary

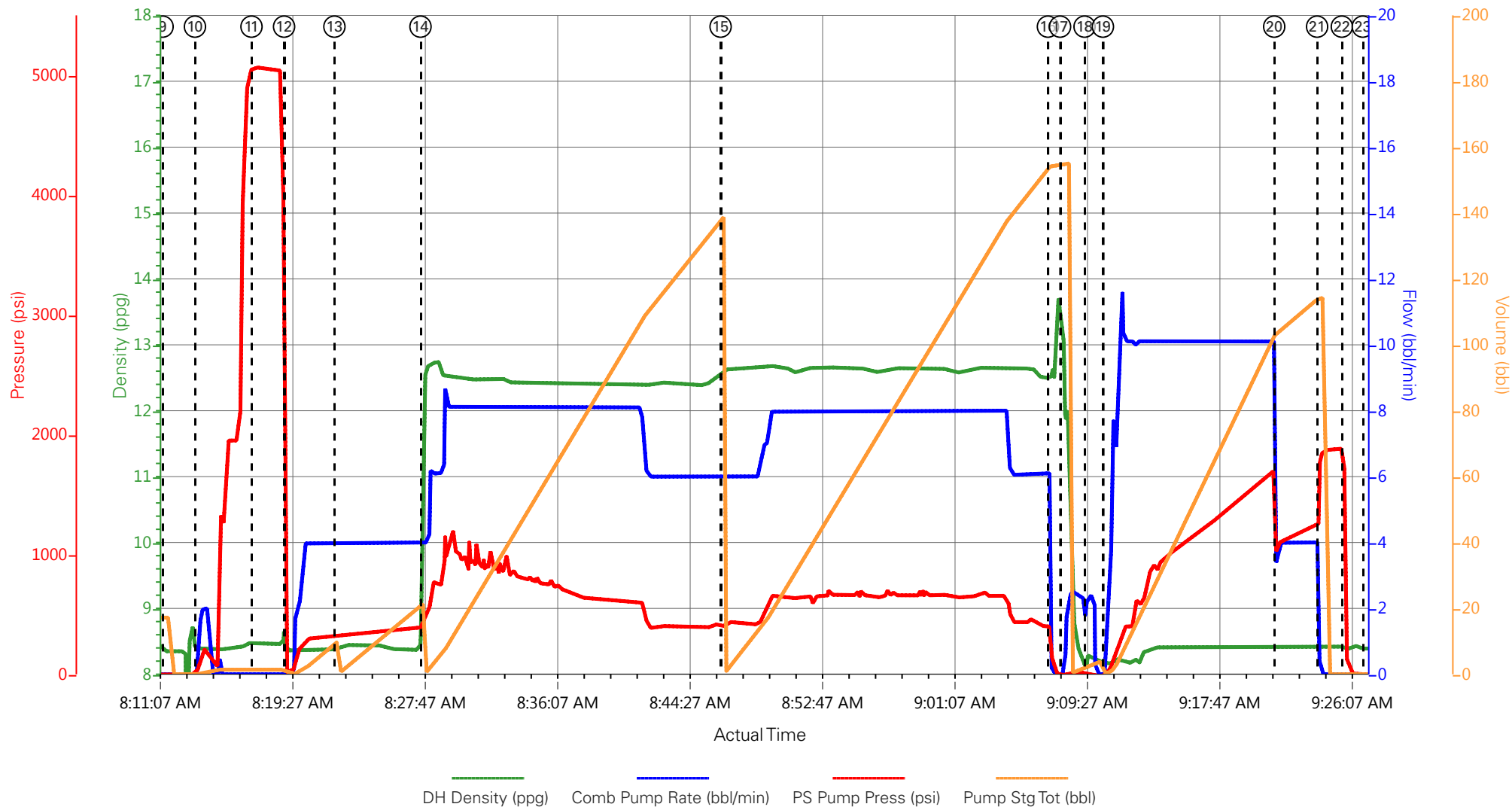
## 2.1 Job Event Log

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	7/18/2016	22:00:00	USER					ELITE # 8
Event	2	Pre-Convoy Safety Meeting	7/18/2016	23:30:00	USER					ALL HES EMPLOYEES
Event	3	Arrive At Loc	7/19/2016	02:00:00	USER					ARRIVED 2 HOURS EARLY DID NOT START CHARGING HOURS UNTIL REQUESTED ON LOCATION TIME
Event	4	Assessment Of Location Safety Meeting	7/19/2016	02:15:00	USER					ALL HES EMPLOYEES
Event	5	Pre-Rig Up Safety Meeting	7/19/2016	02:30:00	USER					ALL HES EMPLOYEES
Event	6	Rig-Up Equipment	7/19/2016	02:45:00	USER					1 HT-400 PUMP TRUCK ( ELITE # 8 ) 2 660 BULK TRUCKS 1 SILO 1 F-550 PICKUP
Event	7	Comment	7/19/2016	02:55:00	USER					CUSTOMER WAS OFFERED SDS WATER TEMP 57 F PH:7 CHLORIDES: 0 PPM
Event	8	Pre-Job Safety Meeting	7/19/2016	08:00:00	USER					ALL HES EMPLOYEES AND RIG CREW RIG CIRCULATED @ 14 BBL/MIN FOR 1 1/2 HOURS PRIOR TO JOB GAS WAS @ 43 PRIOR TO JOB
Event	9	Start Job	7/19/2016	08:11:29	COM5					TD: 7035 TP: 7028 CSG: 4 1/2 11.6# P-110 SJ: 25 OH: 8 3/4 MUD WEIGHT: 9.7 PPG SURFACE CSG: 9 5/8 32.3# SET @ 1625

Event	10	Prime Lines	7/19/2016	08:13:31	COM5	8.33	2.0	230	2.0	PRIME LINES FRESH WATER
Event	11	Test Lines	7/19/2016	08:17:05	COM5			5066		PRESSURE TEST OK
Event	12	Fresh Water Spacer	7/19/2016	08:19:08	COM5	8.33	4.0	360	10.0	10 BBL FRESH WATER SPACER
Event	13	Mud Flush	7/19/2016	08:22:18	COM5	8.4	4.0	385	20.0	20 BBL MUD FLUSH
Event	14	Pump Lead Cement	7/19/2016	08:27:43	COM5	12.5	8.0	900	137.8	395 SKS ( 137.8 BBLS) 12.5 PPG 1.96 YIELD 9.35 GAL/SK LEAD CEMENT WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES
Event	15	Pump Tail Cement	7/19/2016	08:46:36	COM5	12.7	8.0	670	144.8	435 SKS ( 144.8 BBLS) 12.7 PPG 1.87 YIELD 8.71 GAL/SK TAIL CEMENT WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES
Event	16	Shutdown	7/19/2016	09:07:12	USER					
Event	17	Clean Lines	7/19/2016	09:07:57	USER					CLEAN LINES FRESH WATER
Event	18	Drop Top Plug	7/19/2016	09:09:30	COM5					PLUG AWAY NO ISSUES
Event	19	Pump Displacement	7/19/2016	09:10:39	COM5	8.4	10.0	1600	108.5	108.5 BBL KCL DISPLACEMENT 3 LBS BE-6 1 GAL MMCR
Event	20	Slow Rate	7/19/2016	09:21:26	USER	8.4	4.0	1120	98.5	SLOW RATE TO BUMP PLUG
Event	21	Bump Plug	7/19/2016	09:24:08	COM5	8.4	4.0	1240	108.5	PRESSURE PRIOR TO BUMPING PLUG @ 1240 PSI BUMPED PLUG UP TO 1860 PSI
Event	22	Check Floats	7/19/2016	09:25:41	COM5	8.4		1860	108.5	FLOATS HOLDING 3/4 BBL BACK TO TRUCK TANK
Event	23	End Job	7/19/2016	09:27:00	COM5					GOOD RETURNS THROUGHOUT JOB PIPE WAS WORKED THROUGHOUT JOB

Event	24	Pre-Rig Down Safety Meeting	7/19/2016	10:00:00	USER	ALL HES EMPLOYEES
Event	25	Rig-Down Equipment	7/19/2016	10:15:00	USER	
Event	26	Pre-Convoy Safety Meeting	7/19/2016	10:45:00	USER	ALL HES EMPLOYEES
Event	27	Crew Leave Location	7/19/2016	11:00:00	USER	THANK YOU FOR USING HALLIBURTON CEMENT DAVID CAMPBELL AND CREW

# WPX - FEDERAL GM 422-9 - 4 1/2 PRODUCTION



- |   |                          |                    |                                |                              |
|---|--------------------------|--------------------|--------------------------------|------------------------------|
| ① Call Out                              | ⑦ Comment                | ⑬ Mud Flush        | ⑲ Pump Displacement            | 25 Rig-Down Equipment        |
| ② Pre-Convoy Safety Meeting             | ⑧ Pre-Job Safety Meeting | ⑭ Pump Lead Cement | 20 Slow Rate                   | 26 Pre-Convoy Safety Meeting |
| ③ Arrive At Loc                         | ⑨ Start Job              | ⑮ Pump Tail Cement | 21 Bump Plug                   | 27 Crew Leave Location       |
| ④ Assessment Of Location Safety Meeting | ⑩ Prime Lines            | ⑯ Shutdown         | 22 Check Floats                |                              |
| ⑤ Pre-Rig Up Safety Meeting             | ⑪ Test Lines             | ⑰ Clean Lines      | 23 End Job                     |                              |
| ⑥ Rig-Up Equipment                      | ⑫ Fresh Water Spacer     | ⑱ Drop Top Plug    | 24 Pre-Rig Down Safety Meeting |                              |

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Created: 2016-07-18 22:32:25, Version: 4.2.393

Edit

Customer: WPX ENERGY ROCKY MOUNTAIN LLC-  
EBUS

Job Date: 7/19/2016

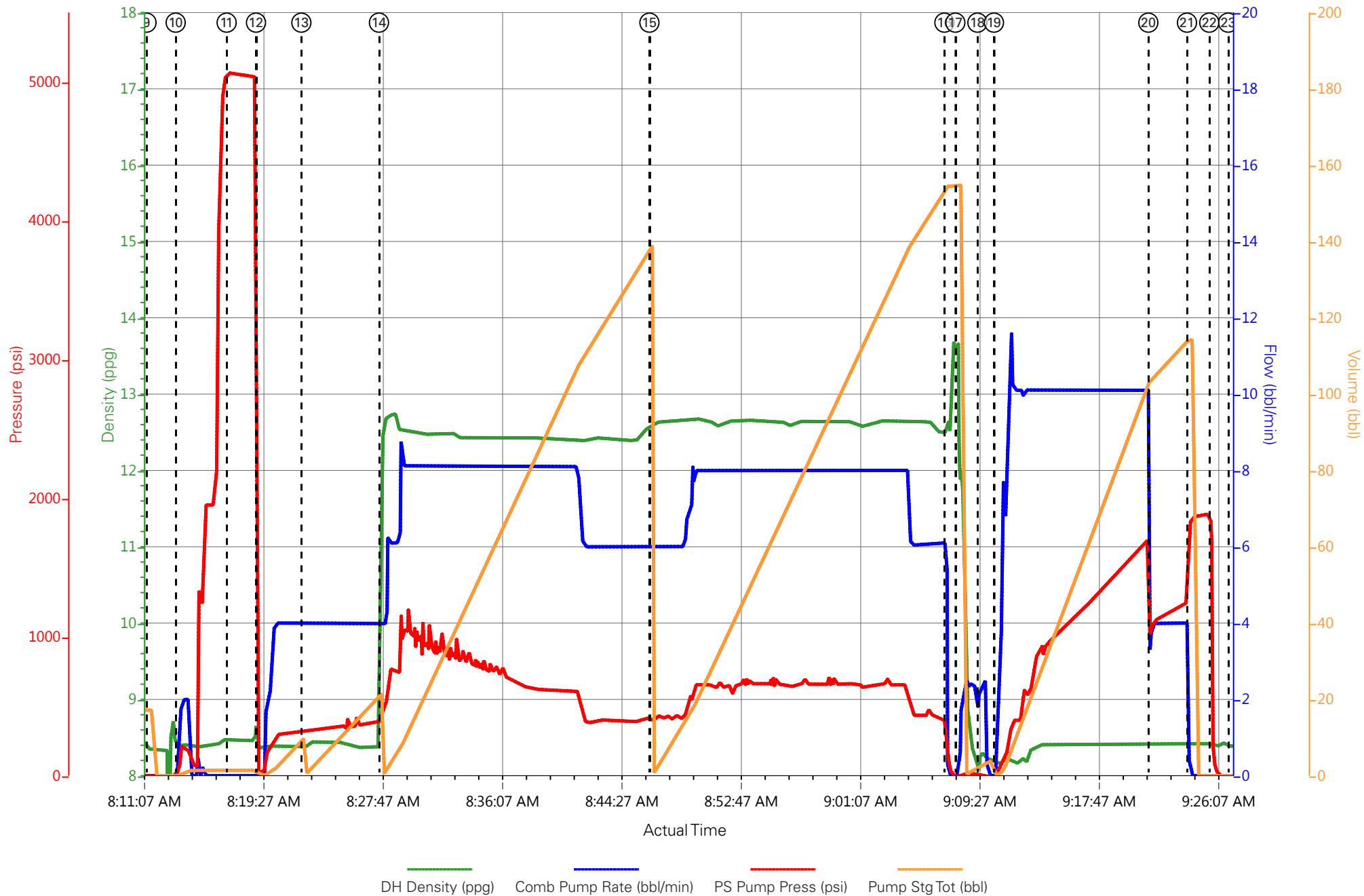
Well: FEDERAL GM 422-9

Representative: ROBERT BROWN

Sales Order #: 0903427624

ELITE # 8: DAVID CAMPBELL / RYAN MARTIN

# WPX - FEDERAL GM 422-9 - 4 1/2 PRODUCTION



## Job Information

Request/Slurry	2329764/1	Rig Name	H&P 318	Date	15/JUL/2016
Submitted By	Evan Russell	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	WPX Energy, Inc.	Location	Garfield	Well	GM 422-9

## Well Information

Casing/Liner Size	4.5 in	Depth MD	7050 ft	BHST	88°C / 191°F
Hole Size	8.75 in	Depth TVD	6548 ft	BHCT	53°C / 127°F
Pressure	3890 psi				

## Drilling Fluid Information

Mud Supplier Name	Baroid	Mud Trade Name	BARADRIL-N	Density	9.9 lbm/gal
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## Cement Information - Lead Design



Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
		NeoCem™ Cement				Slurry Density	12.5	lbm/gal
						Slurry Yield	1.96	ft3/sack
						Water Requirement	9.406	gal/sack
						Total Mix Fluid	9.406	gal/sack
		Fresh Water	Lab	12.03.13				
		Bentonite Wyoming - PB	Bulk Blend	16.07.16	Tank 17	Water Source	Fresh Water	
		Econolite (Powder - PB)	Bulk Blend	16.07.16	U046316	Water Chloride		
		Na2SO4 (Sodium Sulfate)	Bulk Blend	16.07.16	02-05-16			
		Salt						
		HALAD-344 (PB)	Bulk Blend	16.07.16	16022940			
		NaCl (Sodium Chloride)	Bulk Blend	16.07.16	Tank 14			
		Salt						
		HALAD-567	Bulk Blend	16.07.16	081115-139			
		Fe-2 (citric acid)	Bulk Blend	16.07.16	GA5LZ7BK5E			
		Pol-E-Flake	Bulk Blend	16.07.16	NA			

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# Operation Test Results Request ID 2329764/1

## Thickening Time

16/JUL/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	3890	35	16	4:08	4:30	4:42	4:46	4:52

395 Total Sacks

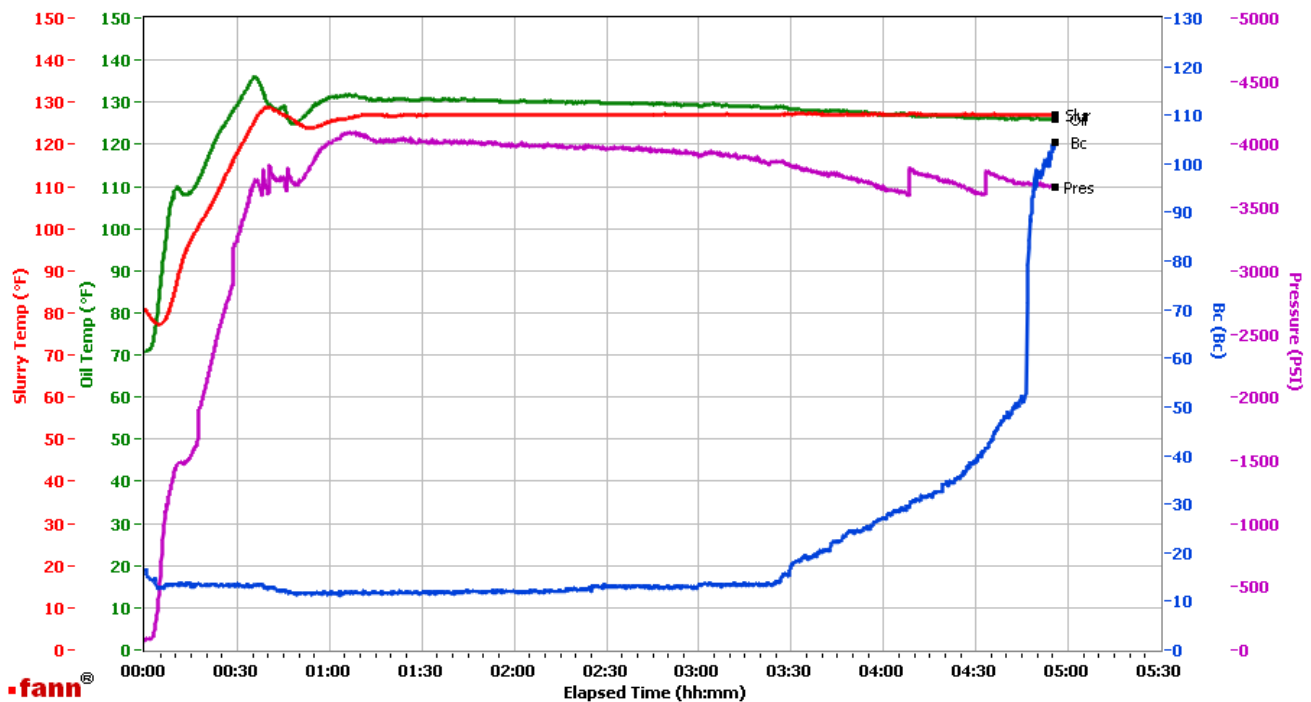
CS0647 TR 1513 395 SKS

## Grand Junction Colorado

Fields	Values
Project Name	GJ2329764-1 TERRA PRODUCTION BULK LE
Test ID	GJ2329764-1 TERRA PRODUCTION BULK LE
Request ID	GJ2329764-1 TERRA PRODUCTION BULK LE
Tested by	JASON
Customer	TERRA
Well No	GM 422-9
Rig	H&P 318
Casing/Liner Size	4.5

Fields	Values
Job Type	PRODUCTION
Cement Type	NEOCEM
Cement Weight	Light Weight
Test Date	07/16/16
Test Time	07:55 PM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.507

Events	Results
30.00 Bc	04h:08m
40.00 Bc	04h:30m
50.00 Bc	04h:42m
70.00 Bc	04h:46m
100.00 Bc	04h:52m
00h:30m	13.58
01h:00m	11.73
01h:30m	11.75



Data File C:\Documents and Settings\Administrator\Local Settings\Temporary Internet Files\Content.IE5\OTUB09Y7\GJ2329764-1 TERRA BULK LEAD[1].tdms

Comments CS0647 TR 1513 395 SKS

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# HALLIBURTON

## Rockies, Grand Junction

## Lab Results- Tail

### Job Information

Request/Slurry	2329763/2	Rig Name	H&P 318	Date	15/JUL/2016
Submitted By	Evan Russell	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	WPX Energy, Inc.	Location	Garfield	Well	GM 422-9

### Well Information

Casing/Liner Size	4.5 in	Depth MD	7055 ft	BHST	88°C / 191°F
Hole Size	8.75 in	Depth TVD	6558 ft	BHCT	53°C / 127°F
Pressure	3890 psi				

### Drilling Fluid Information

Mud Supplier Name	Baroid	Mud Trade Name	BARADRIL-N	Density	9.9 lbm/gal
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### Cement Information - Tail Design



Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
		NeoCem™ Cement				Slurry Density	12.7	lbm/gal
						Slurry Yield	1.869	ft3/sack
						Water Requirement	8.744	gal/sack
						Total Mix Fluid	8.744	gal/sack
		Fresh Water	Lab	12.03.13				
		Bentonite Wyoming - PB	Bulk Blend	16.07.16	Tank 17	Water Source	Fresh Water	
		Econolite (Powder - PB)	Bulk Blend	16.07.16	U046316	Water Chloride		
		Na2SO4 (Sodium Sulfate) Salt	Bulk Blend	16.07.16	02-05-16			
		HALAD-344 (PB)	Bulk Blend	16.07.16	16022940			
		NaCl (Sodium Chloride) Salt	Bulk Blend	16.07.16	Tank 14			
		HALAD-567	Bulk Blend	16.07.16	081115-139			
		Fe-2 (citric acid)	Bulk Blend	16.07.16	GA5LZ7BK5E			

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# Operation Test Results Request ID 2329763/2

## Thickening Time

16/JUL/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	3890	35	15	3:26	3:46	4:02	4:23	4:32

435 Total Sks

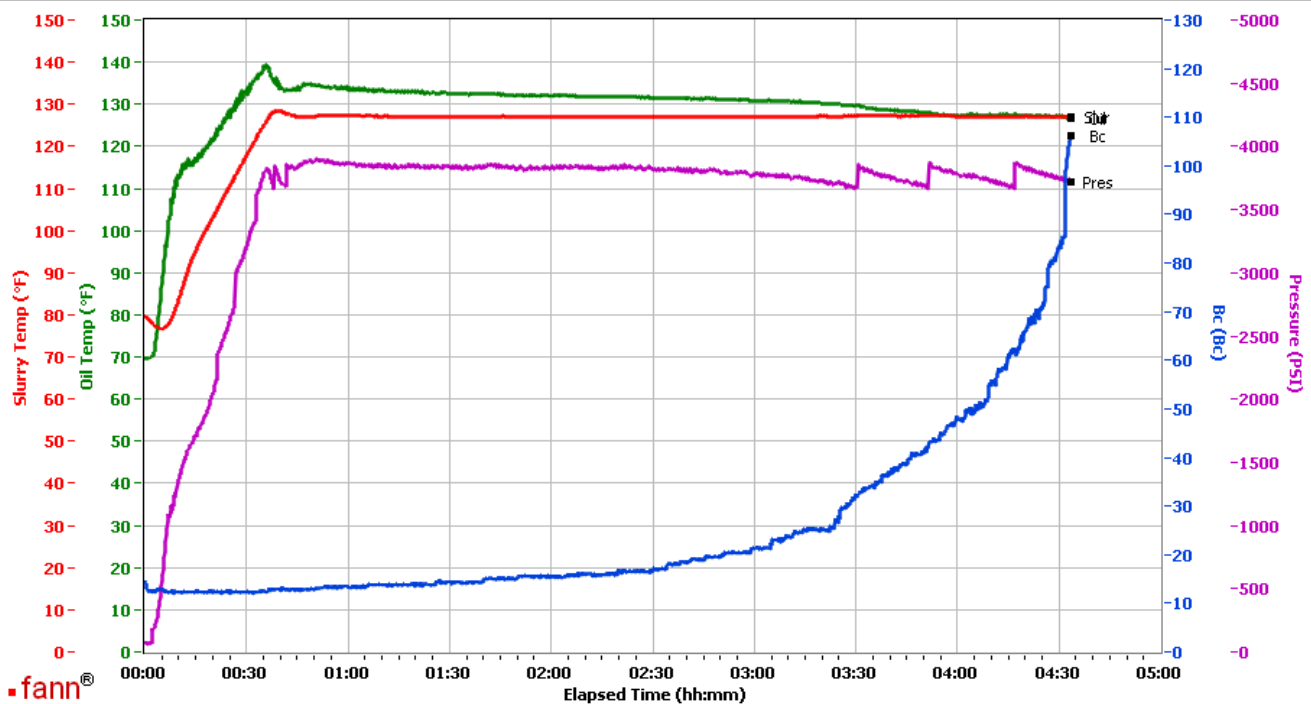
CS0649 TR 7094 217.5 SKS

## Grand Junction Colorado

Fields	Values
Project Name	GJ2329763-2 TERRA PRODUCTION BULK TA
Test ID	GJ2329763-2 TERRA PRODUCTION BULK TA
Request ID	GJ2329763-2 TERRA PRODUCTION BULK TA
Tested by	JASON
Customer	TERRA
Well No	GM 422-9
Rig	H&P 318
Casing/Liner Size	4.5

Fields	Values
Job Type	PRODUCTION
Cement Type	NEOCEM
Cement Weight	Light Weight
Test Date	07/16/16
Test Time	01:19 PM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.507

Events	Results
30.00 Bc	03h:26m
40.00 Bc	03h:46m
50.00 Bc	04h:02m
70.00 Bc	04h:23m
100.00 Bc	04h:32m
00h:30m	12.21
01h:00m	13.42
01h:30m	14.25



Data File C:\Documents and Settings\M290\Desktop\Test Data\GJ2329763-2 TERRA BULK TAIL.tdms

Comments CS0649 TR 7094 217.5 SKS

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# Operation Test Results Request ID 2329763/1

## Thickening Time

16/JUL/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	3890	35	22	4:07	4:22	4:34	5:04	5:04

435 Total SKs

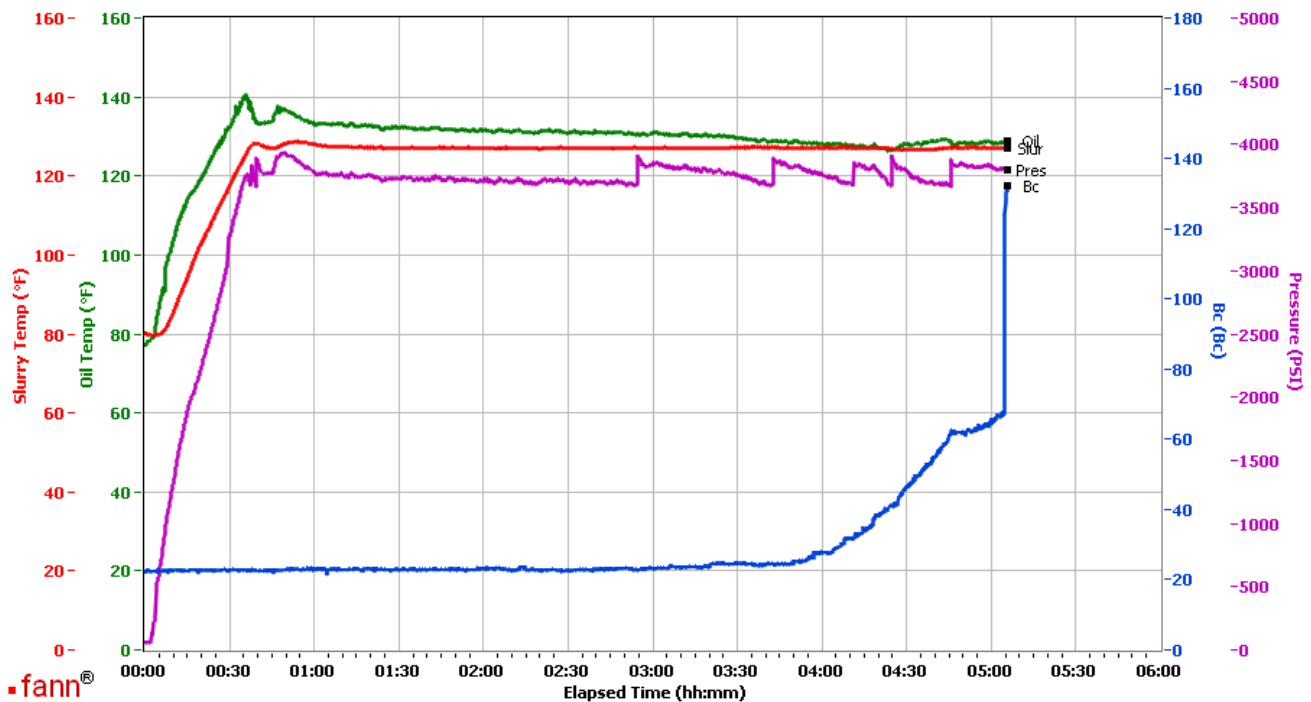
CS0648 TR 4080 217.5 SKS

## Grand Junction, Colorado

Fields	Values
Project Name	GJ2329763-1 TERRA PRODUCTION BULK TA
Test ID	GJ2329763-1 TERRA PRODUCTION BULK TA
Request ID	GJ2329763-1 TERRA PRODUCTION BULK TA
Tested by	JASON
Customer	TERRA
Well No	GM 422-9
Rig	H8P 318
Casing/Liner Size	4.5

Fields	Values
Job Type	PRODUCTION
Cement Type	NEOCEM
Cement Weight	Light Weight
Test Date	07/16/16
Test Time	07:27 PM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.507

Events	Results
30.00 Bc	04h:07m
40.00 Bc	04h:22m
50.00 Bc	04h:34m
70.00 Bc	05h:04m
100.00 Bc	05h:04m
00h:30m	22.97
01h:00m	23.08
01h:30m	23.17



Data File C:\Documents and Settings\M290\Desktop\Test Data\GJ2329763-1 TERRA BULK TAIL.tdmp

Comments CS0648 TR 4080 217.5 SKS

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