

# HALLIBURTON

iCem<sup>®</sup> Service

## **WPX ENERGY LLC-EBUS**

**For: Mark Mewshaw/Lynn Cass**

Date: Sunday, July 10, 2016

## **FED GM 532-9 Production**

API# 05-045-22535-00

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	7/10/2016	05:00:00	USER					REQUESTED ON LOCATION @ 1200
Event	2	Pre-Convoy Safety Meeting	7/10/2016	07:45:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	7/10/2016	08:00:00	USER					1 F550, 1 PUMP TRUCK & 2 660 BULK TURCKS,
Event	4	Arrive At Loc	7/10/2016	09:30:00	USER					RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	7/10/2016	10:00:00	USER					MET WITH COMP REP, BOBBY BROWN, AND WENT OVER NUMBERS AND JOB PROCEDURE. WALKED AROUND LOCATION AND COLLECTED WATER SAMPLE (PH- 7, CHLORIDES- 0, TEMP- 69F). COMP REP WAS OFFERED SDS FOR ALL CHEMICLES USED BY HES.
Event	6	Pre-Rig Up Safety Meeting	7/10/2016	13:00:00	USER					ALL HES PRESENT
Event	7	Rig-Up Equipment	7/10/2016	13:20:00	USER					HES RIGGED UP EQUIPMENT WITHOUT ENTERING RED ZONE.
Event	8	Pre-Job Safety Meeting	7/10/2016	14:25:23	USER					ALL HES AND RIG CREW PRESENT
Event	9	Start Job	7/10/2016	16:29:35	COM6					TD 7934', TP 7924', SJ 28.85', OH 8.75'', CSG 4.5'' 11.6#, MUD 9.7 PPG. RIG CIRCULATED WELL @ APPROX 16 BPM WITH 1175

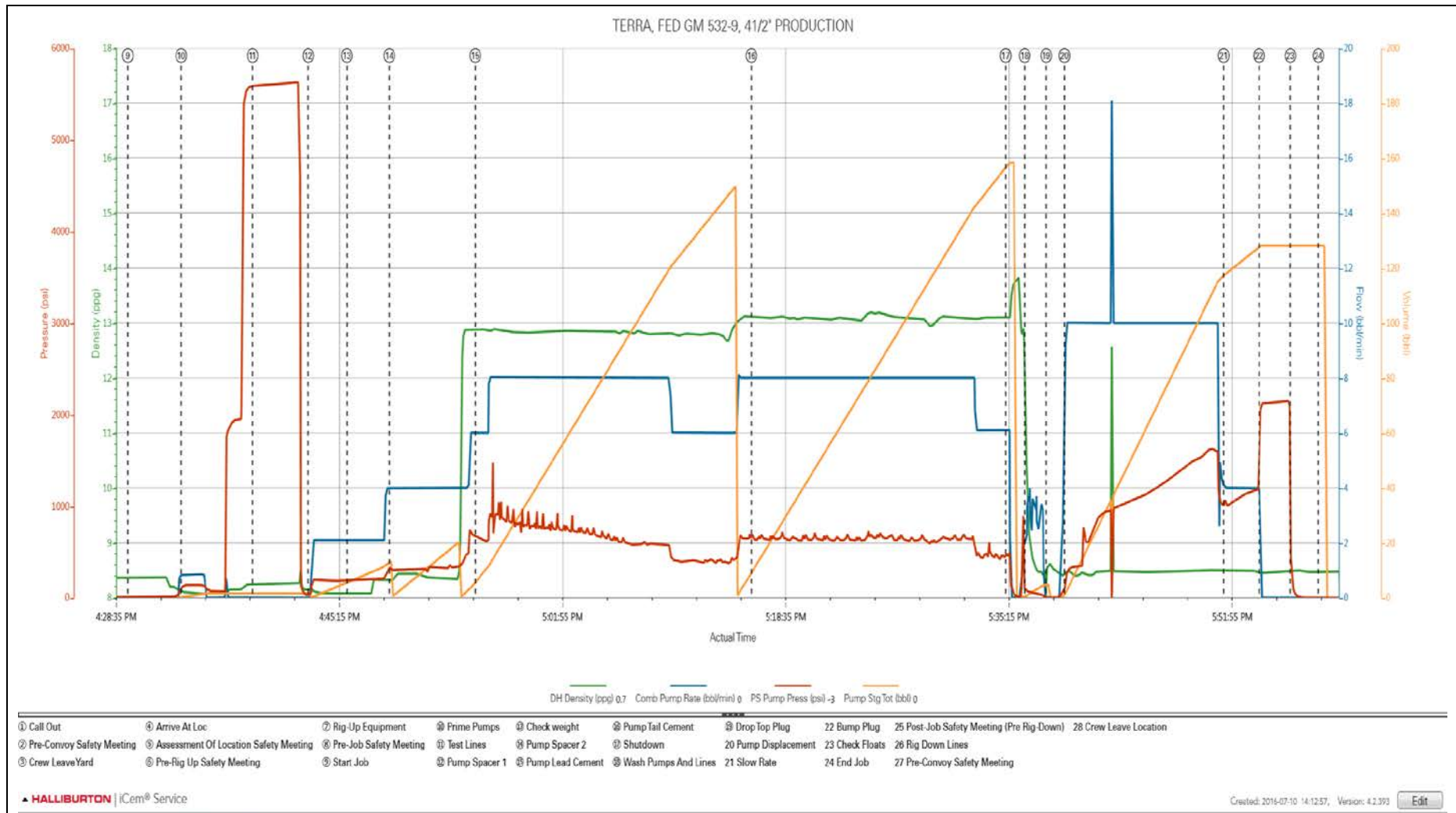
PSI FOR APPROX 1.5 HRS.										
Event	10	Prime Pumps	7/10/2016	16:33:34	COM6	131.00	8.10	0.80	0.2	8.33 PPG FRESH WATER
Event	11	Test Lines	7/10/2016	16:38:54	COM6	5589.00	8.24	0.00	1.6	ALL LINES HELD PRESSURE AT 5590 PSI
Event	12	Pump Spacer 1	7/10/2016	16:43:04	COM6	31.00	8.15	0.00	0.0	8.33 PPG FRESH WATER (10BBL)
Event	13	Check weight	7/10/2016	16:45:57	COM6					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	14	Pump Spacer 2	7/10/2016	16:49:07	COM6	299.00	8.31	4.00	13.2	8.4 PPG MUDFLUSH III (20BBL)
Event	15	Pump Lead Cement	7/10/2016	16:55:32	COM6	669.00	12.58	6.00	6.4	NEOCEM CEMENT 415 SKS (145 BBLS), 12.5 PPG, 1.96 FT3/SK, 9.35 GAL/SK
Event	16	Pump Tail Cement	7/10/2016	17:16:09	COM6	632.00	12.71	8.00	10.1	NEOCEM CEMENT 435 SKS (145 BBLS), 12.8 PPG, 1.87 FT3/SK, 8.7 GAL/SK.
Event	17	Shutdown	7/10/2016	17:35:09	USER					END OF CEMENT
Event	18	Wash Pumps And Lines	7/10/2016	17:36:34	COM6	70.00	10.39	2.10	0.6	WASH UP PUMPS AND LINES ON TOP OF PLUG
Event	19	Drop Top Plug	7/10/2016	17:38:10	COM6	-4.00	8.57	0.00	4.7	PLUG WENT, VERIFIED BY CO REP
Event	20	Pump Displacement	7/10/2016	17:39:32	COM6	249.00	8.49	10.00	2.0	8.34 PPG FRESH WATER (122.4 BBLS) 3 BAGS BE6, 1 GAL MMCR & 12 SKS KCL
Event	21	Slow Rate	7/10/2016	17:51:25	COM6	999.00	8.48	4.00	117.8	SLOW RATE TO 4 BPM PER CO REP TO LAND PLUG
Event	22	Bump Plug	7/10/2016	17:54:04	COM6					LAND PLUG AT 1290 PSI, BROUGHT UP TO 2145 PSI
Event	23	Check Floats	7/10/2016	17:56:24	COM6					FLOATS HELD, 1 BBL BACK TO TRUCK
Event	24	End Job	7/10/2016	17:58:30	USER					UNABLE TO MONITOR

RETURNS THROUGHOUT  
JOB DUE TO RIG  
OPERATIONS, PIPE WAS  
NOT RECIPROCATED  
DURING THE JOB, 0 BBL OF  
SPACER OR CEMENT BACK  
TO SURFACE

Event	25	Post-Job Safety Meeting (Pre Rig-Down)	7/10/2016	20:00:00	USER	ALL HES PRESENT
Event	26	Rig Down Lines	7/10/2016	20:10:00	USER	ALL HES PRESENT
Event	27	Pre-Convoy Safety Meeting	7/10/2016	20:11:00	USER	ALL HES PRESENT
Event	28	Crew Leave Location	7/10/2016	20:15:00	USER	THANK YOU FOR CHOOSING HALLIBURTON CEMENT, CHRIS SMITH AND CREW

## 2.0 Attachments

### 2.1 CHART.png



## Job Information

Request/Slurry	2328318/1	Rig Name	H&P 318	Date	06/JUL/2016
Submitted By	Aaron Katz	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	WPX Energy, Inc.	Location	Garfield	Well	GM 532-9

## Well Information

Casing/Liner Size	4.5 in	Depth MD	7955 ft	BHST	89°C / 192°F
Hole Size	8.75 in	Depth TVD	6600 ft	BHCT	53°C / 128°F
Pressure	3920 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 GJ1				Slurry Density	12.5 lbm/gal
		Fresh Water	Lab	12.03.13		Slurry Yield	1.96 ft3/sack
		Bentonite Wyoming - PB	Bulk Blend	06.07.16	Tank 17	Water Requirement	9.406 gal/sack
		Econolite (Powder - PB)	Bulk Blend	06.07.16	U070415	Total Mix Fluid	9.406 gal/sack
		Na2SO4 (Sodium Sulfate)	Bulk Blend	06.07.16	02-05-16		
		Salt					
		HALAD-344 (PB)	Bulk Blend	06.07.16	16022940	Water Source	Fresh Water
		NaCl (Sodium Chloride)	Bulk Blend	06.07.16	Tank 14	Water Chloride	
		Salt					
		HALAD-567	Bulk Blend	06.07.16	08115-139		
		Fe-2 (citric acid)	Bulk Blend	06.07.16	GA5LZ7BK5E		
		Pol-E-Flake	Bulk Blend	06.07.16	NA		

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# Operation Test Results Request ID 2328318/1

## Thickening Time

07/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)
128	3920	35	9	4:19	4:19	4:19	4:19	4:31

415 SKS

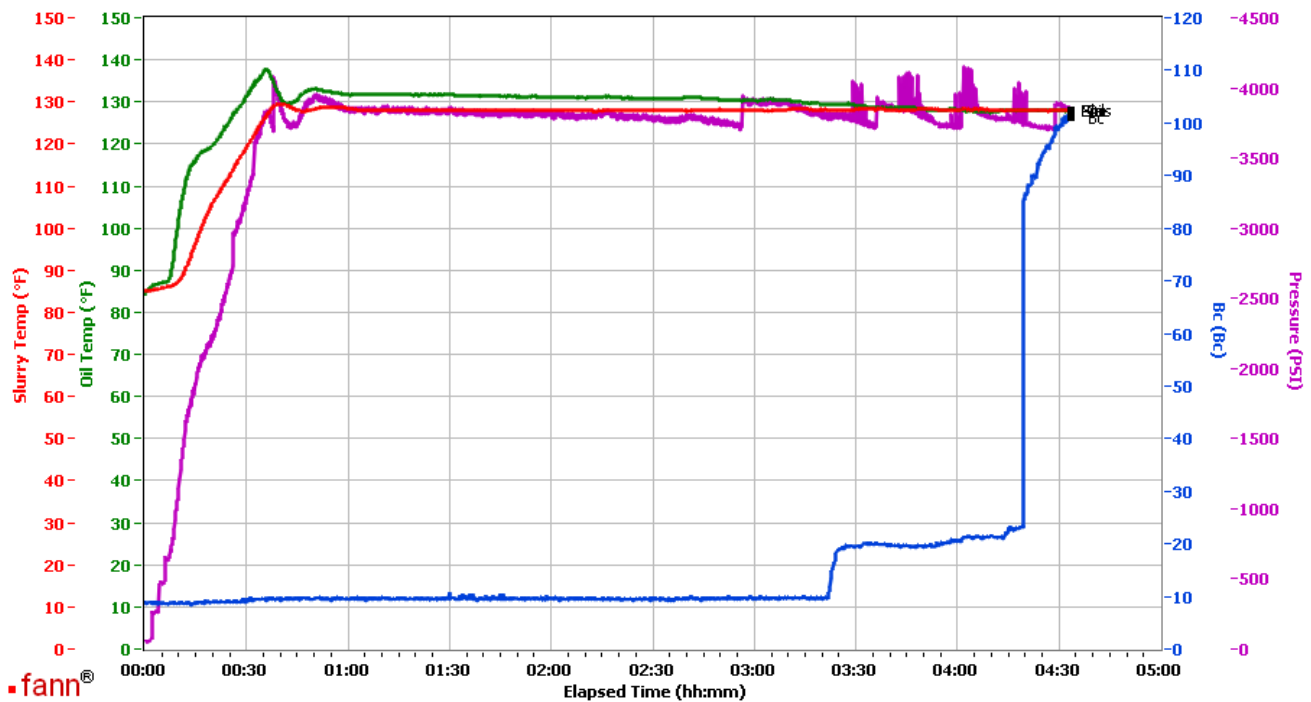
CS0613 TR 8658 415 SKS

## Grand Junction Colorado

Fields	Values
Project Name	GJ2328318-1 TERRA PRODUCTION BULK LE
Test ID	GJ2328318-1 TERRA PRODUCTION BULK LE
Request ID	GJ2328318-1 TERRA PRODUCTION BULK LE
Tested by	JASON
Customer	TERRA
Well No	GM 532-9
Rig	H&P 318
Casing/Liner Size	4.5

Fields	Values
Job Type	PRODUCTION
Cement Type	NEOCEM
Cement Weight	Light Weight
Test Date	07/06/16
Test Time	04:15 PM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.507

Events	Results
30.00 Bc	04h:19m
40.00 Bc	04h:19m
50.00 Bc	04h:19m
70.00 Bc	04h:19m
100.00 Bc	04h:31m
00h:30m	9.54
01h:00m	9.61
01h:30m	9.28



Data File C:\Documents and Settings\M290\Local Settings\Temporary Internet Files\Content.IE5\4TJ89YN\GJ2328318-1 TERRA BULK LEAD[1].tdms

Comments CS0613 TR 8658 415 SKS

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# HALLIBURTON

## Rockies, Grand Junction

## Lab Results- Tail

### Job Information

Request/Slurry	2328319/2	Rig Name	H&P 318	Date	06/JUL/2016
Submitted By	Aaron Katz	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	WPX Energy, Inc.	Location	Garfield	Well	GM 532-9

### Well Information

Casing/Liner Size	4.5 in	Depth MD	7955 ft	BHST	89°C / 192°F
Hole Size	8.75 in	Depth TVD	6600 ft	BHCT	53°C / 128°F
Pressure	3920 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 GJ1				Slurry Density	12.7 lbm/gal
		Fresh Water	Lab	12.03.13		Slurry Yield	1.869 ft3/sack
		Bentonite Wyoming - PB	Bulk Blend	07.07.16	Tank 17 &24	Water Requirement	8.744 gal/sack
		Econolite (Powder - PB)	Bulk Blend	07.07.16	U070415	Total Mix Fluid	8.744 gal/sack
		Na2SO4 (Sodium Sulfate) Salt	Bulk Blend	07.07.16	02-05-16		
		HALAD-344 (PB)	Bulk Blend	07.07.16	16022940	Water Source	Fresh Water
		NaCl (Sodium Chloride) Salt	Bulk Blend	07.07.16	Tank 14/32615ADC AA	Water Chloride	
		HALAD-567	Bulk Blend	07.07.16	08115-139		
		Fe-2 (citric acid)	Bulk Blend	07.07.16	GA5LZ7BK5E		

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# Operation Test Results Request ID 2328319/2

## Thickening Time

07/JUL/2016

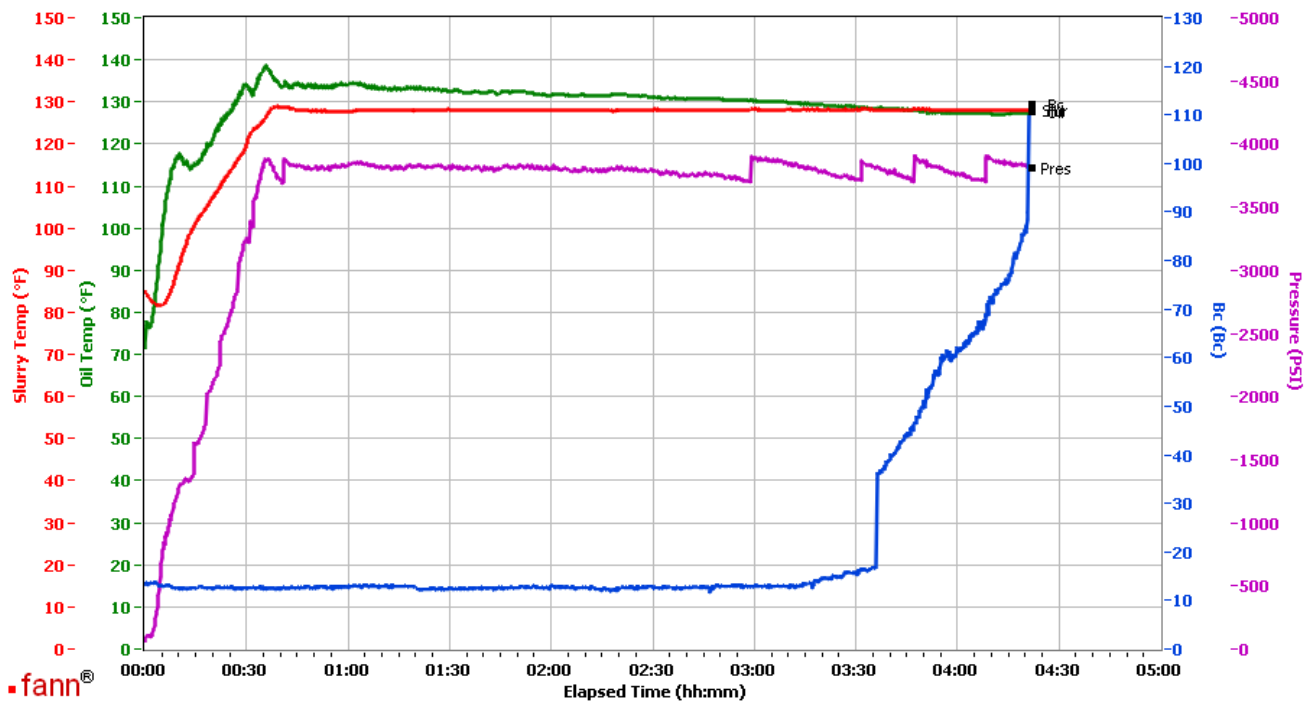
Temp (°F)	Pressure (psi)	Reached in (min)	Start BC	30 Bc (hh:mm)	40 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	100 Bc (hh:mm)
128	3920	35	13	3:36	3:40	3:50	4:08	4:21

435 Total Sks

CS0615 TR 5104 217.5 SKS

## Grand Junction Colorado

Fields	Values	Fields	Values	Events	Results
Project Name	2328319-2	Job Type		30.00 Bc	03h:36m
Test ID	2328319-2 TERRA BULK TAIL	Cement Type		40.00 Bc	03h:40m
Request ID		Cement Weight	Standard	50.00 Bc	03h:50m
Tested by	DEBA	Test Date	07/07/16	70.00 Bc	04h:08m
Customer	TERRA	Test Time	11:22 AM	100.00 Bc	04h:21m
Well No	GM 532-9	Temp. Units	degF	00h:30m	12.55
Rig		Pressure Units	PSI	01h:00m	13.20
Casing/Liner Size		SW Version	2.1.0.507	01h:30m	12.51



Data File C:\Documents and Settings\M290\Local Settings\Temporary Internet Files\Content.IE5\CDER4HUV\2328319-2 TERRA BULK TAIL[1].tdms

Comments CS0615 TR#5104 217.5 SKS

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# Operation Test Results Request ID 2328319/1

## Thickening Time

07/JUL/2016

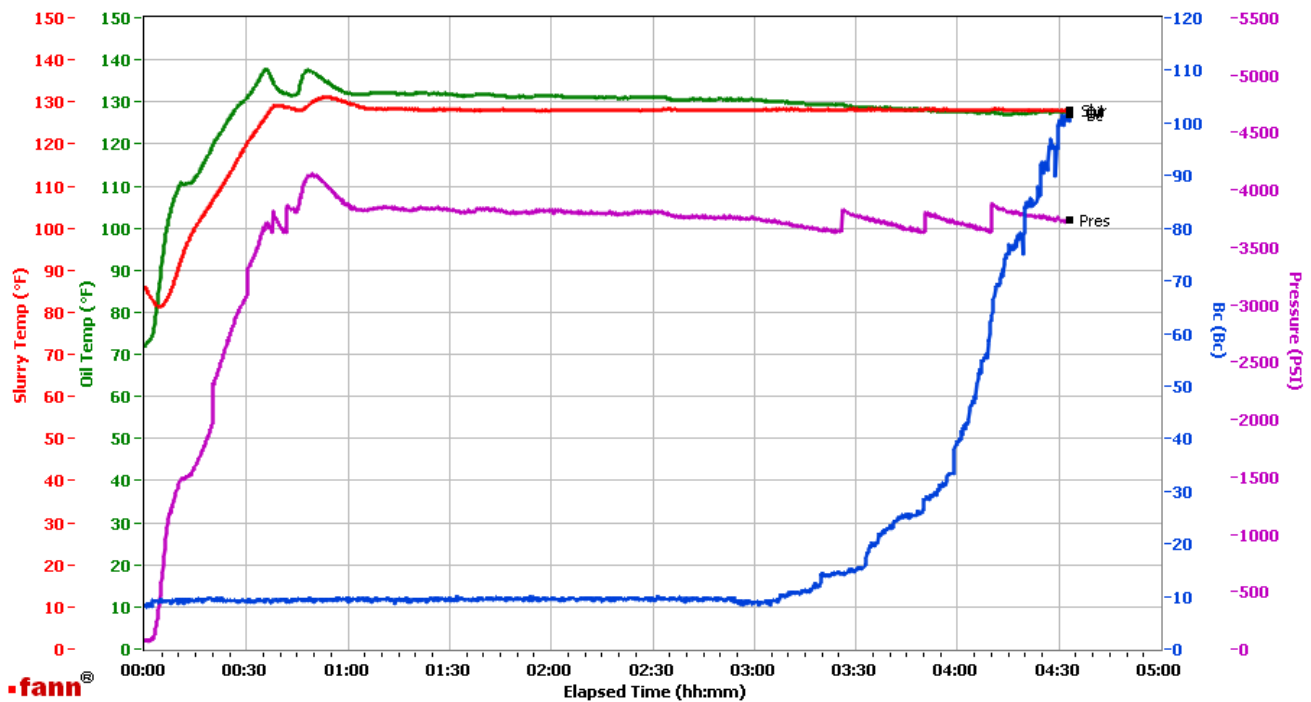
Temp (°F)	Pressure (psi)	Reached in (min)	Start BC	30 Bc (hh:mm)	40 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	100 Bc (hh:mm)
128	3920	35	8	3:54	4:00	4:05	4:12	4:30

435 Total SKs

CS0614 TR 5040 217.5 SKS

## Grand Junction Colorado

Fields	Values	Fields	Values	Events	Results
Project Name	GJ2328319-1 TERRA PRODUCTION BULK TA	Job Type	PRODUCTION	30.00 Bc	03h:54m
Test ID	GJ2328319-1 TERRA PRODUCTION BULK TA	Cement Type	NEOCEM	40.00 Bc	04h:00m
Request ID	GJ2328319-1 TERRA PRODUCTION BULK TA	Cement Weight	Light Weight	50.00 Bc	04h:05m
Tested by	JASON	Test Date	07/07/16	70.00 Bc	04h:12m
Customer	TERRA	Test Time	07:04 PM	100.00 Bc	04h:30m
Well No	GM 532-9	Temp. Units	degF	00h:30m	9.35
Rig	H8P 318	Pressure Units	PSI	01h:00m	9.11
Casing/Liner Size	4.5	SW Version	2.1.0.507	01h:30m	9.65



Data File C:\Documents and Settings\Administrator\Desktop\Test Data\GJ2328319-1 TERRA BULK TAIL.tdms

Comments CS0614 TR 5040 217.5 SKS

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