

**WPX ENERGY ROCKY MOUNTAIN LLC-EBUS**

RGU 522-24-198

Cyclone/29

**Post Job Summary**  
**Cement Surface Casing**

Date Prepared: 05/02/2014  
Job Date: 04/29/2014

Submitted by: Kory Hugentobler - Cement Engineer

The Road to Excellence Starts with Safety

Sold To #: 300721		Ship To #: 3276452		Quote #:		Sales Order #: 0901301389				
Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS				Customer Rep: Andrew Brunk						
Well Name: FEDERAL		Well #: RGU 522-24-198		API/UWI #: 05-103-12080-00						
Field: SULPHUR CREEK		City (SAP): MEE		County/Parish: RIO BLANCO		State: COLORADO				
Legal Description: 24-1S-98W-2155FSL-1713FEL										
Contractor: CYCLONE				Rig/Platform Name/Num: CYCLONE 29						
Job BOM: 392189										
Well Type: DIRECTIONAL GAS										
Sales Person: HALAMERICA\HB50180				Srv Supervisor: Edward Deussen						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		3949ft		Job Depth TVD						
Water Depth				Wk Ht Above Floor						
Perforation Depth (MD)		From		To						
Well Data										
Description	New / Used	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Open Hole Section			14.75				0	1750		0
Casing		9.625	8.921	36		J-55	0	3949		0
Open Hole Section			13.5				1750	3945	0	0
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make		
Guide Shoe				3949	Top Plug			HES		
Float Shoe					Bottom Plug			HES		
Float Collar					SSR plug set			HES		
Insert Float					Plug Container			HES		
Stage Tool					Centralizers			HES		
Miscellaneous Materials										
Gelling Agt		Conc		Surfactant		Conc	Acid Type		Qty	Conc
Treatment Fld		Conc		Inhibitor		Conc	Sand Type		Size	Qty
Fluid Data										
Stage/Plug #: 1										
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1	Fresh Water	Fresh Water	40	bbl	8.3			4.0		
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	



2	Stage 1 HLC Lead	ECONOCEM (TM) SYSTEM	725	sack	12.8	1.77		8.0	9.33
9.33 Gal		FRESH WATER							
0.35 %		HR-5, 50 LB SK (100005050)							
0.25 lbm		POLY-E-FLAKE (101216940)							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	Stage 1 VariCem Tail	VARICEM (TM) CEMENT	275	sack	12.8	1.96		7.0	10.95
10.91 Gal		FRESH WATER							
0.25 lbm		POLY-E-FLAKE (101216940)							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
4	Displacement	Displacement	303.5	bbl	8.3			10.0	
Cement Left In Pipe		Amount	26 ft		Reason		Shoe Joint		
Fluid Data									
Stage/Plug #: 2									
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Fresh Water	Fresh Water	20	bbl	8.3			2.0	
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
2	Stage 2 VariCem Lead	VARICEM (TM) CEMENT	1245	sack	12.8	1.96		8.0	10.96
0.25 lbm		POLY-E-FLAKE (101216940)							
10.91 Gal		FRESH WATER							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	Displacement	Displacement	138.5	bbl	8.3			10.0	
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
4	HalCem	HALCEM (TM) SYSTEM	1360	sack	15.8	1.15		3.0	5
4.99 Gal		FRESH WATER							

**HALLIBURTON**

*Cementing Job Summary*

Cement Left In Pipe	Amount	Reason	Shoe Joint
Comment			

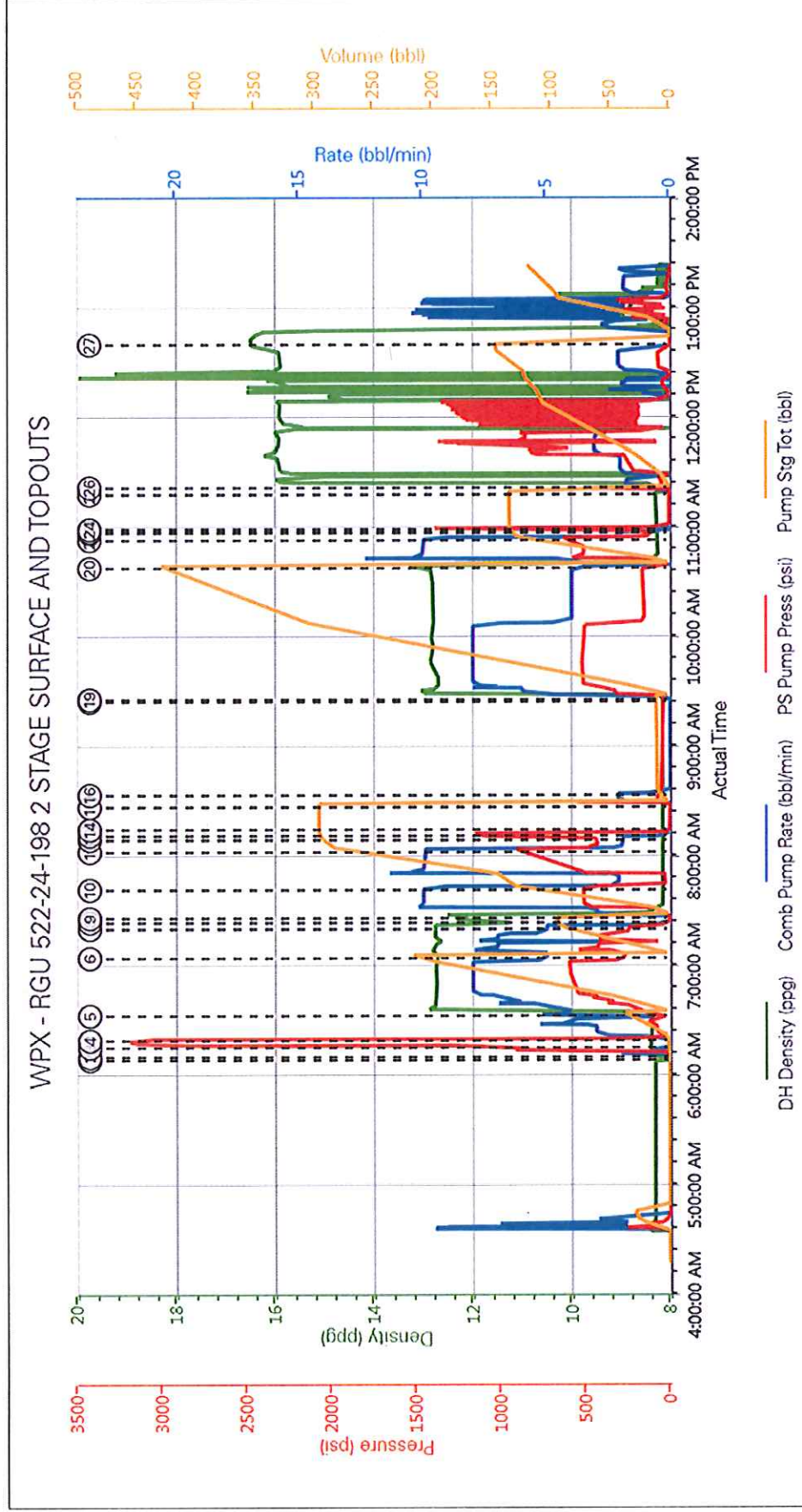
## 3.1 Job Event Log

Type	Seq No.	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comment
Event	1	Start Job	4/29/2014	06:10:25	COM5					TP 3948.65', SJ 25.85', 14 1/2" OH to 1750', 13 3/4" OH to TD, Tool @ 1787.65', Mud 9.5 ppg
Event	2	Prime Lines	4/29/2014	06:12:00	COM5	8.38	2.00	45	2.0	Fresh Water
Event	3	Test Lines	4/29/2014	06:17:14	COM5			3204		Pressure held well
Event	4	Pump H2O Spacer	4/29/2014	06:21:05	COM5	8.31	4.0	123	40.0	Fresh Water
Event	5	Pump Lead Cement	4/29/2014	06:34:45	COM5	12.8	8.0	590	228.5	725 sks, 12.8 ppg, 1.77 yield, 9.33 gal/sk
Event	6	Pump Tail Cement	4/29/2014	07:06:14	COM5	12.8	7.0	380	96.0	275 sks, 12.8 ppg, 1.96 yield, 10.95 gal/sk
Event	7	Shutdown/Wash Up	4/29/2014	07:22:11	USER					
Event	8	Drop Plug	4/29/2014	07:25:38	USER					Rig supplied dart plug
Event	9	Pump Displacement	4/29/2014	07:28:02	COM5	8.40	10.0	920	303.5	Fresh Water
Event	10	Slow Rate Thru Tool	4/29/2014	07:43:38	USER	8.35	2.0	51	128-148	
Event	11	Slow Rate	4/29/2014	08:04:18	COM5	8.27	2.0	446	293.0	
Event	12	Bump Plug	4/29/2014	08:10:49	COM5			557		
Event	13	Check Floats	4/29/2014	08:13:16	COM5			1195		Floats held - 1 1/2 bbl flowback
Event	14	Drop MSC Opening Device	4/29/2014	08:16:31	USER					
Event	15	Open MSC	4/29/2014	08:28:48	COM5	8.35	2.0	680	4.0	Tool opened
Event	16	Shutdown/Rig to circulate	4/29/2014	08:35:27	USER					Rig to circulate to re-establish good returns
Event	17	Pump Water Ahead	4/29/2014	09:26:28	USER	8.38	2.0	34	3.0	Establish flow
Event	18	Pump Tail Cement	4/29/2014	09:27:41	COM5	12.8	8.0	525	434.6	1245 sks, 12.8 ppg, 1.96 yield, 10.95 gal/sk
Event	19	Shutdown/Drop Plug	4/29/2014	09:27:42	USER					Lost returns approx 240 bbls into cement
Event	20	Pump Displacement	4/29/2014	10:39:37	COM5	8.28	10.0	648	138.5	Fresh Water
Event	21	Slow Rate	4/29/2014	10:55:00	COM5	8.27	2.0	114	128	
Event	22	Bump Plug	4/29/2014	10:58:51	COM5			123		

Event	23	Close MSC	4/29/2014	10:59:40	COM5	1296	Tool closed
Event	24	Release Pressure/End Job	4/29/2014	11:00:55	COM5	0.00	2 stage complete
Event	25	Start Job-Topout	4/29/2014	11:19:59	COM5	135.9	1st Topout - RGU 523-24-198 - 685 ft, took 83.1 bbls, 406 sacks 2nd Topout - RGU 333-24-192 - 15 ft, took 3.4 bbls, 16 sacks 3rd Topout - RGU 323-24-198 - 40 ft, took 9.0 bbls, 44 sacks 4th Topout - RGU 442-24-198 - 323 ft, took 47.9 bbls, 234 sacks
Event	26	Pump Cement	4/29/2014	11:23:48	COM5	797	700 sks, 15.8 ppg, 1.15 yield, 5.0 gal/sk
Event	27	End Job	4/29/2014	12:41:52	COM5	143.2	Suspend Icem - wait on more cement

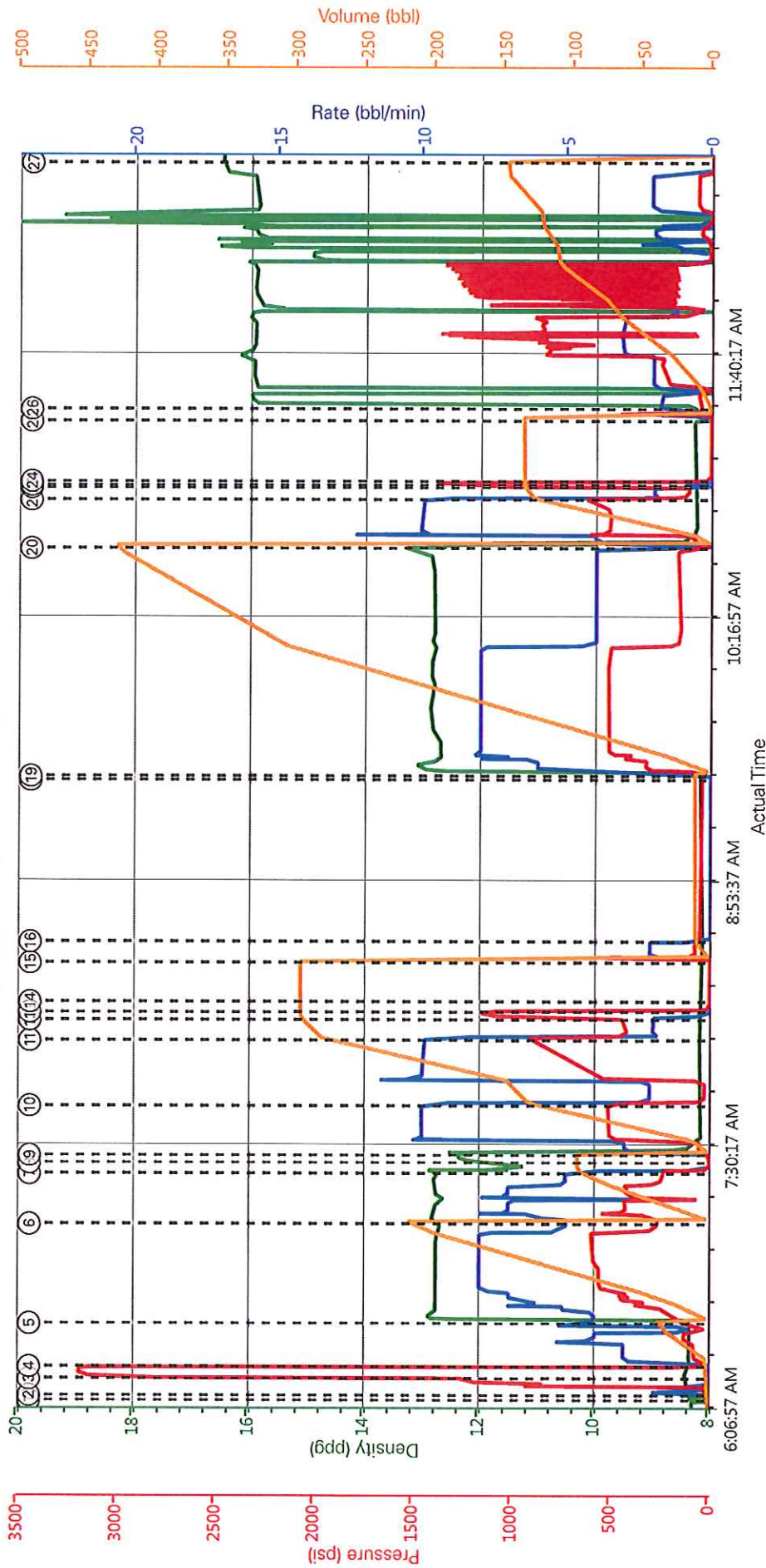
## 4.0 Custom Graphs

### 4.1 Custom Graph





WPX - RGU 522-24-198 2 STAGE SURFACE AND TOPOUTS



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

- ① Start Job 8.35;0;-2;0
- ② Prime Lines 8.38;2;45;1.6
- ③ Test Lines 8.44;0;3182;2.1
- ④ Pump H2O Spacer 8.3;1.7;21;2.3
- ⑤ Pump Lead Cement 8.95;4.1;136;0.8
- ⑥ Pump Tail Cement 12.83;5;258;0.1
- ⑦ Shutdown/Wash Up 11.49;0;52;95.6
- ⑧ Drop Plug 12.34;0;4;95.6
- ⑨ Pump Displacement 10.66;2.8;60;1.4
- ⑩ Slow Rate Thru Tool 8.15;2.2;111;131.8
- ⑪ Slow Rate 8.16;2.2;612;283.6
- ⑫ Bump Plug 8.19;0;1073;296.3
- ⑬ Check Floats 8.15;0;7;296.3
- ⑭ Drop MSC Opening Device 8.15;0;3;296.3
- ⑮ Open MSC 8.15;0;-1;0
- ⑯ Shutdown/Rig to circulate 8.14;0;53;10.8
- ⑰ Pump Water Ahead 8.18;0;50;10.8
- ⑱ Pump Tail Cement 8.09;3;59;12.8
- ⑲ Shutdown/Drop Plug 8.09;2.9;59;0
- 20 Pump Displacement 12.69;0;1;0
- 21 Slow Rate 8.27;2;132;129.7
- 22 Bump Plug 8.32;0;1367;135.9
- 23 Close MSC 8.31;0;328;135.9
- 24 Release Pressure/End Job 8.28;0;3;135.9
- 25 Start Job-Topout 8.31;0;-1;135.9
- 26 Pump Cement 8.4;1.8;54;0.5
- 27 End Job 16.48;0;-2;148.1

► HALLIBURTON | iCem® Service

Created: 2014-04-29 04:13:32, Version: 3.0.121

Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS

Job Date: 4/29/2014 4:15:31 AM

Well: RGU 522-24-198

Representative: Andrew Brunk

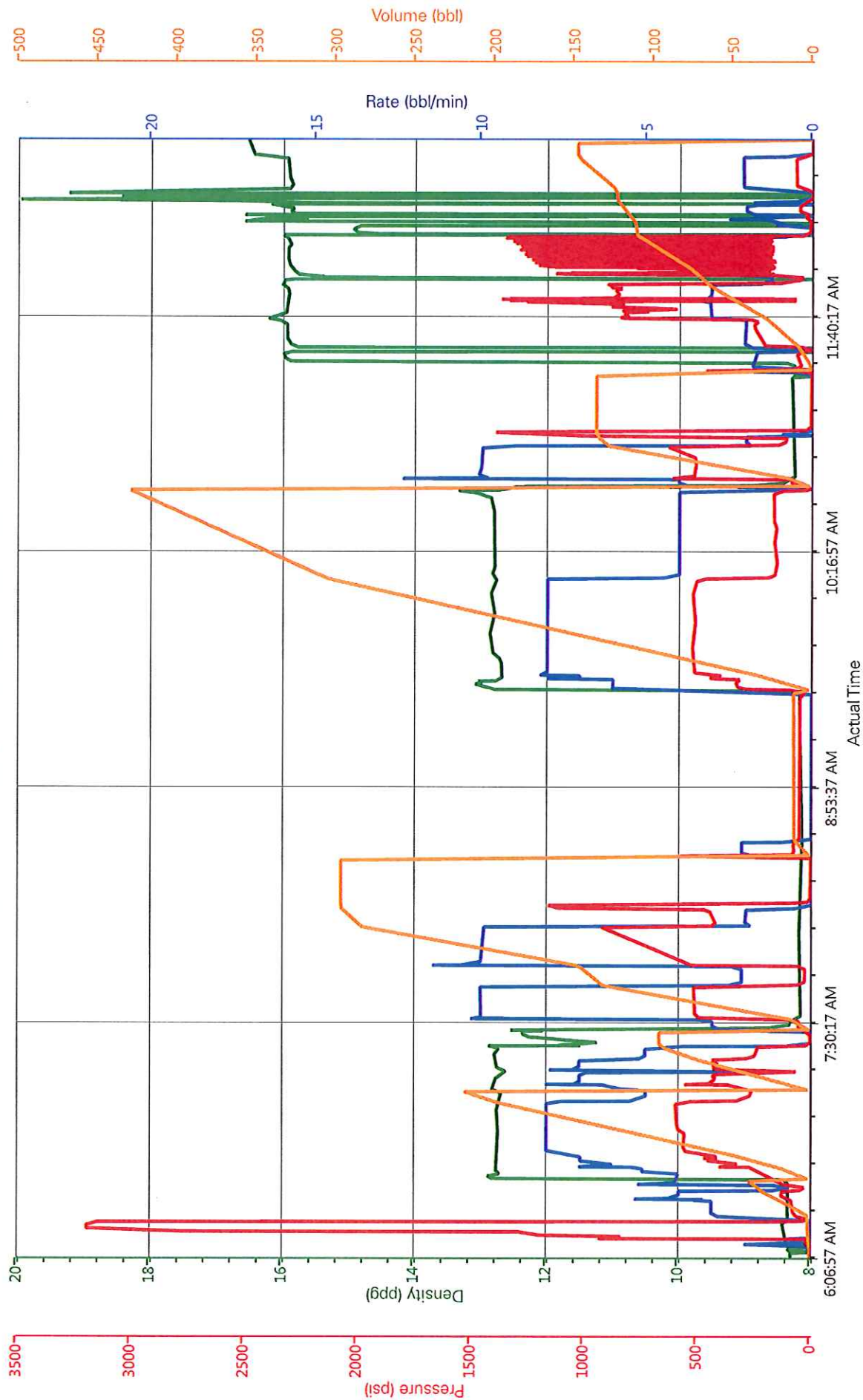
Sales Order #: 901301389

Elite #4: Ed Deussen / Zach Diaz

Edit



# WPX - RGU 522-24-198 2 STAGE SURFACE AND TOPOUTS



▼ **HALLIBURTON** | iCem® Service

Created: 2014-04-29 04:13:32, Version: 3.0.121

Edit

Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS

Job Date: 4/29/2014 4:15:31 AM

Well: RGU 522-24-198

Representative: Andrew Brunk

Sales Order #: 901301389

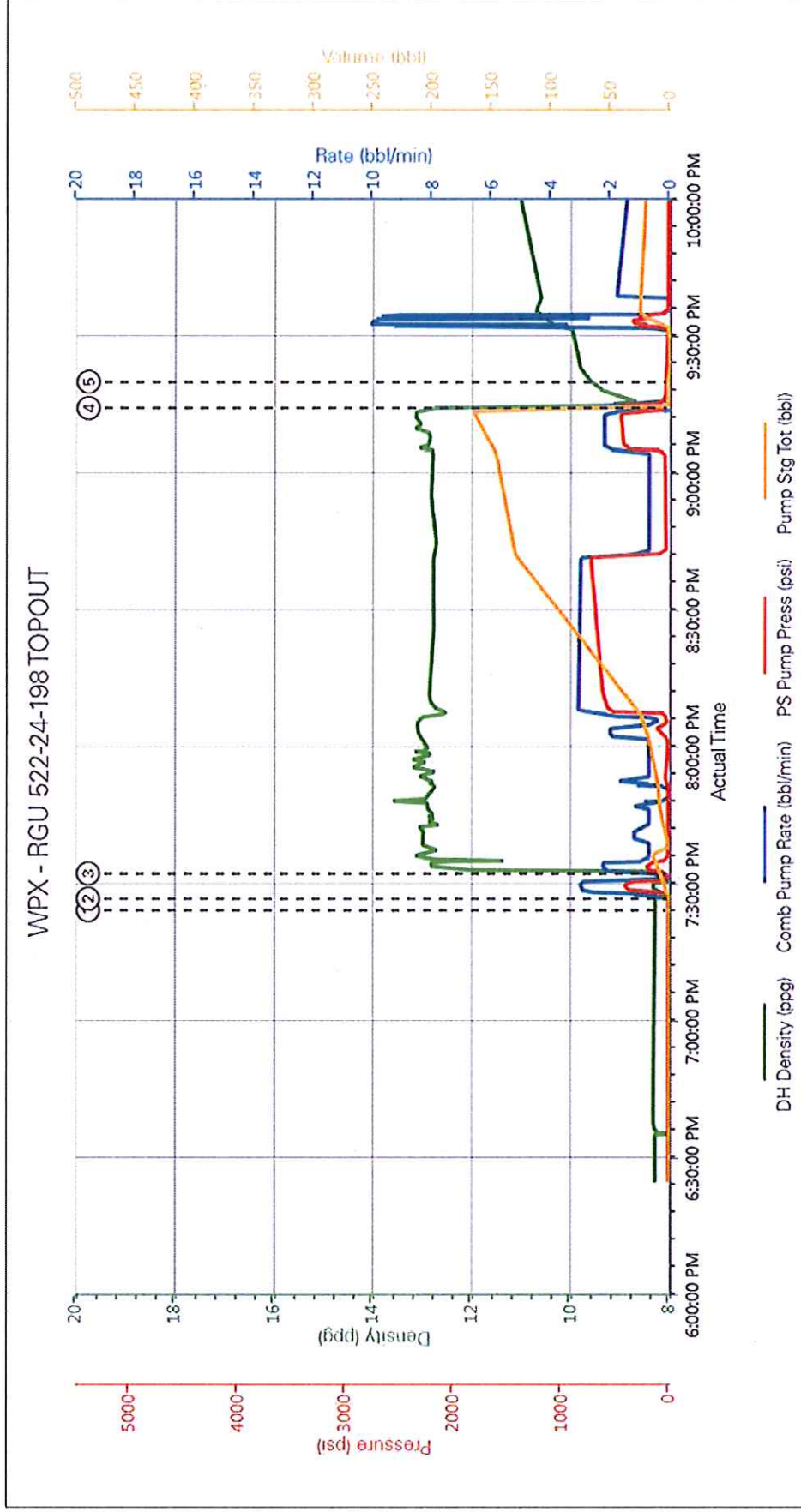
Elite #4: Ed Deussen / Zach Diaz

## 3.1 Job Event Log

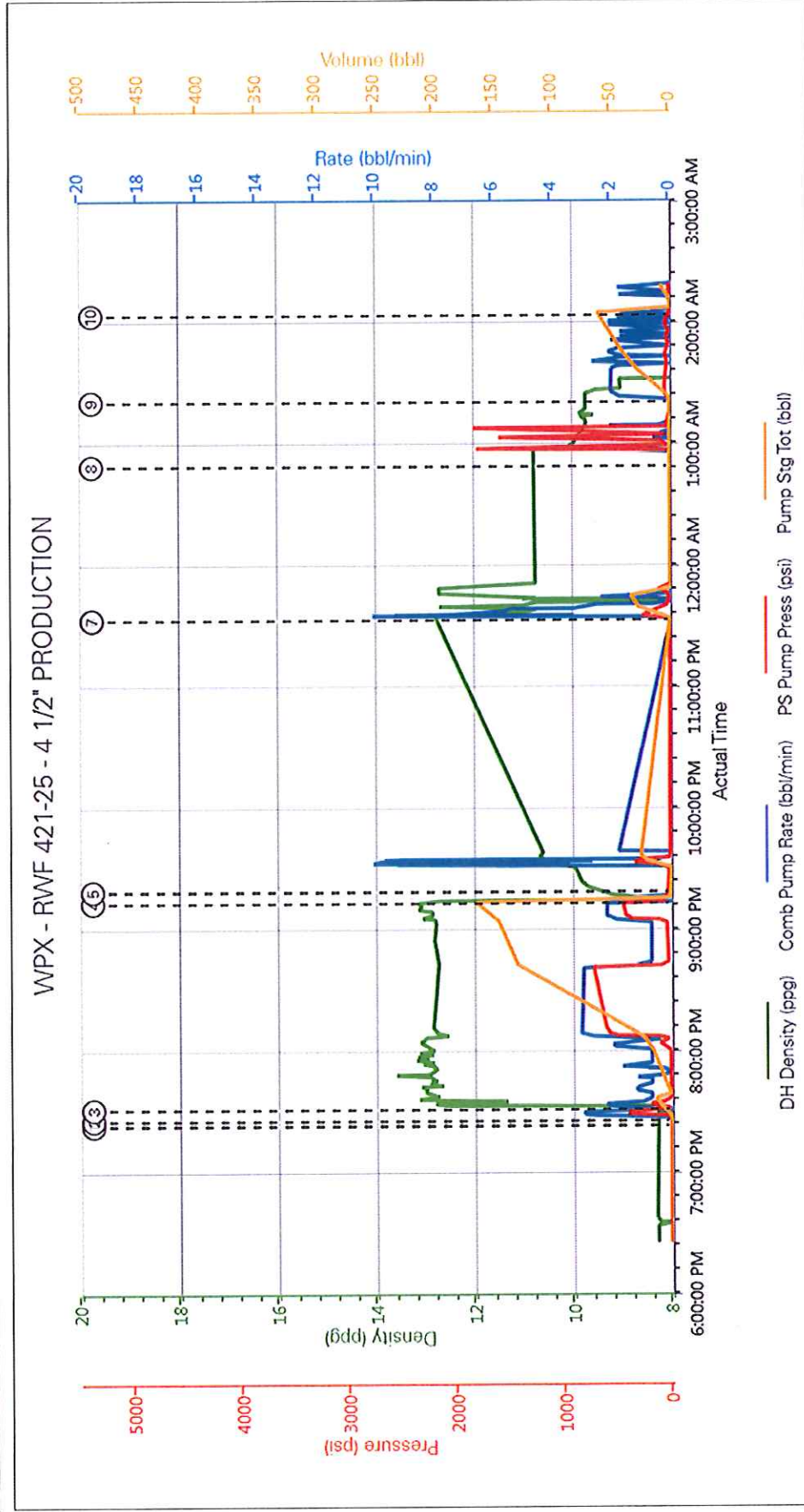
Type	Seq No.	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Recirc Density (ppg)	Comment
Event	1	Start Job	4/29/2014	19:25:00	COM5						Topout - 505 sacks G neat - mixed at 12.8 ppg per company rep
Event	2	Pump Water Ahead	4/29/2014	19:27:34	COM5						
Event	3	Pump Tail Cement	4/29/2014	19:33:05	COM5	12.8	3.0	695	174.4		505 sks, 12.8 ppg, 1.92 yield, 10.75 gal/sk
Event	4	Shutdown	4/29/2014	21:15:00	USER						Returns re-established with 50 bbls pumped
Event	5	End Job	4/29/2014	21:20:45	COM5						Approx 8 bbls cement to surface
Event	6	Start Job	4/29/2014	23:34:51	COM5						
Event	7	Prime Pumps	4/29/2014	23:34:55	COM5						
Event	8	Start Job	4/30/2014	00:50:54	COM5						Topout - RGU 522-24-198
Event	9	Pump Cap Cement	4/30/2014	01:22:25	COM5		2.0	54	61.9	15.8	used 61.9 bbls @ 15.8 ppg, 1.15. yield, 5.0 gal/sk = approx 302 sacks used
Event	10	End Job	4/30/2014	02:05:25	COM5						Approx 203 sacks left on site in silo 11749218

## 4.0 Custom Graphs

### 4.1 Custom Graph



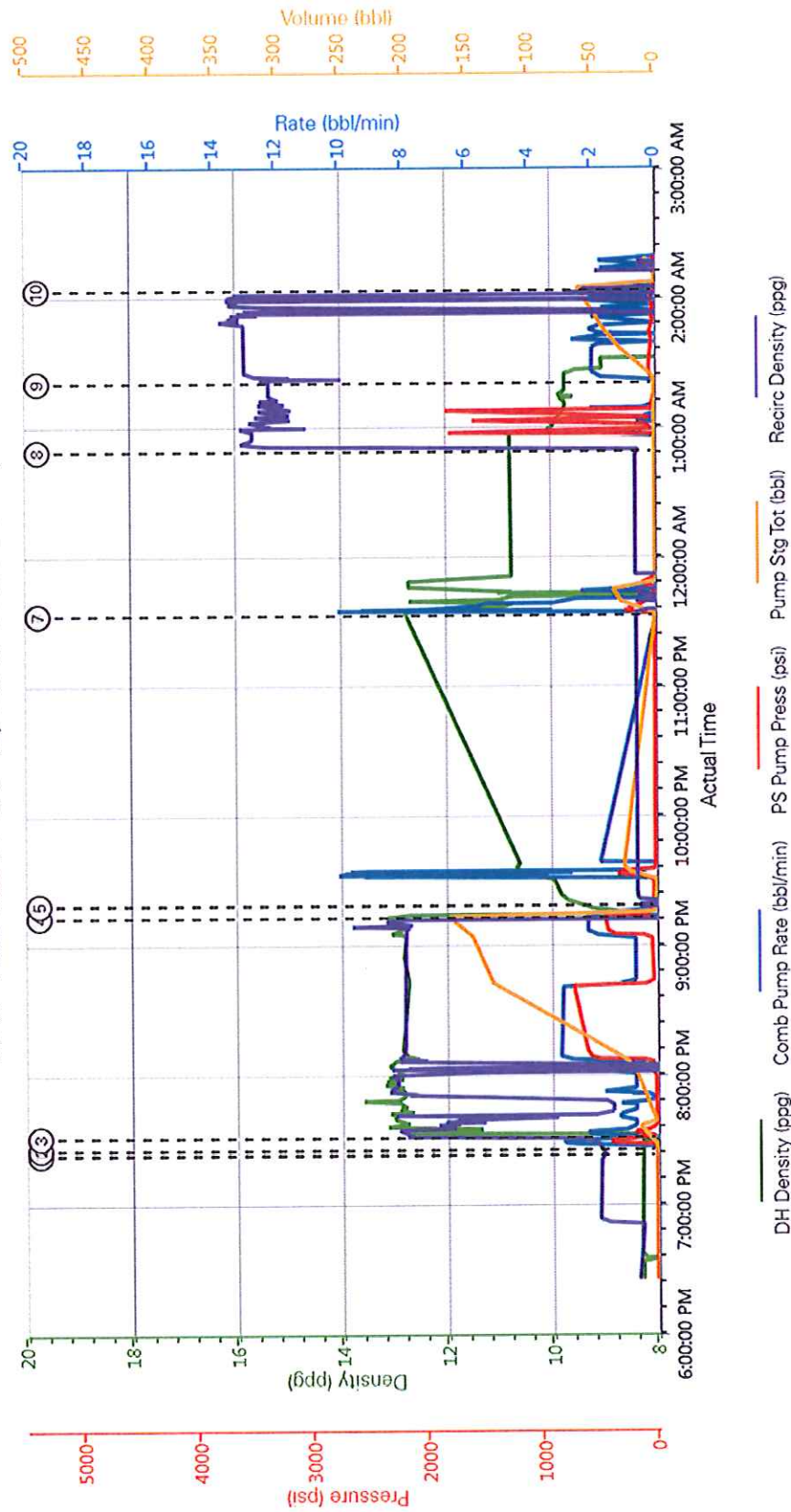
## 4.2 Custom Graph



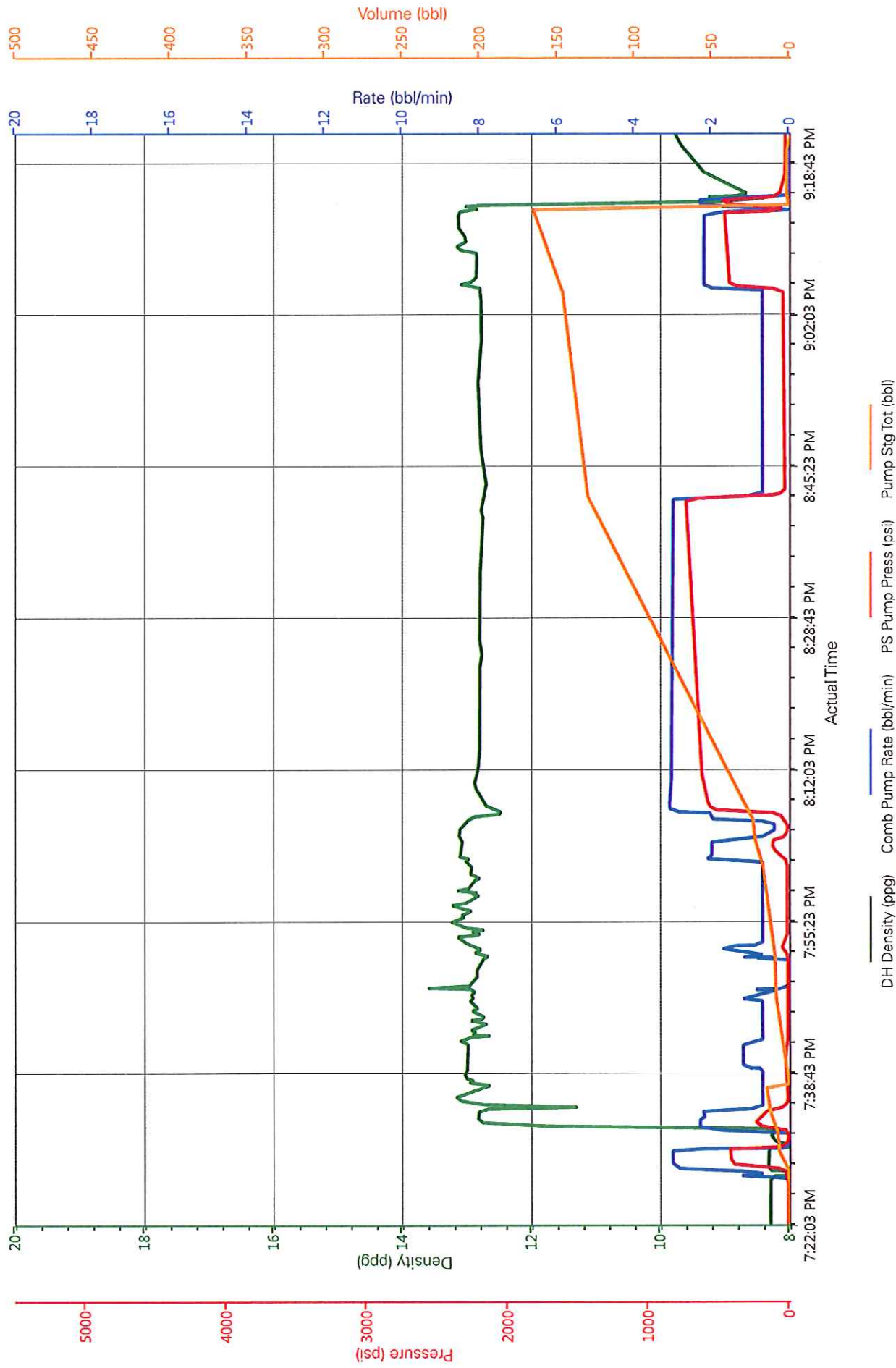


## 4.3 Custom Graph

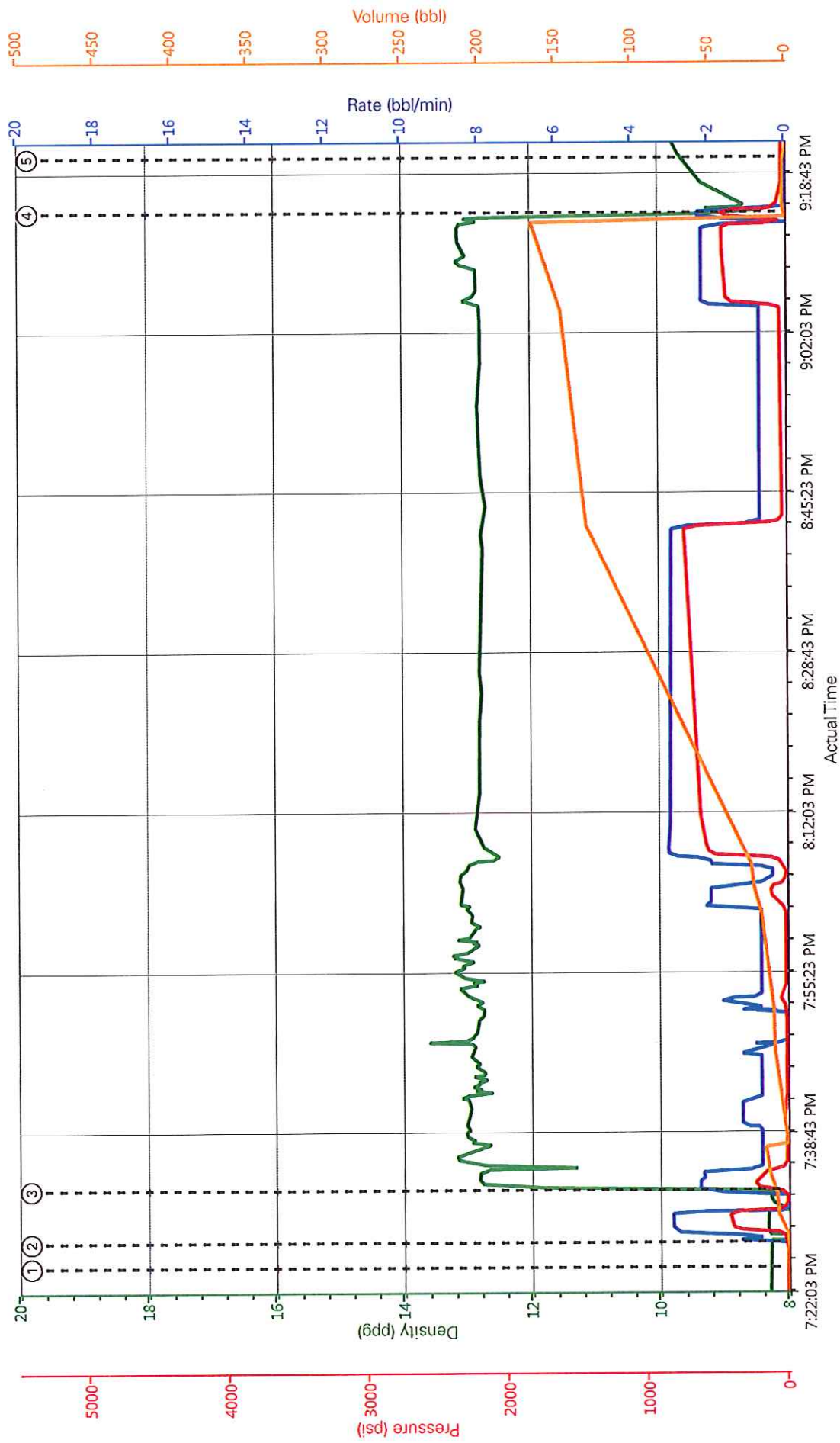
WPX - RGU 522-24-198 - Topout w/ Recirc Density



WPX - RGU 522-24-198 TOPOUT



WPX - RGU 522-24-198 TOPOUT



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

① Start Job 8.3;0;9;0    ② Pump Water Ahead 4.21;0.7;14;0.2    ③ Pump Tail Cement 12.29;2.3;228;9.3    ④ Shutdown 8.88;0;155;2.3    ⑤ End Job 9.68;0;33;2.3

▼ **HALLIBURTON** | iCem® Service

Created: 2014-04-29 18:23:17, Version: 3.0.121

Edit

Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS  
Representative: Ted Sagsdale

Job Date: 4/29/14

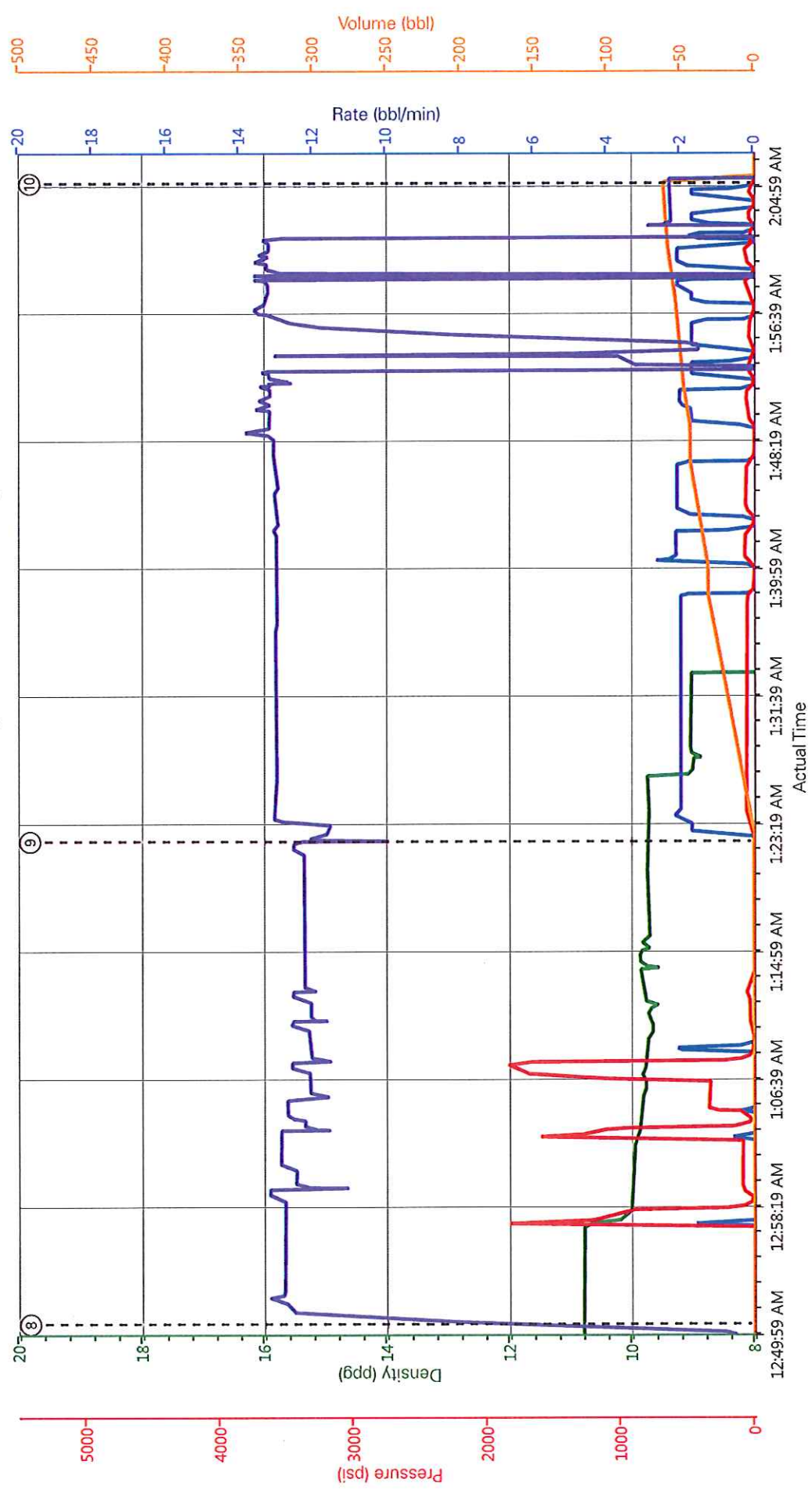
Well: RGU 522-24-198

Sales Order #: 901301389

Elite #4: Ed Deussen / Rob Eickhoff



WPX - RGU 522-24-198 - Topout w/ Recirc Density



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

- ① Start Job 8.3;0.9;0.04
- ② Pump Water Ahead 4.21;0.7;14.0;2.9.18
- ③ Pump Tail Cement 12.29;2.3;228;9.3;12.76
- ④ Shutdown 8.88;0.155;2.3;-0.01
- ⑤ End Job 9.68;0.33;2.3;8.32
- ⑥ Start Job 12.77;7.6;153;2.4;8.38
- ⑦ Prime Pumps 12.77;10.1;277;3.8.38
- ⑧ Start Job 10.8;0.3;0.13.14
- ⑨ Pump Cap Cement 9.73;0.0;0.15.16
- ⑩ End Job -1.97;0.0;61.9;9.38

➤ **HALLIBURTON** | iCem® Service

Created: 2014-04-29 18:23:17, Version: 3.0.121

Edit

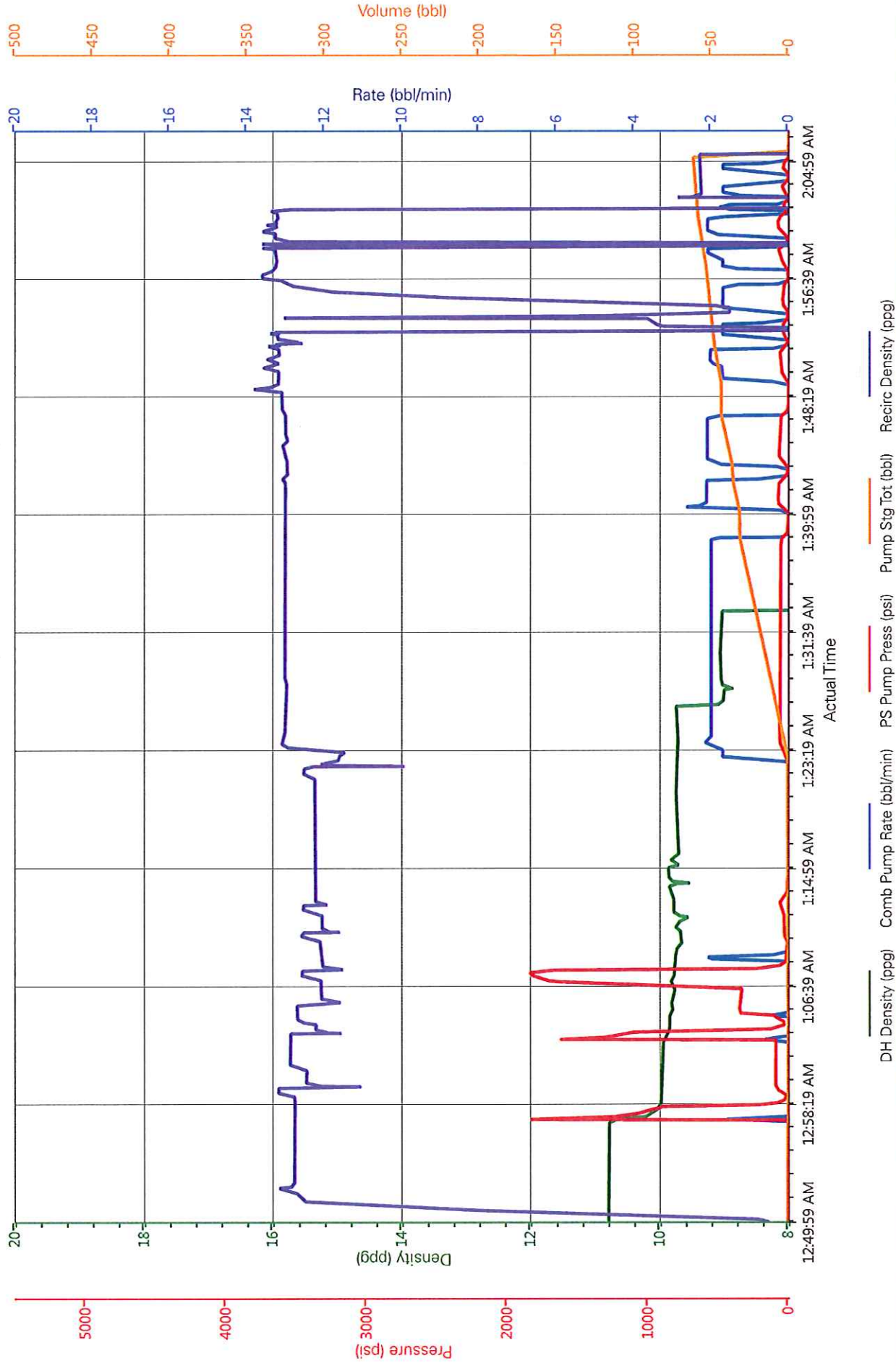
Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS  
Representative: Ted Ragsdale

Job Date: 4-30-14  
Sales Order #: 901301389

Well: RGU 522-24-198  
Elite #4: Ed Deussen / Rob Eickhoff



WPX - RGU 522-24-198 - Topout w/ Recirc Density



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Created: 2014-04-29 18:23:17, Version: 3.0.121

Edit

Customer: WPX ENERGY ROCKY MOUNTAIN LLC-  
EBUS

Job Date : 4-30-14

Well : RGU 522-24-198

Representative : Ted Ragsdale

Sales Order # : 901301389

Elite #4 : Ed Deussen / Rob Eickhoff

# HALLIBURTON

## Water Analysis Report

Company: WPX  
Submitted by: ED DEUSSEN  
Attention: J.TROUT  
Lease: FED RGU  
Well #: 522-24-198

Date: 4/29/2014  
Date Rec.: 4/29/2014  
S.O.#: 901301389  
Job Type: SURFACE

Specific Gravity	<i>MAX</i>	<b>1</b>
pH	<i>8</i>	<b>7.5</b>
Potassium (K)	<i>5000</i>	<b>200 Mg / L</b>
Calcium (Ca)	<i>500</i>	<b>250 Mg / L</b>
Iron (FE2)	<i>300</i>	<b>0 Mg / L</b>
Chlorides (Cl)	<i>3000</i>	<b>0 Mg / L</b>
Sulfates (SO <sub>4</sub> )	<i>1500</i>	<b>&lt;200 Mg / L</b>
Temp	<i>40-80</i>	<b>43 Deg</b>
Total Dissolved Solids		<b>340 Mg / L</b>

Respectfully: ED DEUSSEN

Title: CEMENTING SUPERVISOR

Location: Grand Junction, CO

**NOTICE:**

This report is limited to the described sample tested. Any person using or relying on this report agrees that Halliburton shall not be liable for any loss or damage whether due to act or omission resulting from such report or its use.

<b>Sales Order #:</b> 0901301389	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 4/30/2014
<b>Customer:</b> WPX ENERGY ROCKY MOUNTAIN LLC-EBUS		<b>Job Type (BOM):</b> CMT MULTIPLE STAGES BOM
<b>Customer Representative:</b> TED RAGSDALE		<b>API / UWI: (leave blank if unknown)</b> 05-103-12080-00
<b>Well Name:</b> FEDERAL		<b>Well Number:</b> 0080359352
<b>Well Type:</b> DIRECTIONAL GAS	<b>Well Country:</b> USA	
<b>H2S Present:</b> No	<b>Well State:</b> COLORADO	<b>Well County:</b> RIO BLANCO

Dear Customer,

We hope that you were satisfied with the service quality of this job performed by Halliburton. It is the aim of our management and service personnel to deliver equipment and service of a standard unmatched in the service sector of the energy industry.

Please take the time to let us know if our performance met with your satisfaction. Please be as critical as possible to ensure we constantly improve our service. Your comments are of great value to us and are intended for the exclusive use of Halliburton.

### CUSTOMER SATISFACTION SURVEY

CATEGORY	CUSTOMER SATISFACTION RESPONSE	
Survey Conducted Date	The date the survey was conducted	4/30/2014
Survey Interviewer	The survey interviewer is the person who initiated the survey.	HB57194
Customer Participation	Did the customer participate in this survey? (Y/N)	Yes
Customer Representative	Enter the Customer representative name	TED RAGSDALE
HSE	Was our HSE performance satisfactory? Circle Y or N	Yes
Equipment	Were you satisfied with our Equipment? Circle Y or N	Yes
Personnel	Were you satisfied with our people? Circle Y or N	Yes
Customer Comment	Customer's Comment	JOB WENT WELL THANKS

CUSTOMER SIGNATURE



<b>Sales Order #:</b> 0901301389	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 4/30/2014
<b>Customer:</b> WPX ENERGY ROCKY MOUNTAIN LLC-EBUS		<b>Job Type (BOM):</b> CMT MULTIPLE STAGES BOM
<b>Customer Representative:</b> TED RAGSDALE		<b>API / UWI: (leave blank if unknown)</b> 05-103-12080-00
<b>Well Name:</b> FEDERAL		<b>Well Number:</b> 0080359352
<b>Well Type:</b> DIRECTIONAL GAS	<b>Well Country:</b> USA	
<b>H2S Present:</b> No	<b>Well State:</b> COLORADO	<b>Well County:</b> RIO BLANCO

### KEY PERFORMANCE INDICATORS

General	
<b>Survey Conducted Date</b> The date the survey was conducted	4/30/2014

Cementing KPI Survey	
<b>Type of Job</b> Select the type of job. (Cementing or Non-Cementing)	0
<b>Select the Maximum Deviation range for this Job</b> What is the highest deviation for the job you just completed? This may not be the maximum well deviation.	Vertical
<b>Total Operating Time (hours)</b> Total Operating Hours Including Rig-up, Pumping, Rig-down. Enter in decimal format.	10
<b>HSE Incident, Accident, Injury</b> HSE Incident, Accident, Injury. This should be recordable incidents only.	No
<b>Was the job purpose achieved?</b> Was the job delivered correctly as per customer agreed design?	Yes
<b>Operating Hours (Pumping Hours)</b> Total number of hours pumping fluid on this job. Enter in decimal format.	6
<b>Customer Non-Productive Rig Time (hrs)</b> Lost time due to Halliburton in the start, execution, or completion of an ordered service or product, or delays in a follow-on service. Enter in decimal format. 0 if none.	0
<b>Type of Rig Classification Job Was Performed</b> Type Of Rig (classification) Job Was Performed On	Drilling Rig (Portable)
<b>Number Of JSAs Performed</b> Number Of Jsas Performed	5
<b>Number of Unplanned Shutdowns</b> Unplanned shutdown is when injection stops for any period of time.	0
<b>Was this a Primary Cement Job (Yes / No)</b>	Yes



<b>Sales Order #:</b> 0901301389	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 4/30/2014
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<b>Customer Representative:</b> TED RAGSDALE		<b>API / UWI: (leave blank if unknown)</b> 05-103-12080-00
<b>Well Name:</b> FEDERAL		<b>Well Number:</b> 0080359352
<b>Well Type:</b> DIRECTIONAL GAS	<b>Well Country:</b> USA	
<b>H2S Present:</b> No	<b>Well State:</b> COLORADO	<b>Well County:</b> RIO BLANCO

Primary Cement Job= Casing job, Liner job, or Tie-back job.	
<b>Did We Run Wiper Plugs?</b>	Top
Did We Run Top And Bottom Casing Wiper Plugs?	
<b>Mixing Density of Job Stayed in Designed Density Range (0-100%)</b>	99
Density Range defined as +/- .20 ppg. Calculation: Total BBLs cement mixed at designed density divided by total BBLs of cement multiplied by 100	
<b>Was Automated Density Control Used?</b>	Yes
Was Automated Density Control (ADC) Used ?	
<b>Pump Rate (percent) of Job Stayed At Designed Pump Rate</b>	99
Pump Rate range defined as +/- 1bbl/min. Calculation: Total BBLs of fluid pumped at the designed rate divided by Total BBLs of fluid pumped, multiplied by 100	
<b>Nbr of Remedial Sqz Jobs Rqd - Competition</b>	0
Number Of Remedial Squeeze Jobs Required After Primary Job Performed By Competition	
<b>Nbr of Remedial Plug Jobs Rqd - HES</b>	0
Number Of Remedial Plug Jobs Needed After Primary Plug Pumped By HES	
<b>Nbr of Remedial Sqz Jobs Rqd - HES</b>	0
Number Of Remedial Squeeze Jobs Required After Primary Job Performed By HES	