

WPX Energy Rocky Mountain LLC- EBUS

PA 441-27

**Nabors 576**

## **Post Job Summary**

# **Cement Surface Casing**

Date Prepared: 12/28/2014  
Job Date: 12/23/2014

Submitted by: Evan Russell – Grand Junction Cement Engineer

## The Road to Excellence Starts with Safety

Sold To #: 300721	Ship To #: 3207586	Quote #:	Sales Order #: 0901956908
Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS	Customer Rep: AL HARTAL		
Well Name: FEDERAL	Well #: PA 441-27	API/UWI #: 05-045-22237-00	
Field: PARACHUTE	City (SAP): RIFLE	County/Parish: GARFIELD	State: COLORADO
Legal Description: 27-6S-95W-2337FNL-647FEL			
Contractor: NABORS DRLG	Rig/Platform Name/Num: NABORS 576		
Job BOM: 7521			
Well Type: DIRECTIONAL GAS			
Sales Person: HALAMERICA\HB50180	Srv Supervisor: Bill Jamison		
Job			

### CIRCULATED 50 BBLS OF CEMENT TO SURFACE

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type			BHST
Job depth MD	2977.82ft		Job Depth TVD
Water Depth			Wk Ht Above Floor 3
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
Casing		9.625	9.001	32.3			0	1478	0	0
Casing		9.625	9.001	32.3		H-40	0	1500		0
Open Hole Section			13.5				0	2995		0

### Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	9.625	1		2980	Top Plug	9.625	1	HES
Float Shoe					Bottom Plug			
Float Collar	9.625	1		2936	SSR plug set			
Insert Float					Plug Container	9.625	1	HES
Stage Tool					Centralizers			

### 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	20	bbl	8.4			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
2	VariCem GJ1	VARICEM (TM) CEMENT	425	sack	12.3	2.38		8	13.77

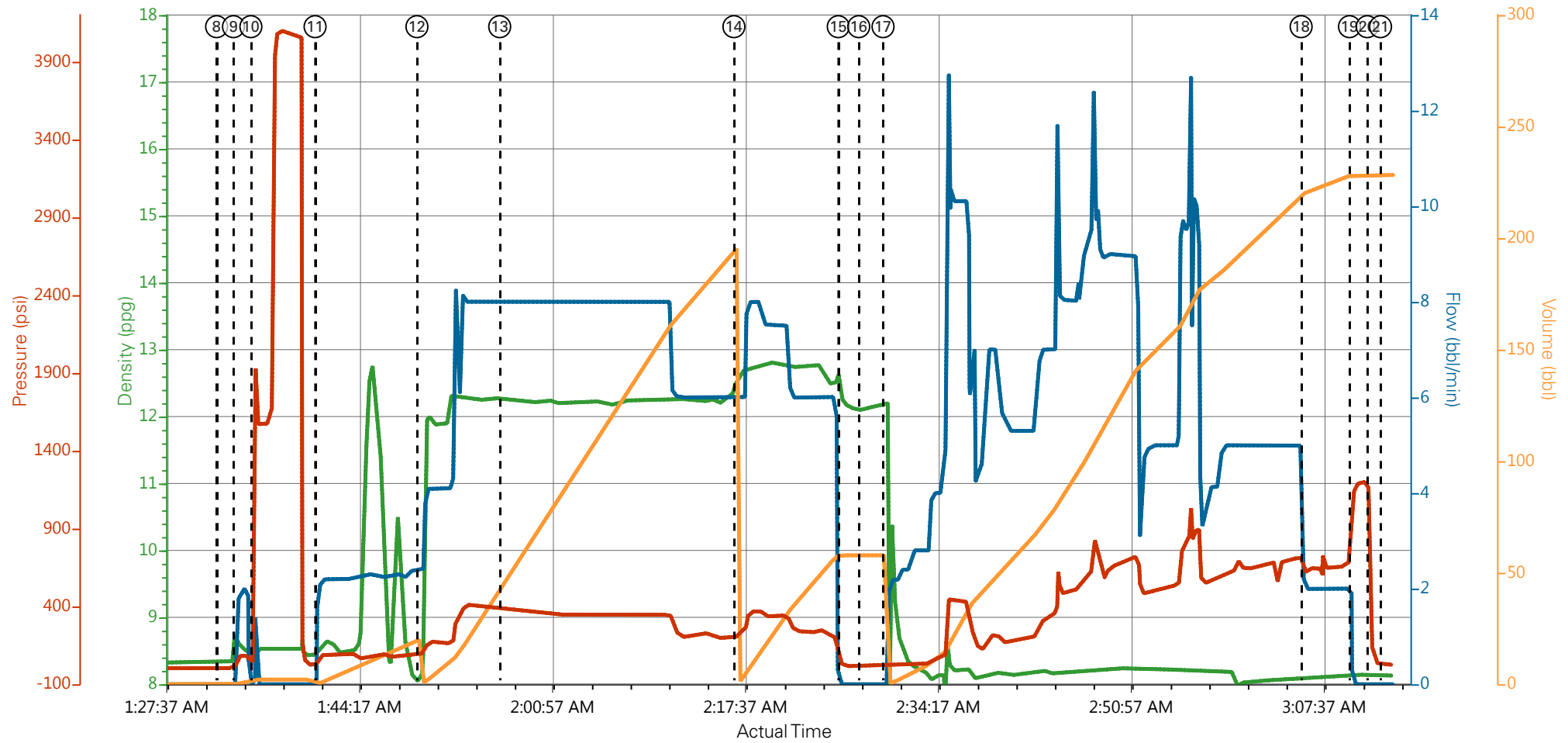
13.70 Gal		FRESH WATER							
0.25 lbm		POLY-E-FLAKE (101216940)							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
3	VariCem GJ1	VARICEM (TM) CEMENT	150	sack	12.8	2.11		8	11.77
0.25 lbm		POLY-E-FLAKE (101216940)							
11.71 Gal		FRESH WATER							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
4	Fresh Water Displacement	Fresh Water Displacement	229	bbl	8.4			8	
Cement Left In Pipe		Amount	44 ft		Reason			Shoe Joint	
Comment									

## 4.5 Job Event Log

Type	Seq. No.	Activity	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	12/22/2014	12:00:00	USER					TD 2995 TP 2977.82 CASING 9.625 32.3 # & 36 # SJ 44 MUD 10.7 SHOE SET @ 2980
Event	2	Depart Yard Safety Meeting	12/22/2014	14:50:00	USER					
Event	3	Crew Leave Yard	12/22/2014	15:00:00	USER					
Event	4	Arrive At Loc	12/22/2014	16:30:00	USER					
Event	5	Assessment Of Location Safety Meeting	12/22/2014	23:00:00	USER					
Event	6	Pre-Rig Up Safety Meeting	12/22/2014	23:30:00	USER					
Event	7	Pre-Job Safety Meeting	12/23/2014	01:00:00	USER					
Event	8	Start Job	12/23/2014	01:32:11	COM2					
Event	9	Prime Pumps	12/23/2014	01:33:39	COM2	8.4	2	94	2	FRESH WATER
Event	10	Test Lines	12/23/2014	01:35:09	COM2			4000		
Event	11	Pump Spacer 1	12/23/2014	01:40:42	COM2	8.4	2	94	20	FRESH WATER
Event	12	Pump Lead Cement	12/23/2014	01:49:30	COM2	12.3	8	400	194	425 SKS YIELD 2.38 WAT/REQ 13.77
Event	13	Check Weight	12/23/2014	01:56:39	COM2					
Event	14	Pump Tail Cement	12/23/2014	02:16:53	COM2	12.8	8	360	58	150 SKS YIELD 2.11 WAT/TREQ 11.77
Event	15	Shutdown	12/23/2014	02:25:54	USER					
Event	16	Drop Top Plug	12/23/2014	02:27:40	COM2					
Event	17	Pump Displacement	12/23/2014	02:29:46	COM2	8.4	8			FRESH WATER
Event	18	Slow Rate	12/23/2014	03:05:53	USER	8.4	2	660	219	
Event	19	Bump Plug	12/23/2014	03:10:04	COM2	8.4		600	229	PRESSURED UP TO 1200 PSI
Event	20	Check Floats	12/23/2014	03:11:36	USER					FLOATS HELD

Type	Seq. No.	Activity	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	21	End Job	12/23/2014	03:12:45	COM2					GOOD CIRCULATION THROUGHOUT JOB
Event	22	Post-Job Safety Meeting (Pre Rig-Down)	12/23/2014	03:20:00	USER					CASING WAS NOT MOVED THROUGHOUT JOB
Event	23	Depart Location Safety Meeting	12/23/2014	03:50:00	USER					CEMENT TO SURFACE 50 BBLs
Event	24	Crew Leave Location	12/23/2014	04:00:00	USER					THANKS FOR USING HALLIBURTON BILL JAMISON & CREW

# WPX PA 441-27 Surface



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

① Call Out n/a;n/a;n/a;n/a	⑧ Start Job 8.33;0;3;0	⑮ Shutdown 12.25;0;27;57.8	22 Post-Job Safety Meeting (Pre Rig-Down) n/a;n/a;n/a;n/a
② Depart Yard Safety Meeting n/a;n/a;n/a;n/a	⑨ Prime Pumps 8.63;1.8;35;0.2	⑯ Drop Top Plug 12.12;0;15;57.8	23 Depart Location Safety Meeting n/a;n/a;n/a;n/a
③ Crew Leave Yard n/a;n/a;n/a;n/a	⑩ Test Lines 8.5;0;38;2.1	⑰ Pump Displacement 12.21;0;15;0	24 Crew Leave Location n/a;n/a;n/a;n/a
④ Arrive At Loc n/a;n/a;n/a;n/a	⑪ Pump Spacer 1 8.51;1.8;54;0.3	⑱ Slow Rate 8.08;2;618;220.2	
⑤ Assessment Of Location Safety Meeting n/a;n/a;n/a;n/a	⑫ Pump Lead Cement 8.04;2.4;99;0	⑲ Bump Plug 8.14;0;1114;228.3	
⑥ Pre-Rig Up Safety Meeting n/a;n/a;n/a;n/a	⑬ Check weight 12.27;8;389;44.8	20 Check Floats 8.13;0;304;228.3	
⑦ Pre-Job Safety Meeting 8.37;0.9;7;0.1	⑭ Pump Tail Cement 12.56;6;207;195.8	21 End Job 8.13;0;26;228.3	

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Created: 2014-12-22 20:41:06, Version: 4.0.248

Edit

Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS

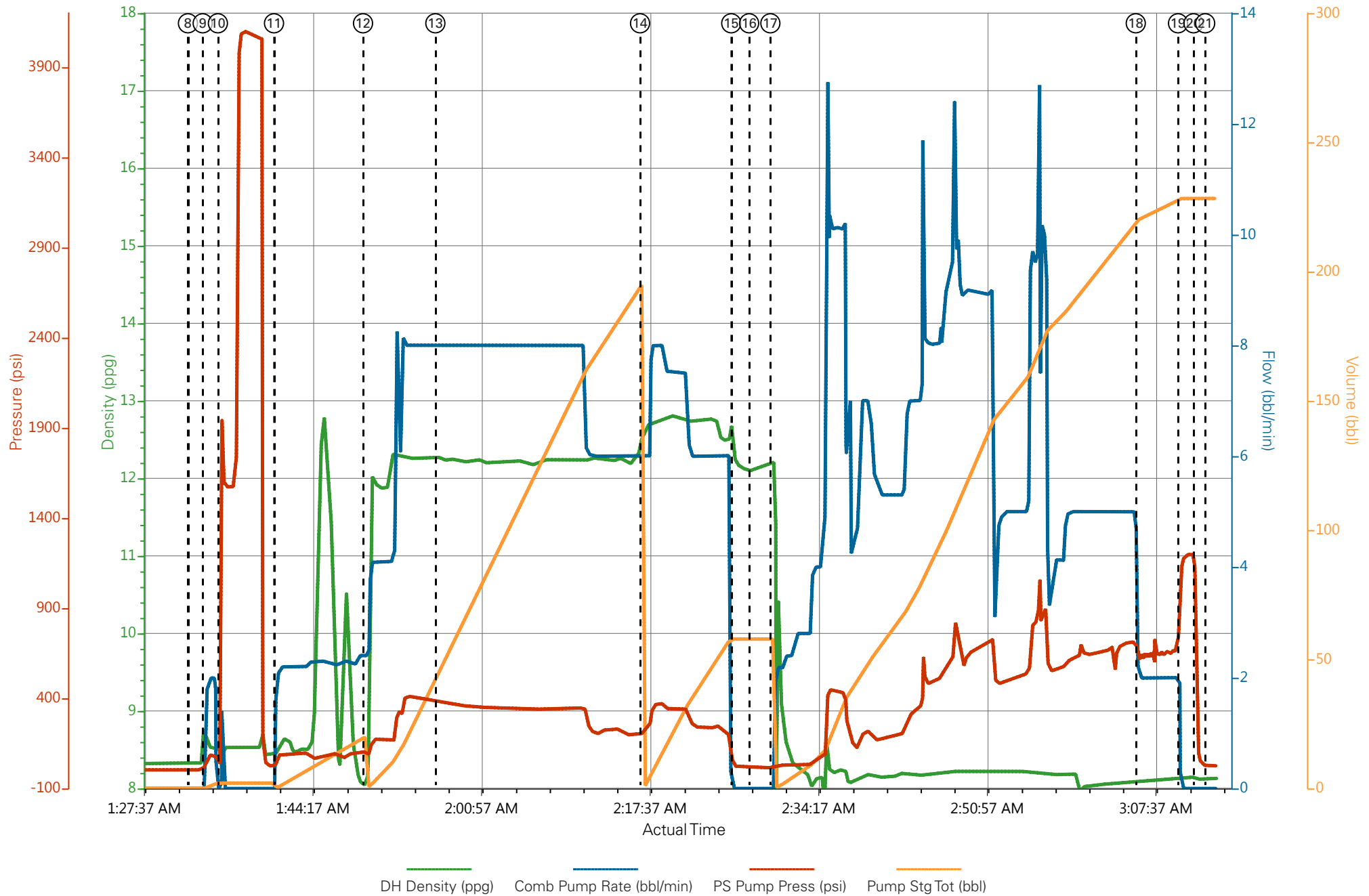
Job Date: 12/23/2014 12:45:06 AM

Well: FEDERAL

Representative: BILL JAMISON

Sales Order #: 901956908

# WPX PA 441-27 Surface



# HALLIBURTON

## Water Analysis Report

Company: WPX

Submitted by: BILL JAMISON

Attention:

Lease FEDERAL

Well # PA 441-27

Date: 12/22/2014

Date Rec.: 12/22/2014

S.O.# 901956908

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>400</b> Mg / L
Calcium (Ca)	<i>500</i>	<b>120</b> Mg / L
Iron (FE2)	<i>300</i>	<b>0</b> Mg / L
Chlorides (Cl)	<i>3000</i>	<b>0</b> Mg / L
Sulfates (SO <sub>4</sub> )	<i>1500</i>	<b>-200</b> Mg / L
Chlorine (Cl <sub>2</sub> )		<b>0</b> Mg / L
Temp	<i>40-80</i>	<b>65</b> Deg
Total Dissolved Solids		<b>470</b> Mg / L

Respectfully: BILL JAMISON

Title: CEMENTING SUPERVISOR

Location: WILLISTON ND

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

<b>Sales Order #:</b> 0901956908	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 12/23/2014
<b>Customer:</b> WPX ENERGY ROCKY MOUNTAIN LLC-EBUS		<b>Job Type (BOM):</b> CMT SURFACE CASING BOM
<b>Customer Representative:</b>		<b>API / UWI: (leave blank if unknown)</b> 05-045-22237-00
<b>Well Name:</b> FEDERAL		<b>Well Number:</b> 0080244847
<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> GARFIELD

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	12/23/2014
Survey Interviewer	The survey interviewer is the person who initiated the survey.	HAL9235
Customer Participation	Did the customer participate in this survey? (Y/N)	No
Customer Representative	Enter the Customer representative name	
HSE	Was our HSE performance satisfactory? Circle Y or N	
Equipment	Were you satisfied with our Equipment? Circle Y or N	
Personnel	Were you satisfied with our people? Circle Y or N	
Customer Comment	Customer's Comment	

<b>CUSTOMER SIGNATURE</b>
---------------------------

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### KEY PERFORMANCE INDICATORS

General	
<b>Survey Conducted Date</b>	12/23/2014
The date the survey was conducted	

Cementing KPI Survey	
<b>Type of Job</b>	0
Select the type of job. (Cementing or Non-Cementing)	
<b>Select the Maximum Deviation range for this Job</b>	Vertical
What is the highest deviation for the job you just completed? This may not be the maximum well deviation.	
<b>Total Operating Time (hours)</b>	5
Total Operating Hours Including Rig-up, Pumping, Rig-down. Enter in decimal format.	
<b>HSE Incident, Accident, Injury</b>	No
HSE Incident, Accident, Injury. This should be recordable incidents only.	
<b>Was the job purpose achieved?</b>	Yes
Was the job delivered correctly as per customer agreed design?	
<b>Pumping Hours</b>	2
Total number of hours pumping fluid on this job. Enter in decimal format.	
<b>Type of Rig Classification Job Was Performed</b>	Drilling Rig (Portable)
Type Of Rig (classification) Job Was Performed On	
<b>Number Of JSAs Performed</b>	5
Number Of Jsas Performed	
<b>Was this a Primary Cement Job (Yes / No)</b>	Yes
Primary Cement Job= Casing job, Liner job, or Tie-back job.	
<b>Number of Unplanned Shutdowns</b>	0
Unplanned shutdown is when injection stops for any period of time.	
<b>Customer Non-Productive Rig Time (hrs)</b>	0

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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.	
<b>Was the non productive time or the unplanned shutdown caused by a problem with a piece of equipment?</b> Was the non productive time or the unplanned shutdown caused by a problem with a piece of equipment?	No
<b>Did We Run Wiper Plugs?</b> Did We Run Top And Bottom Casing Wiper Plugs?	Top
<b>If a top plug was run, was the plug bumped? (Yes/No/N/A)</b> If a top plug was run, was the plug bumped? (Yes/No/N/A)	Yes
<b>If applicable, was Halliburton float equipment used? (Yes/No/N/A)</b> If applicable, was Halliburton float equipment used? (Yes/No/N/A)	No
<b>If applicable, did the floats hold? (Yes/No/N/A)</b> If applicable, did the floats hold? (Yes/No/N/A)	Yes
<b>Mixing Density of Job Stayed in Designed Density Range (0-100%)</b> Density Range defined as +/- .20 ppg. Calculation: Total BBLs cement mixed at designed density divided by total BBLs of cement multiplied by 100	98
<b>Pump Rate (percent) of Job Stayed At Designed Pump Rate</b> 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	98
<b>If applicable, were there returns throughout the job? (Yes/No/N/A)</b> If applicable, were there returns throughout the job? (Yes/No/N/A)	Yes
<b>Nbr of Remedial Plug Jobs Rqd - HES</b> Number Of Remedial Plug Jobs Needed After Primary Plug Pumped By HES	0
<b>Nbr of Remedial Sqz Jobs Rqd - HES</b> Number Of Remedial Squeeze Jobs Required After Primary Job Performed By HES	0