

**HALLIBURTON**

---

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

---

**Federal RG 412-14-298  
SULFUR CREEK  
Rio Blanco County , Colorado**

## **Cement Multiple Stages**

**03-Dec-2013**

## **Post Job Report**

*The Road to Excellence Starts with Safety*

Sold To #: 300721	Ship To #: 3124396	Quote #:	Sales Order #: 900933045
Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS	Customer Rep: Ragsdale, Ted		
Well Name: Federal RG	Well #: 412-14-298	API/UWI #: 05-103-11795	
Field: SULFUR CREEK	City (SAP): MEEKER	County/Parish: Rio Blanco	State: Colorado
Lat: N 39.881 deg. OR N 39 deg. 52 min. 49.861 secs.	Long: W 108.367 deg. OR W -109 deg. 37 min. 59.171 secs.		
Contractor: CYCLONE 29	Rig/Platform Name/Num: Cyclone 29		
Job Purpose: Cement Multiple Stages			
Well Type: Development Well	Job Type: Cement Multiple Stages		
Sales Person: MAYO, MARK	Srv Supervisor: CASTILLO, FRANCISCO	MBU ID Emp #: 513620	

**Job Personnel**

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
BROWN, JUSTIN Michael	10	549296	CASTILLO, FRANCISCO P	10	513620	MARTIN, DILLON Ray	10	478664
SINCLAIR, DAN J	10	338784						

**Equipment**

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10616651C	60 mile	11021972	60 mile	11259884	60 mile	11360871	60 mile
11808827	60 mile						

**Job Hours**

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
12/3/13	10	3.5						

**TOTAL** Total is the sum of each column separately

Job					Job Times			
Formation Name					Date	Time	Time Zone	
Formation Depth (MD)	Top	SURFACE	Bottom	3130	Called Out	02 - Dec - 2013	20:45	MST
Form Type		BHST		115 degF	On Location	03 - Dec - 2013	01:45	MST
Job depth MD	3120. ft	Job Depth TVD	3018. ft		Job Started	03 - Dec - 2013	06:53	MST
Water Depth		Wk Ht Above Floor	3. ft		Job Completed	03 - Dec - 2013	10:20	GMT
Perforation Depth (MD)	From		To		Departed Loc	03 - Dec - 2013	12:00	MST

**Well Data**

Description	New / Used	Max pressure psig	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
-------------	------------	-------------------	---------	-------	---------------	--------	-------	-----------	--------------	------------	---------------

**Tools and Accessories**

Type	Size	Qty	Make	Depth	Type	Size	Qty	Make	Depth	Type	Size	Qty	Make
Guide Shoe					Packer					1 <sup>st</sup> STG Plug	9.625	1	WTF
Float Shoe	9.625	1	WTF	3120	Bridge Plug					Closing Plug	9.625	1	WTF
Float Collar	9.625	1	WTF	3091.19	Retainer					SSR plug set			
Insert Float										Plug Container	9.625	1	WTF
Stage Tool	9.625	1	WTF	1256.08						Centralizers	9.625	1	13

**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/sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk		

Stage/Plug #: 1													
Fluid #	Stage Type	Fluid Name			Qty	Qty uom	Mixing Density lbm/gal	Yield ft3/sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk		

Stage/Plug #: 1									
1	Fresh Water Spacer		40.00	bbl	8.33	.0	.0	4	
2	1st Stage HLC Lead Cement	ECONOCEM (TM) SYSTEM (452992)	530.0	sacks	12.8	1.77	9.34	7	9.34
9.34 Gal		FRESH WATER							
3	1st Stage Varicem Tail Cement	VARICEM (TM) CEMENT (452009)	200.0	sacks	12.8	1.96	10.95	7	10.95
0.3 lbm		POLY-E-FLAKE (101216940)							
10.95 Gal		FRESH WATER							
4	Displacement		239.00	bbl	8.33	.0	.0	8	
5	Fresh Water Spacer		20.00	bbl	8.33	.0	.0	4	
6	2nd Stage VariCem Cement	VARICEM (TM) CEMENT (452009)	730.0	sacks	12.8	1.96	10.95	6	10.95
0.3 lbm		POLY-E-FLAKE (101216940)							
10.95 Gal		FRESH WATER							
7	Displacement		97.00	bbl	8.33	.0	.0	8	
Calculated Values		Pressures		Volumes					
Displacement	239	Shut In: Instant		Lost Returns	PARTIAL	Cement Slurry	492	Pad	
Top Of Cement	SURFACE	5 Min		Cement Returns	70	Actual Displacement	239	Treatment	
Frac Gradient		15 Min		Spacers	60	Load and Breakdown		Total Job	888
Rates									
Circulating	RIG	Mixing	7	Displacement	8	Avg. Job	7.5		
Cement Left In Pipe	Amount	28.81 ft	Reason	Shoe Joint					
Frac Ring # 1 @	ID	Frac ring # 2 @	ID	Frac Ring # 3 @	ID	Frac Ring # 4 @	ID		
The Information Stated Herein Is Correct				Customer Representative Signature					



*The Road to Excellence Starts with Safety*

Sold To #: 300721		Ship To #: 3124396		Quote #:		Sales Order #: 900933045	
Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS				Customer Rep: Ragsdale, Ted			
Well Name: Federal RG			Well #: 412-14-298		API/UWI #: 05-103-11795		
Field: SULFUR CREEK		City (SAP): MEEKER		County/Parish: Rio Blanco		State: Colorado	
Legal Description:							
Lat: N 39.881 deg. OR N 39 deg. 52 min. 49.861 secs.				Long: W 108.367 deg. OR W -109 deg. 37 min. 59.171 secs.			
Contractor: CYCLONE 29			Rig/Platform Name/Num: Cyclone 29				
Job Purpose: Cement Multiple Stages					Ticket Amount:		
Well Type: Development Well			Job Type: Cement Multiple Stages				
Sales Person: MAYO, MARK			Srv Supervisor: CASTILLO, FRANCISCO			MBU ID Emp #: 513620	

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	12/02/2013 20:45							ON LOCATION TIME 02:30 HRS
Pre-Convoy Safety Meeting	12/02/2013 22:50							ALL HES PERSONEL
Crew Leave Yard	12/02/2013 23:00							
Arrive At Loc	12/03/2013 01:45							RIG WAS STILL RUNNING CASING/LANDED CASING 04:20 AM/CIRCULATED WELL FOR 2:00 HRS
Assessment Of Location Safety Meeting	12/03/2013 02:00							ALL HES PERSONEL
Rig-Up Equipment	12/03/2013 02:10							1-ELITE, 1-660 BULK TRUCKS, 2-1700 CUFT 2" PUMPING IRON, 9.625" PLUG CONTAINER AND QUICKLATCH
Rig-Up Completed	12/03/2013 02:45							
Pre-Job Safety Meeting	12/03/2013 06:40							ALL HES PERSONEL AND RIG CREW
Start Job	12/03/2013 06:53							TD-3120', OH-14.75" TO 1200', OH-13.5" TO 3120', SJ-28.81', FC-3091.19', CSG-9.625", 36#, J-55, DV TOOL-1256.08', MUD-8.4 PPG, FV-47, PV-17, YP-14, pH-9.5, TEMP-85
Pump Water	12/03/2013 06:54		2	2			87.0	FILL LINES

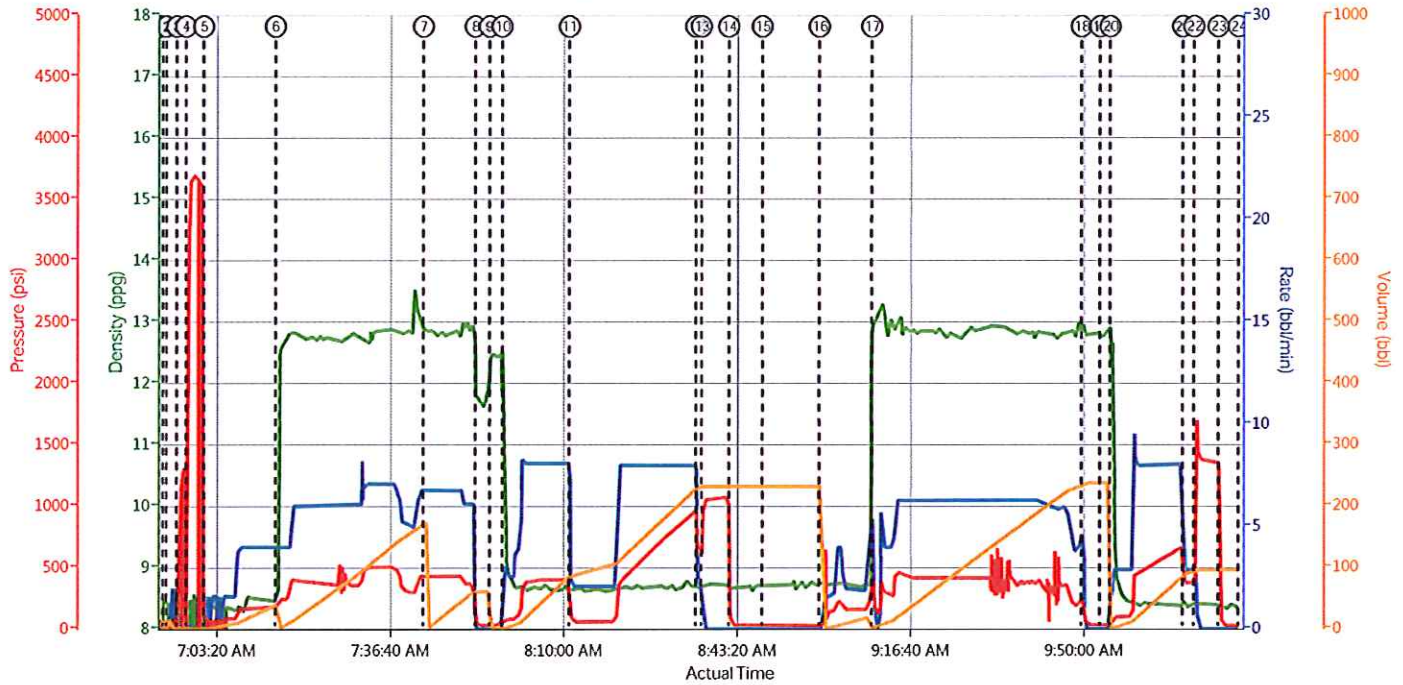
Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pressure Test	12/03/2013 06:56		0.2	0.2				STALL OUT TEST WITH 1317 PSI
Pressure Test	12/03/2013 06:57		0.2	0.2				PRESSURE TEST LINES WITH 3711 PSI
Pump Spacer	12/03/2013 07:01		4	40			183.0	FIRST 10 BBLS WERE PUMPED AT 2 BPM WITH 35 PSI WERE BATCHING UP CEMENT SLURRY
Pump Lead Cement	12/03/2013 07:15		7	167			500.0	530 SKS, 12.8 PPG, 1.77 FT3/SK, 9.34 GAL/SK, SETUP TIME 5:20 HRS AT 70 BC
Pump Tail Cement	12/03/2013 07:43		7	70			421.0	200 SKS, 12.8 PPG, 1.96 FT3/SK, 10.95 GAL/SK, SETUP TIME 03:43 HRS AT 70 BC
Shutdown	12/03/2013 07:53							
Drop Plug	12/03/2013 07:56							VERIFIED BY DRILLER
Pump Displacement	12/03/2013 07:58		8	87			970.0	SLOWED DOWN TO 2 BPM AT 87 BBLS WITH 403 PSI, FOR 20 BBLS TO PASS THROUGH THE TOOL
Slow Rate	12/03/2013 08:11		2	20			63.0	SLOW RATE TO PASS THROUGH DV TOOL.
Pump Displacement	12/03/2013 08:33		8	122			970.0	FRESH WATER
Slow Rate	12/03/2013 08:35		2	10			650.0	
Bump Plug	12/03/2013 08:37			239			1067.0	CIRCULATED 50 BBLS/159 SKS OF CEMENT TO SURFACE FROM 1ST STAGE
Drop Opening Device For Multiple Stage Cementer	12/03/2013 08:48							
Pump Spacer	12/03/2013 08:59		4	20			375.0	OPENED TOOL WITH 642 PSI
Pump Cement	12/03/2013 09:09		6	254.8			418.0	730 SKS, 12.8 PPG, 1.96 FT3/SK, 10.95 GAL/SK, SETUP TIME 3:43 HRS AT 70 BC
Shutdown	12/03/2013 09:50							
Drop Plug	12/03/2013 09:53							VERIFIED BY DRILLER

## Cementing Job Log

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pump Displacement	12/03/2013 09:55		8	87			667.0	FRESH WATER
Slow Rate	12/03/2013 10:09		3	10			377.0	
Bump Plug	12/03/2013 10:11			97			1360.0	CLOSE DV TOOL / CIRCULATED 70 BBLS/200 SKS OF CEMENT TO SURFACE ON THE 2ND STAGE.
End Job	12/03/2013 10:20							
Safety Meeting - Pre Rig-Down	12/03/2013 10:30							
Rig-Down Completed	12/03/2013 11:45							
Safety Meeting - Departing Location	12/03/2013 11:50							
Depart Location for Service Center or Other Site	12/03/2013 12:00							
Other	12/03/2013 12:01							THAK YOU FOR YOUR BUSINESS FROM JAVIER CASTILLO AND CREW.



# WPX RG 412-14-298 2 STG SURFACE



DH Density (ppg)    Comb Pump Rate (bbl/min)    PS Pump Press (psi)    Pump Stg Tot (bbl)			
• Start Job n/a;n/a;n/a;n/a	• Pump Tail Cement 12.85;6.8;436;0.1	• Bump Plug 8.72;0;1053;232.6	• Drop Plug 12.8;0;36;238.2
• Fill Lines n/a;n/a;n/a;n/a	• Shutdown 11.73;0;33;61.3	• Check Floats 8.68;0;45;232.6	20 Pump Displacement 10.55;2.9;115;1.2
• Stall Out 8.4;0;1141;0	• Drop Plug 12.5;0;37;0	• Drop Opening Device 8.68;0;31;232.6	21 Slow Rate 8.38;2.9;368;90
• Test Lines 0;0;3185;2	• Pump Displacement 9.38;3.1;100;1.6	• Open Tool & Pump Water Spacer 8.79;0;29;0	22 Bump Plug 8.41;0.7;1617;96.2
• Pump Water Spacer 8.39;1.6;62;0.2	• Pass Through Tool 8.69;2.1;71;88.6	• Pump Tail Cement 13.05;0;186;4.2	23 Check Tool/Tool Closed 8.35;0;94;96.2
• Pump Lead Cement 12.08;4;192;1.3	• Slow Rate 8.69;2.1;603;231.2	• Shutdown 12.78;0;103;238.2	24 End Job n/a;n/a;n/a;n/a

▼ HALIBURTON | ICem® Service

Created: 2013-12-03 04:17:06, Version: 2.0.606

Edit

Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS

Job Date: 12/3/2013 6:17:57 AM

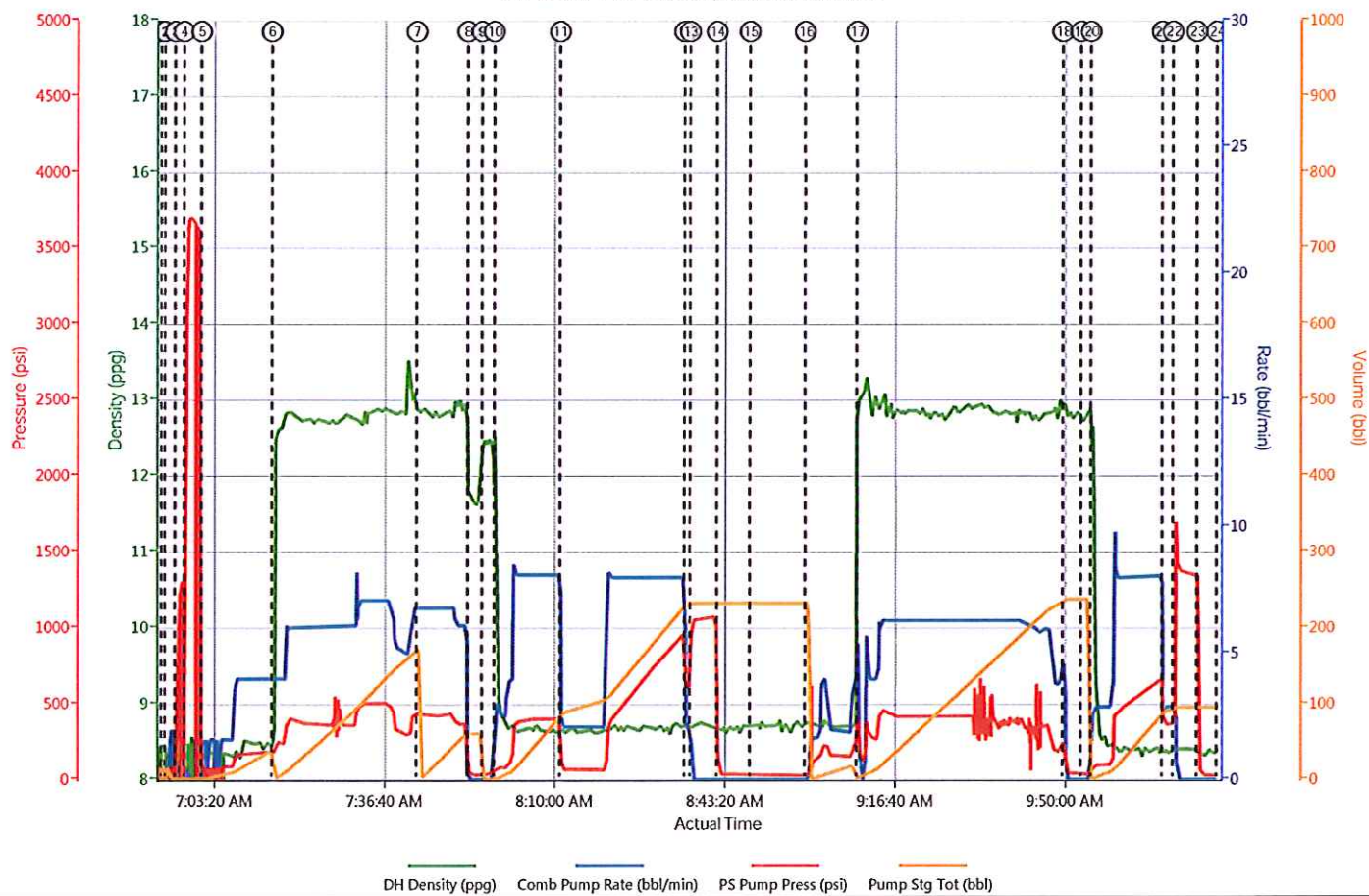
Well: RG 412-14-298

Representative: BEAUDE OAKS

Sales Order #: 900933045

ELITE #4: J. CASTILLO / DAN SINCLAIR

# WPX RG 412-14-298 2 STG SURFACE



HALIBURTON | ICem® Service

Created: 2013-12-03 04:17:06, Version: 2.0.606

Edit

Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS

Job Date: 12/3/2013 6:17:57 AM

Well: RG 412-14-298

Representative: BEAUDE OAKS

Sales Order #: 900933045

ELITE #4: J. CASTILLO / DAN SINCLAIR



# HALLIBURTON

## Water Analysis Report

Company: WPX  
Submitted by: JAVIER CASTILLO  
Attention: J.Trout  
Lease: RG  
Well #: 412-12-298

Date: 12/3/2013  
Date Rec.: 12/3/2013  
S.O.#: 900933045  
Job Type: SURFACE

Specific Gravity	<i>MAX</i>	<b>1</b>
pH	<i>8</i>	<b>7</b>
Potassium (K)	<i>5000</i>	<b>200</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>510</b> Mg / L

Respectfully: JAVIER CASTILLO

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 it

<b>Sales Order #:</b> 900933045	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 12/3/2013
<b>Customer:</b> WPX ENERGY ROCKY MOUNTAIN LLC-EBUS		<b>Job Type (BOM):</b> CMT MULTIPLE STAGES BOM
<b>Customer Representative:</b> BEAUDE OAKS		<b>API / UWI: (leave blank if unknown)</b> 05-103-11795
<b>Well Name:</b> Federal RG		<b>Well Number:</b> 412-14-298
<b>Well Type:</b> Development Well	<b>Well Country:</b> United States of America	
<b>H2S Present:</b>	<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	12/3/2013
Survey Interviewer	The survey Interviewer is the person who initiated the survey.	FRANCISCO CASTILLO (HB85312)
Customer Participation	Did the customer participate in this survey? (Y/N)	Yes
Customer Representative	Enter the Customer representative name	BEAUDE OAKS
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	

CUSTOMER SIGNATURE

<b>Sales Order #:</b> 900933045	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 12/3/2013
<b>Customer:</b> WPX ENERGY ROCKY MOUNTAIN LLC-EBUS		<b>Job Type (BOM):</b> CMT MULTIPLE STAGES BOM
<b>Customer Representative:</b> BEAUDE OAKS		<b>API / UWI: (leave blank if unknown)</b> 05-103-11795
<b>Well Name:</b> Federal RG		<b>Well Number:</b> 412-14-298
<b>Well Type:</b> Development Well	<b>Well Country:</b> United States of America	
<b>H2S Present:</b>	<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	12/3/2013

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.	3.5
<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> 900933045	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 12/3/2013
<b>Customer:</b> WPX ENERGY ROCKY MOUNTAIN LLC-EBUS		<b>Job Type (BOM):</b> CMT MULTIPLE STAGES BOM
<b>Customer Representative:</b> BEAUDE OAKS		<b>API / UWI: (leave blank if unknown)</b> 05-103-11795
<b>Well Name:</b> Federal RG		<b>Well Number:</b> 412-14-298
<b>Well Type:</b> Development Well	<b>Well Country:</b> United States of America	
<b>H2S Present:</b>	<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> Did We Run Top And Bottom Casing Wiper Plugs?	Bottom
<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	95
<b>Was Automated Density Control Used?</b> Was Automated Density Control (ADC) Used ?	Yes
<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	95
<b>Nbr of Remedial Sqz Jobs Rqd - Competition</b> Number Of Remedial Squeeze Jobs Required After Primary Job Performed By Competition	0
<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