

WPX ENERGY ROCKY MOUNTAIN LLC-EBUS

PA 512-2

**Aztec 1000**

## **Post Job Summary**

# **Cement Surface Casing**

Date Prepared: 02/19/2014

Submitted by: Grand Junction Cement Engineering

## The Road to Excellence Starts with Safety

Sold To #: 300721	Ship To #: 3191536	Quote #:	Sales Order #: 901104534
Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS	Customer Rep: Moore, Frank		
Well Name: PA	Well #: 512-2	API/UWI #: 05-045-22141	
Field: PARACHUTE	City (SAP): PARACHUTE	County/Parish: Garfield	State: Colorado
Contractor: Aztec	Rig/Platform Name/Num: 1000		
Job Purpose: Cement Surface Casing			
Well Type: Development Well	Job Type: Cement Surface Casing		
Sales Person: MAYO, MARK	Srv Supervisor: CARTER, ERIC	MBU ID Emp #: 345598	

## Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
CAMPBELL, DAVID Arthur	0.0	544403	CARTER, ERIC Earl	0.0	345598	KATZ, AARON Isaac	0.0	552503
LINN, PAUL Andrew	0.0	479143	ROBINSON, JAMES Daniel	0.0	560123			

## Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10551730C	60 mile	10867322	60 mile	11027039	60 mile	11583933	60 mile
11808841	60 mile						

## Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours

TOTAL	Total is the sum of each column separately							
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## Job

Formation Name					Job Times			
Formation Depth (MD)	Top	Bottom			Called Out	Date	Time	Time Zone
Form Type	BHST				On Location	10 - Feb - 2014	22:00	MST
Job depth MD	906 ft		Job Depth TVD	906 ft	Job Started	11 - Feb - 2014	05:40	MST
Water Depth			Wk Ht Above Floor	5. ft	Job Completed	11 - Feb - 2014	06:34	MST
Perforation Depth (MD)	From	To			Departed Loc	11 - Feb - 2014	07:30	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
OPEN HOLE				13.5				.	920.		
SURFACE CASING	New		9.625	9.001	32.3		H-40	.	906		

## Tools and Accessories

Type	Size	Qty	Make	Depth	Type	Size	Qty	Make	Depth	Type	Size	Qty	Make
Guide Shoe					Packer					Top Plug			
Float Shoe					Bridge Plug					Bottom Plug			
Float Collar					Retainer					SSR plug set			
Insert Float										Plug Container			
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 ft <sup>3</sup> /sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk		

Stage/Plug #: 1

Stage/Plug #: 1									
Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
1	Fresh Water Spacer		30.00	bbl	.	.0	.0	.0	
2	VersaCem Tail Cement	VERSACEM (TM) SYSTEM (452010)	245.0	sacks	12.8	2.11	11.77		11.77
11.77 Gal		FRESH WATER							
3	Fresh Water Displacement		68.00	bbl	8.33	.0	.0	10.0	
Calculated Values		Pressures		Volumes					
Displacement		Shut In: Instant		Lost Returns		Cement Slurry		Pad	
Top Of Cement		5 Min		Cement Returns		Actual Displacement		Treatment	
Frac Gradient		15 Min		Spacers		Load and Breakdown		Total Job	
Rates									
Circulating		Mixing		Displacement		Avg. Job			
Cement Left In Pipe	Amount	44.78 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					

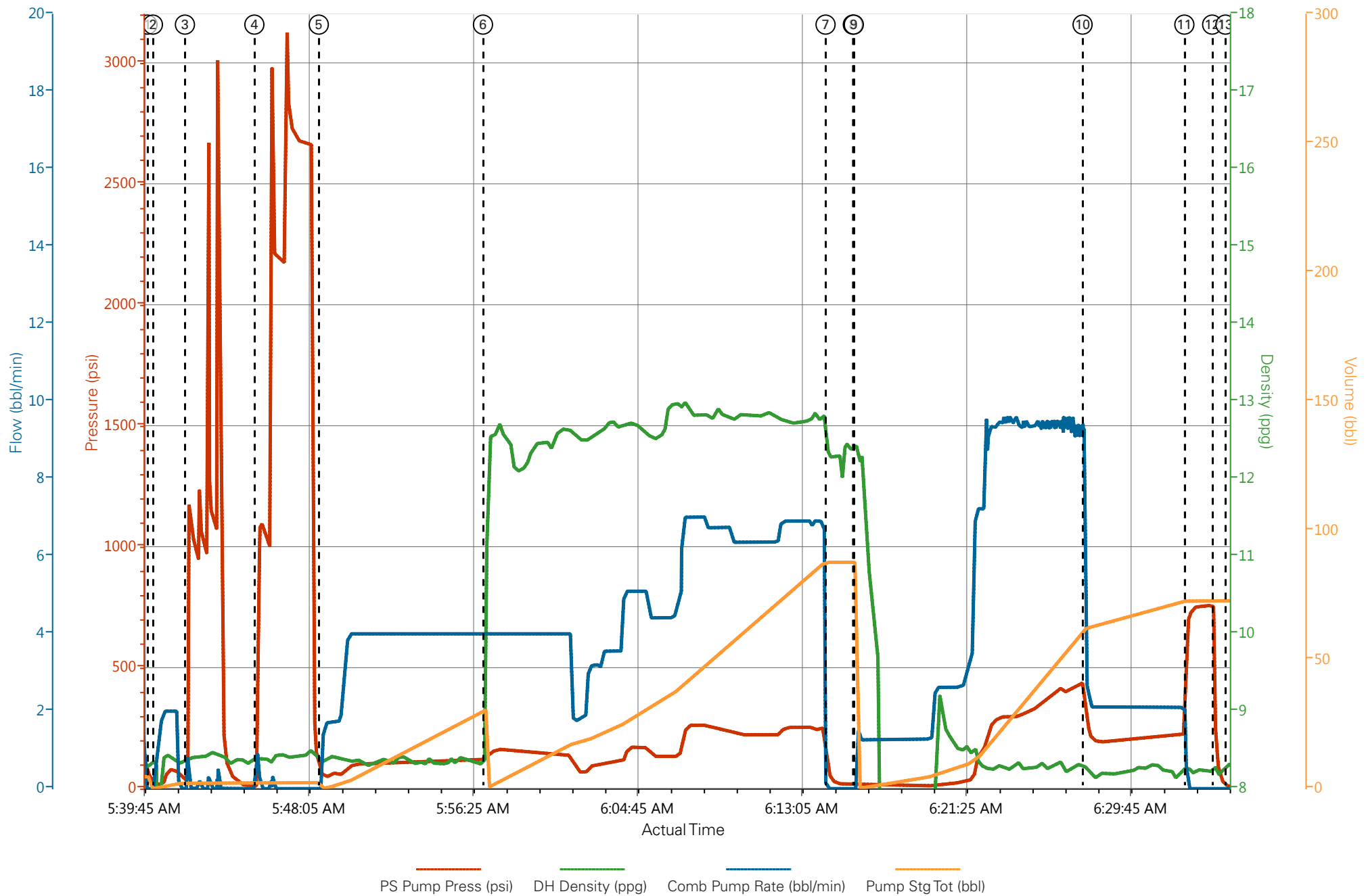
*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 300721		<b>Ship To #:</b> 3191536		<b>Quote #:</b>		<b>Sales Order #:</b> 901104534	
<b>Customer:</b> WPX ENERGY ROCKY MOUNTAIN LLC-EBUS				<b>Customer Rep:</b> Moore, Frank			
<b>Well Name:</b> PA			<b>Well #:</b> 512-2			<b>API/UWI #:</b> 05-045-22141	
<b>Field:</b> PARACHUTE		<b>City (SAP):</b> PARACHUTE		<b>County/Parish:</b> Garfield		<b>State:</b> Colorado	
<b>Legal Description:</b>							
<b>Lat:</b> N 0 deg. OR N 0 deg. 0 min. 0 secs.				<b>Long:</b> E 0 deg. OR E 0 deg. 0 min. 0 secs.			
<b>Contractor:</b> Aztec			<b>Rig/Platform Name/Num:</b> 1000				
<b>Job Purpose:</b> Cement Surface Casing						<b>Ticket Amount:</b>	
<b>Well Type:</b> Development Well			<b>Job Type:</b> Cement Surface Casing				
<b>Sales Person:</b> MAYO, MARK			<b>Srv Supervisor:</b> CARTER, ERIC			<b>MBU ID Emp #:</b> 345598	

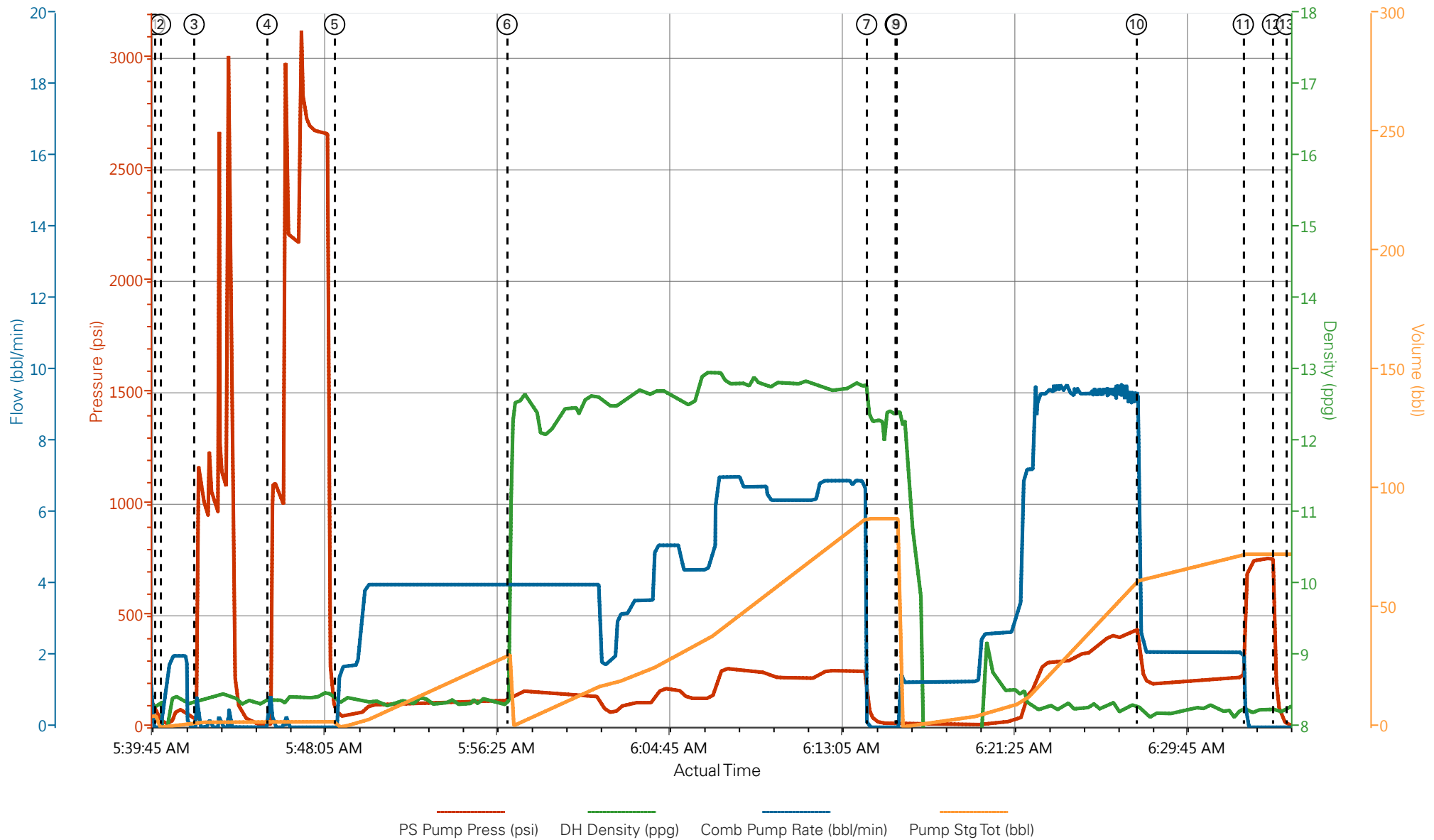
Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	02/10/2014 18:00							
Depart Yard Safety Meeting	02/10/2014 19:50							ATTENDED BY ALL HES CREW
Crew Leave Yard	02/10/2014 20:00							
Arrive At Loc	02/10/2014 22:00							RIG DRILLING
Assessment Of Location Safety Meeting	02/11/2014 04:00							ATTENDED BY ALL HES CREW
Other	02/11/2014 04:10							SPOT EQUIPMENT
Pre-Rig Up Safety Meeting	02/11/2014 04:20							ATTENDED BY ALL HES CREW
Rig-Up Equipment	02/11/2014 04:30							
Pre-Job Safety Meeting	02/11/2014 05:20							ATTENDED BY ALL HES CREW, RIG CREW AND COMPANY REP
Start Job	02/11/2014 05:40							TP 906, TD 920', SJ 44.78', FC 832.04', LJ 36', MW 10.1 PPG, CASING 9.625", 32.3#, H-40, HOLE 13.5", 11 CENTRALIZERS, RIG CIRCULATED FOR 1 HR PRIOR TO JOB AT 14 BPM
Other	02/11/2014 05:40		2	2			80.0	FILL LINES
Test Lines	02/11/2014 05:41							PRESSURED UP TO 2800 PSI, PRESSURE HELD
Pump Spacer	02/11/2014 05:48		4	20			140.0	FRESH WATER

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pump Tail Cement	02/11/2014 05:57		6	92.1			250.0	245 SKS VERSACEM MIXED AT 12.8 PPG, 2.11 YIELD, 11.75 GL/SK
Shutdown	02/11/2014 06:14							
Drop Top Plug	02/11/2014 06:15							PLUG LAUNCHED
Pump Displacement	02/11/2014 06:15		9.5	58.3			440.0	FRESH WATER
Slow Rate	02/11/2014 06:27		2	10			225.0	
Bump Plug	02/11/2014 06:32						760.0	PLUG LANDED
Check Floats	02/11/2014 06:34							FLOATS HELD
End Job	02/11/2014 06:34							GOOD CIRCULATION THROUGH OUT JOB, PIPE NOT MOVED DURING JOB, 13 BBLS CEMENT TO SURFACE
Post-Job Safety Meeting (Pre Rig-Down)	02/11/2014 06:35							ATTENDED BY ALL HES CREW
Rig-Down Equipment	02/11/2014 06:40							
Depart Location Safety Meeting	02/11/2014 07:20							ATTENDED BY ALL HES CREW
Crew Leave Location	02/11/2014 07:30							THANK YOU FOR USING HALLIBURTON CEMENT, ERIC CARTER AND CREW.

# WPX - PA 512-2 - SURFACE



# WPX - PA 512-2 - SURFACE



- |                                |                                    |                                 |                                |                         |
|--------------------------------|------------------------------------|---------------------------------|--------------------------------|-------------------------|
| ① Start Job 44;8.31;0;0        | ④ Test Lines 11;8.4;0.9;2.2        | ⑦ Shutdown 67;12.26;0;87.7      | ⑩ Slow Rate 376;8.3;4.2;62.1   | ⑬ End Job 9;8.33;0;72.8 |
| ② Prime Pumps 21;8.32;0.9;0    | ⑤ Pump Spacer 1 58;8.35;0.4;0      | ⑧ Drop Top Plug 15;12.44;0;87.7 | ⑪ Bump Plug 673;8.26;0;72.8    |                         |
| ③ Test Lines 1175;8.35;0.7;2.1 | ⑥ Pump Tail Cement 124;10.71;4;0.1 | ⑨ Pump Displacement 15;12.4;0;0 | ⑫ Check Floats 247;8.27;0;72.8 |                         |

▼ **HALLIBURTON** | iCem® Service

Created: 2014-02-10 23:24:57, Version: 3.0.121

Edit

Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS

Job Date: 2/11/2014 5:02:57 AM

Well: PA 512-2

Representative: FRANK MOORE

Sales Order #: 901104534

ERIC CARTER: ANDREW LINN/ELITE 2

# HALLIBURTON

## Water Analysis Report

Company: WPX

Submitted by: ERIC CARTER

Attention: J.Trout

Lease AZTEC 1000

Well # PA 512-2

Date: 2/19/2014

Date Rec.: 2/19/2014

S.O.# 901104534

Job Type: SURFACE

Specific Gravity	<i>MAX</i>	<i>1</i>
pH	<i>8</i>	<i>7</i>
Potassium (K)	<i>5000</i>	<i>400</i> Mg / L
Hardness	<i>500</i>	<i>425</i> Mg / L
Iron (FE2)	<i>300</i>	<i>0</i> Mg / L
Chlorides (Cl)	<i>3000</i>	<i>500</i> Mg / L
Sulfates (SO <sub>4</sub> )	<i>1500</i>	<i>&lt;200</i> Mg / L
Temp	<i>40-80</i>	<i>40</i> Deg
Total Dissolved Solids		<i>750</i> Mg / L

Respectfully: ERIC CARTER

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> 901104534	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 2/11/2014
<b>Customer:</b> WPX ENERGY ROCKY MOUNTAIN LLC-EBUS		<b>Job Type (BOM):</b> CMT SURFACE CASING BOM
<b>Customer Representative:</b> FRANK MOORE		<b>API / UWI: (leave blank if unknown)</b> 05-045-22141
<b>Well Name:</b> PA		<b>Well Number:</b> 512-2
<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> 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	2/11/2014
Survey Interviewer	The survey interviewer is the person who initiated the survey.	ERIC CARTER (HX15491)
Customer Participation	Did the customer participate in this survey? (Y/N)	Yes
Customer Representative	Enter the Customer representative name	FRANK MOORE
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	

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

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<b>Well Name:</b> PA		<b>Well Number:</b> 512-2
<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> Garfield

*KEY PERFORMANCE INDICATORS*

General	
<b>Survey Conducted Date</b>	2/11/2014
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>	3
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>Operating Hours (Pumping Hours)</b>	1
Total number of hours pumping fluid on this job. Enter in decimal format.	
<b>Customer Non-Productive Rig Time (hrs)</b>	0
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>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>Number of Unplanned Shutdowns</b>	0
Unplanned shutdown is when injection stops for any period of time.	
<b>Was this a Primary Cement Job (Yes / No)</b>	Yes

<b>Sales Order #:</b> 901104534	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 2/11/2014
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<b>Customer Representative:</b> FRANK MOORE		<b>API / UWI: (leave blank if unknown)</b> 05-045-22141
<b>Well Name:</b> PA		<b>Well Number:</b> 512-2
<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> Garfield

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?	Top
<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	93
<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