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**WPX ENERGY ROCKY MOUNTAIN LLC-EBUS**

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**GM 513-1  
RULISON  
Garfield County , Colorado**

**Squeeze Perfs  
02-Jul-2013**

**Post Job Report**

## The Road to Excellence Starts with Safety

Sold To #: 300721	Ship To #: 2403058	Quote #:	Sales Order #: 900562610
Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS	Customer Rep: Dunnick, Brian		
Well Name: GM	Well #: 513-1	API/UWI #:	
Field: RULISON	City (SAP): PARACHUTE	County/Parish: Garfield	State: Colorado
Contractor: WORKOVER	Rig/Platform Name/Num: WORKOVER		
Job Purpose: Squeeze Perfs			
Well Type: Development Well	Job Type: Squeeze Perfs		
Sales Person: MAYO, MARK	Srv Supervisor: PONDER, THOMAS	MBU ID Emp #:	427112

### Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
ATKINSON, STEPHAN Michael	6	513940	LINN, PAUL Andrew	6	479143	PONDER, THOMAS Lynn	6	427112

### Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10567589C	60 mile	10867423	60 mile	11562538	60 mile	11583931	60 mile
11808829	60 mile						

### Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
07/02/2013	6	3						
TOTAL	Total is the sum of each column separately							

### Job

JOB						JOB TIMES				
Formation Name							Date	Time	Time Zone	
Formation Depth (MD)	Top			Bottom		Called Out	02 - Jul - 2013	03:00	MST	
Form Type				BHST		On Location	02 - Jul - 2013	06:00	MST	
Job depth MD	3530. ft			Job Depth TVD		3530. ft	Job Started	02 - Jul - 2013	08:15	MST
Water Depth				Wk Ht Above Floor		3. ft	Job Completed	02 - Jul - 2013	10:25	MST
Perforation Depth (MD)	From			To			Departed Loc	02 - Jul - 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
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### 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	4 1/2	1		3560	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 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 uom	Yield uom	Mix Fluid uom	Rate uom	Total Mix Fluid uom
1	WATER SPACER		10.00	bbl	8.34	.0	.0	2.0	

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	
2	SqueezeCem Tail Cement	SQUEEZECEM (TM) SYSTEM (452971)	35.0	sacks	15.8	1.15	4.98	2.0	4.98	
4.98 Gal		FRESH WATER								
3	Displacement			bbl	8.33	.0	.0	2.0		
Calculated Values		Pressures		Volumes						
Displacement	12	Shut In: Instant		Lost Returns		Cement Slurry	6.1	Pad		
Top Of Cement		5 Min		Cement Returns		Actual Displacement		Treatment		
Frac Gradient		15 Min		Spacers	10	Load and Breakdown		Total Job	28.1	
Rates										
Circulating		Mixing	2	Displacement	2	Avg. Job		2		
Cement Left In Pipe	Amount	0 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> 2403058		<b>Quote #:</b>		<b>Sales Order #:</b> 900562610	
<b>Customer:</b> WPX ENERGY ROCKY MOUNTAIN LLC-EBUS				<b>Customer Rep:</b> Dunnick, Brian			
<b>Well Name:</b> GM			<b>Well #:</b> 513-1			<b>API/UWI #:</b>	
<b>Field:</b> RULISON		<b>City (SAP):</b> PARACHUTE		<b>County/Parish:</b> Garfield		<b>State:</b> Colorado	
<b>Legal Description:</b>							
<b>Lat:</b>				<b>Long:</b>			
<b>Contractor:</b> WORKOVER			<b>Rig/Platform Name/Num:</b> WORKOVER				
<b>Job Purpose:</b> Squeeze Perfs						<b>Ticket Amount:</b>	
<b>Well Type:</b> Development Well			<b>Job Type:</b> Squeeze Perfs				
<b>Sales Person:</b> MAYO, MARK			<b>Srv Supervisor:</b> PONDER, THOMAS			<b>MBU ID Emp #:</b> 427112	

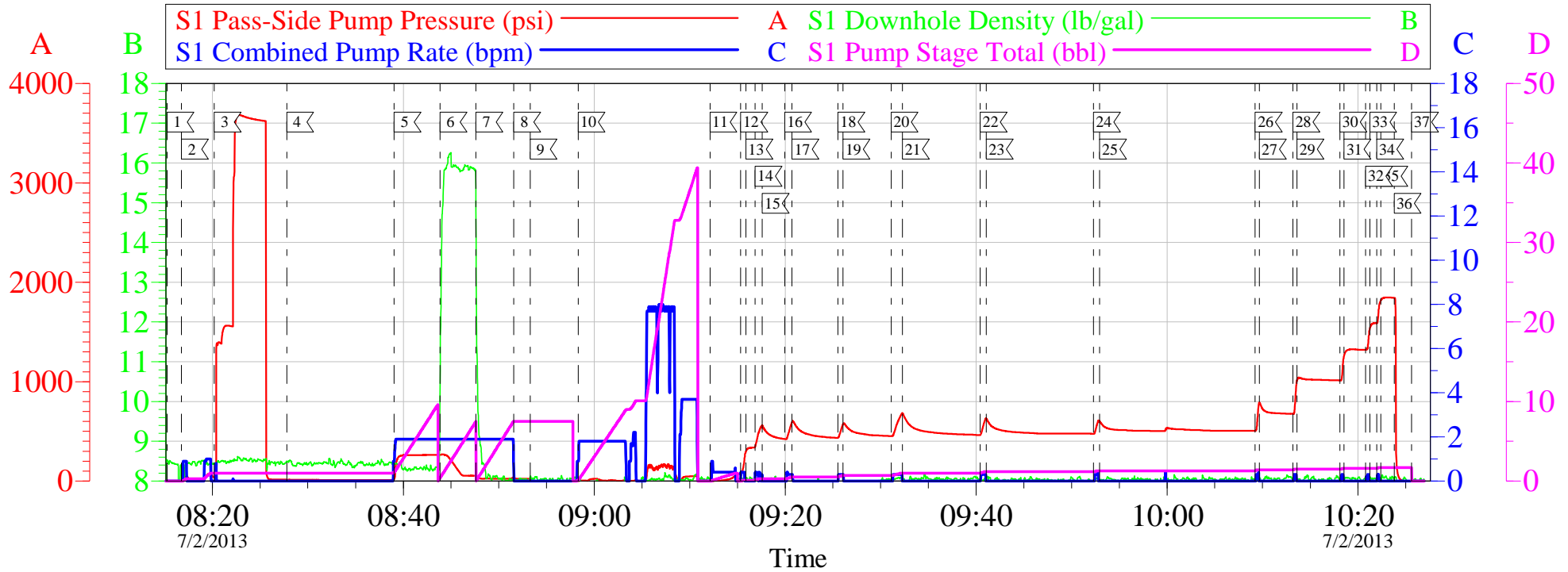
Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	07/02/2013 03:00							
Crew Leave Yard	07/02/2013 04:30							ALL HES PRESENT FOR PRE-CONVOY SAFETY HUDDLE
Arrive At Loc	07/02/2013 06:00							RIG WAS RUNNING IN TUBING WHEN CREW ARRIVED ON LOCATION
Assessment Of Location Safety Meeting	07/02/2013 06:15							CASING- 4 1/2" 11.6#, TUBING- 2 3/8" 4.7# SET @ 3530', BRIDGE PLUG SET @ 3560', HOLES @ 3338', 3370', 3497'
Rig-Up Equipment	07/02/2013 06:30							1-550 PICKUP, 1-ELITE PUMP, 1-660 CUFT BULK TRUCK
Safety Meeting	07/02/2013 08:00							ALL HES PRESENT, RIG CREW PRESENT
Start Job	07/02/2013 08:15		1	1		80.0		FILL LINES
Test Lines	07/02/2013 08:20		0.1	0.1		3683.0		OK PRESSURE TEST
Other	07/02/2013 08:27							MIX CEMENT
Pump Spacer	07/02/2013 08:39		2	9	10	265.0		FRESH WATER
Pump Cement	07/02/2013 08:43		2	6.1		268.0		30 SKS 15.8 PPG 1.15 FT3/SK 4.98 GAL/SK, USED ABOUT 35 SKS OF CEMENT, 15 SKS REMAING ON BULK TRUCK
Activity Description	Date/Time	Cht	Rate bbl/min	Volume bbl		Pressure psig		Comments

		#		Stage	Total	Tubing	Casing	
Pump Displacement	07/02/2013 08:47		2	12		51.0		SHUTDOWN 1 BBL EARLY TO LET PLUG BALANCE
Shutdown	07/02/2013 08:51							RIG PULLED TUBING OUT OF PLUG @ 40' PER MINUTE
Pump Water	07/02/2013 09:12		0.5	1		301.0		FILL WELL, SQUEEZE ON PLUG
Shutdown	07/02/2013 09:15					346.0		HESITATE AS PER CUSTOMER REQUEST
Pump Water	07/02/2013 09:16		0.5	0.25	0.5	323.0		FRESH WATER, SQUEEZE
Shutdown	07/02/2013 09:17					563.0		HESITATE AS PER CUSTOMER REQUEST
Pump Water	07/02/2013 09:19		0.5	0.25	0.75	345.0		FRESH WATER, SQUEEZE
Shutdown	07/02/2013 09:20					592.0		HESITATE AS PER CUSTOMER REQUEST
Pump Water	07/02/2013 09:25		0.5	0.25	1	352.0		FRESH WATER, SQUEEZE
Shutdown	07/02/2013 09:26					604.0		HESITATE AS PER CUSTOMER REQUEST
Pump Water	07/02/2013 09:31		0.5	0.25	1.25	356.0		FRESH WATER, SQUEEZE
Shutdown	07/02/2013 09:32					582.0		HESITATE AS PER CUSTOMER REQUEST
Pump Water	07/02/2013 09:40		0.5	0.25	1.5	347.0		FRESH WATER, SQUEEZE
Shutdown	07/02/2013 09:41					685.0		HESITATE AS PER CUSTOMER REQUEST
Pump Water	07/02/2013 09:52		0.5	0.1	1.6	367.0		FRESH WATER, SQUEEZE
Shutdown	07/02/2013 09:53					631.0		HESITATE AS PER CUSTOMER REQUEST
Pump Water	07/02/2013 10:09		0.5	0.1	1.7	375.0		FRESH WATER, SQUEEZE
Shutdown	07/02/2013 10:09					611.0		HESITATE AS PER CUSTOMER REQUEST
Pump Water	07/02/2013 10:13		0.5	0.1	1.8	788.0		FRESH WATER, SQUEEZE
Shutdown	07/02/2013 10:13					430.0		HESITATE AS PER CUSTOMER REQUEST
Pump Water	07/02/2013 10:18		0.5	0.1	1.9	1041. 0		FRESH WATER, SQUEEZE
Shutdown	07/02/2013 10:18					1324. 0		HESITATE AS PER CUSTOMER REQUEST
Pump Water	07/02/2013 10:20		0.5	0.1	2	1317. 0		FRESH WATER, SQUEEZE
Shutdown	07/02/2013 10:21					1591. 0		HESITATE AS PER CUSTOMER REQUEST

Activity Description	Date/Time	Cht #	Rate bbl/ min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pump Water	07/02/2013 10:21		0.5	0.1	2.1	1589. 0		FRESH WATER, SQUEEZE
Shutdown	07/02/2013 10:22					1846. 0		HESITATE AS PER CUSTOMER REQUEST
Release Tubing Pressure	07/02/2013 10:23					1841. 0		RELEASED TUBING PRESSURE, 1BBL OF FLUID BACK TO THE DISPLACEMENT TANKS
End Job	07/02/2013 10:25							THANK YOU FOR CHOOSING HALLIBURTON, THOMAS PONDER AND CREW

# WPX GM 513-1

## BALANCED PLUG



Local Event Log			
Maximum	SPPP	Maximum	SPPP
1< START JOB	08:15:15 2.000	2< FILL LINES	08:16:46 80.00
4< MIX CEMENT	08:27:47 18.27	5< PUMP H2O SPACER	08:39:02 265.0
7< PUMP H2O DISPLACEMENT	08:47:37 51.00	8< SHUTDOWN	08:51:34 37.00
10< WASH UP PUMP	08:58:19 172.0	11< FILL WELL	09:12:08 75.00
13< HESITATE	09:15:53 346.3	14< SQUEEZE	09:16:51 563.0
16< SQUEEZE	09:19:57 592.2	17< HESITATE	09:20:43 604.0
19< HESITATE	09:26:04 582.0	20< SQUEEZE	09:31:06 684.8
22< SQUEEZE	09:40:25 631.0	23< HESITATE	09:41:03 630.0
25< HESITATE	09:52:56 604.0	26< SQUEEZE	10:09:14 788.0
28< SQUEEZE	10:13:11 1020	29< HESITATE	10:13:37 1041
31< HESITATE	10:18:32 1324	32< SQUEEZE	10:20:48 1540
34< SQUEEZE	10:21:58 1821	35< HESITATE	10:22:24 1846
37< END JOB	10:25:37 0.000		
		3< TEST LINES	08:20:12 3683
		6< PUMP TAIL CEMENT	08:43:51 268.0
		9< POOH	08:53:17 16.00
		12< SQUEEZE	09:15:21 301.0
		15< HESITATE	09:17:36 563.0
		18< SQUEEZE	09:25:31 576.0
		21< HESITATE	09:32:17 685.0
		24< SQUEEZE	09:52:18 611.0
		27< HESITATE	10:09:40 790.0
		30< SQUEEZE	10:18:07 1261
		33< HESITATE	10:21:14 1591
		36< RELEASE TUBING PRESSURE	10:23:47 1843

Customer: WPX  
Well Description: GM 513-1  
Company Rep: JUSTIN SKALLA

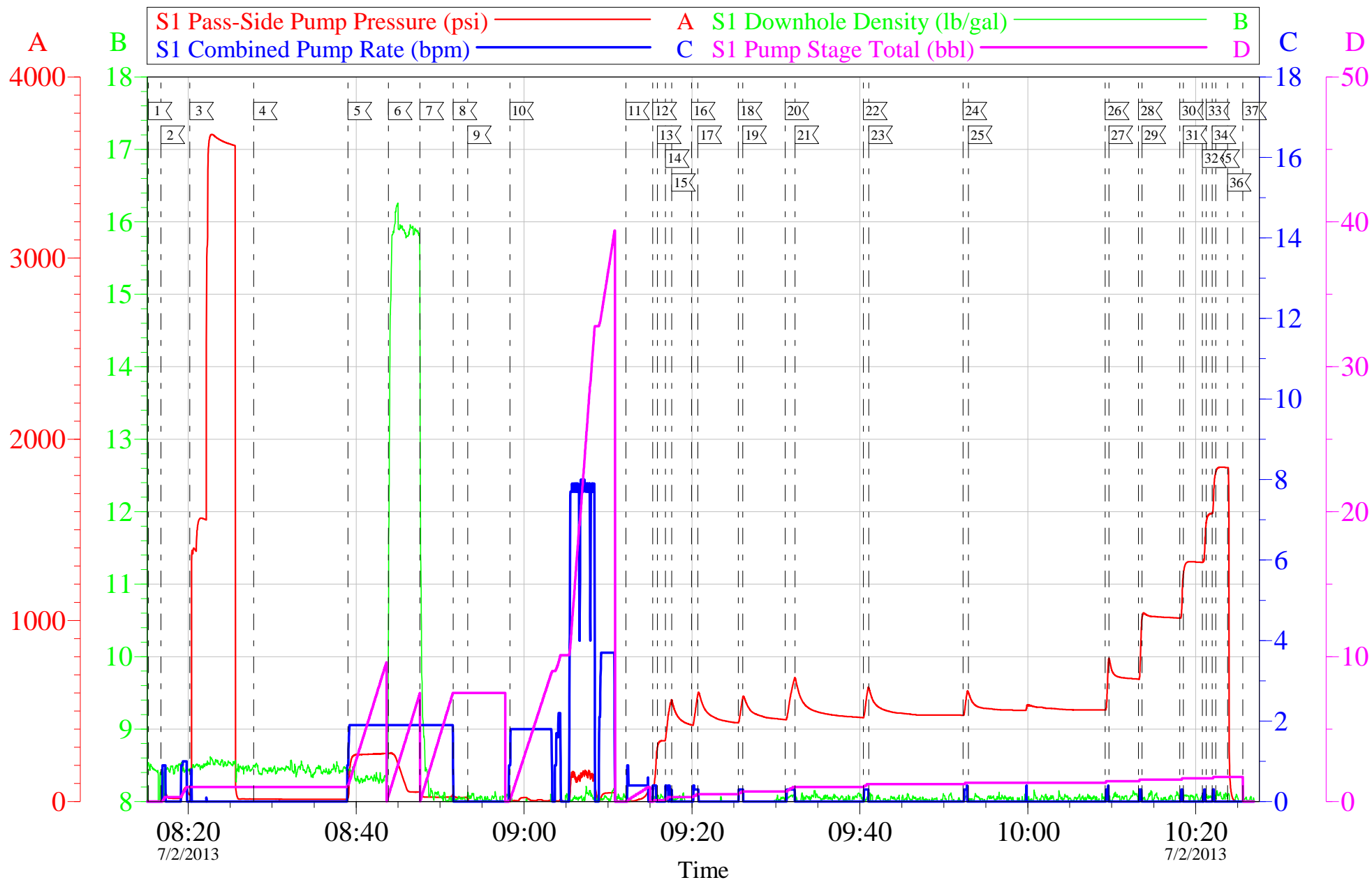
Job Date: 02-Jul-2013  
Job Type: BALANCED PLUG  
Cement Supervisor: THOMAS PONDER

Sales Order #: 900562610  
ADC Used: YES  
Elite #/Operator: ELITE #3 / ANDREW LINN

OptiCem v6.4.10  
02-Jul-13 10:50

# WPX GM 513-1

## BALANCED PLUG



Customer: WPX	Job Date: 02-Jul-2013	Sales Order #: 900562610
Well Description: GM 513-1	Job Type: BALANCED PLUG	ADC Used: YES
Company Rep: JUSTIN SKALLA	Cement Supervisor: THOMAS PONDER	Elite #/Operator: ELITE #3 / ANDREW LINN



# HALLIBURTON

Company:	<u>WPX</u>	Date:	<u>7/2/2013</u>
Submitted by:	<u>THOMAS PONDER</u>	Date Rec.:	<u>7/2/2013</u>
Attention:	<u>LARRY COOKSEY</u>	S.O.#	<u>900562610</u>
Lease	<u>GM</u>	Job Type:	<u>SQUEEZE</u>
Well #	<u>513-1</u>		

Specific Gravity	<i>MAX</i>	<i>1</i>
pH	<i>8</i>	<i>7</i>
Potassium (K)	<i>5000</i>	<i>250</i> Mg / L
Calcium (Ca)	<i>500</i>	<i>120</i> Mg / L
Iron (FE2)	<i>300</i>	<i>0</i> Mg / L
Chlorides (Cl)	<i>3000</i>	<i>0</i> Mg / L
Sulfates (SO <sub>4</sub> )	<i>1500</i>	<i>0</i> Mg / L
Carbonates hardness		
Temp	<i>40-80</i>	<i>65</i> Deg
Total Dissolved Solids		<i>285</i> Mg / L

Respectfully: THOMAS PONDER

Title: CEMENTING SUPERVISOR

Location: GRAND JCT, CO

<b>Sales Order #:</b> 900562610	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 7/3/2013
<b>Customer:</b> WPX ENERGY ROCKY MOUNTAIN LLC-EBUS		<b>Job Type (BOM):</b> CMT SQUEEZE PERFORATIONS BOM
<b>Customer Representative:</b> JUSTIN SKALLA		<b>API / UWI: (leave blank if unknown)</b> AFEYSO4DGHKRW05EAAA
<b>Well Name:</b> GM		<b>Well Number:</b> 513-1
<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	7/3/2013
Survey Interviewer	The survey interviewer is the person who initiated the survey.	THOMAS PONDER (HX41187)
Customer Participation	Did the customer participate in this survey? (Y/N)	Yes
Customer Representative	Enter the Customer representative name	JUSTIN SKALLA
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>
---------------------------

<b>Sales Order #:</b> 900562610	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 7/3/2013
<b>Customer:</b> WPX ENERGY ROCKY MOUNTAIN LLC-EBUS		<b>Job Type (BOM):</b> CMT SQUEEZE PERFORATIONS BOM
<b>Customer Representative:</b> JUSTIN SKALLA		<b>API / UWI: (leave blank if unknown)</b> AFEYSO4DGHKRW05EAAA
<b>Well Name:</b> GM		<b>Well Number:</b> 513-1
<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> The date the survey was conducted	7/3/2013

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.	4
<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
<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	Workover
<b>Number Of JSAs Performed</b> Number Of Jsas Performed	6
<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>	No

<b>Sales Order #:</b> 900562610	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 7/3/2013
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<b>Customer Representative:</b> JUSTIN SKALLA		<b>API / UWI: (leave blank if unknown)</b> AFEYSO4DGHKRW05EAAA
<b>Well Name:</b> GM		<b>Well Number:</b> 513-1
<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>Was this a Plug or a Squeeze Job?</b> Please select the appropriate choice	No
<b>Was this a Primary or a Remedial Job?</b> Kick off plug, Plug to Abandon, LCM plug or Planned Liner Top Squeeze, Squeeze of existing perforations, Squeeze of casing leak	No
<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>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	99
<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

# HALLIBURTON

## Rockies, Grand Junction

## Lab Results- Tail

### Job Information

Request/Slurry	2035021/1	Rig Name	Workover	Date	2/July/2013
Submitted By	Charles Ross	Job Type	Perforation Squeeze	Bulk Plant	Grand Junction
Customer	WPX Energy, Inc.	Location	Garfield	Well	GM 513-1

### Well Information

Casing/Liner Size	Depth MD	3700 ft	BHST	115 degF
Hole Size	Depth TVD	3700 ft	BHCT	105 degF

### Drilling Fluid Information

Mud Supplier Name	Mud Trade Name	Density
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### Cement Information - Tail Design

Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
Mountain G	Bulk Blend	30.04.13	Tank 29	Slurry Density	15.798	lbm/gal
HALAD-344 (PB)	Bulk Blend	30.04.13	B413067	Slurry Yield	1.15	ft3/sack
			B	Water Requirement	4.98	gal/sack
				Total Mix Fluid	4.98	gal/sack
HALAD-413 (PB)	Bulk Blend	30.04.13	ZM2K01			
			98AO			
Fresh Water	Lab	12.03.13	N/A			
				Water Source	Fresh Water	
				Water Chloride		

### Operation Test Results Request ID 2035021/1

#### API Fluid Loss

Test Temp (°F)	Test Pressure (psi)	Test Time (min)	Meas. Vol.	Calc. ISO FL (<30 min)	Conditioning time (min)
121	1000	15.2	42	118	30

#### Mixability (0 - 5) - 0 is not mixable

Mixability rating (0 - 5)	Avg rpm mixing under load
5	12000

#### Thickening Time

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)
126	3730	11	2	1:27	1:35	1:41	1:53	1:57

#### Thickening Time - ON-OFF-ON

Test Temp (°F)	Pressure (psi)	Reached in (min)	30 Bc (hh:min)	50 Bc (hh:min)	70 Bc (hh:min)	100 Bc (hh:min)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)
115	2760	8	1:28	1:58	2:05	2:15	7	30	10	15

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