
WPX ENERGY ROCKY MOUNTAIN LLC-EBUS

**SG 342-22
GRAND VALLEY
Garfield County , Colorado**

Squeeze Perfs
18-Sep-2013

Post Job Report

The Road to Excellence Starts with Safety

Sold To #: 300721		Ship To #: 3009904		Quote #:		Sales Order #: 900754215	
Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS				Customer Rep: Applegate, Cole			
Well Name: SG			Well #: 342-22			API/UWI #: 05-045-21752	
Field: GRAND VALLEY		City (SAP): PARACHUTE		County/Parish: Garfield		State: Colorado	
Lat: N 39.426 deg. OR N 39 deg. 25 min. 33.982 secs.				Long: W 108.088 deg. OR W -109 deg. 54 min. 43.25 secs.			
Contractor: Workover			Rig/Platform Name/Num: workover				
Job Purpose: Squeeze Perfs							
Well Type: Development Well			Job Type: Squeeze Perfs				
Sales Person: MAYO, MARK			Srvc Supervisor: SMITH, DUSTIN			MBU ID Emp #: 418015	

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
ANDERSON, ADAM S	5.5	456683	BLUST, CHARLES Thomas	4.5	386662	EICKHOFF, ROBERT Edward	5.5	495311
MCINTOSH, ROBERT James	5.5	547652	SMITH, DUSTIN Michael	5.5	418015			

Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10248065	30 mile	10551730C	30 mile	10784080	30 mile	11360883	30 mile
11583932	30 mile	11808841	30 mile	HBL-2000-3	30 mile		

Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
09/18/13	5.5	3						

TOTAL	Total is the sum of each column separately							
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Job

Formation Name	Top	Bottom	Called Out	Date	Time	Time Zone
Formation Depth (MD)			On Location	18 - Sep - 2013	05:30	MST
Form Type	BHST		Job Started	18 - Sep - 2013	08:36	MST
Job depth MD	4206. ft		Job Completed	18 - Sep - 2013	09:50	MST
Water Depth	Wk Ht Above Floor		Departed Loc	18 - Sep - 2013	11:00	MST
Perforation Depth (MD)	From	6,800.00 ft	To	6,810.00 ft		

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
Perforation Interval								6800.	6810.	.	.

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				4220	Bottom Plug			
Float Collar					Retainer				4140	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 ³ /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 ³ /sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
1	Fresh Water Spacer		10.00	bbl	8.33	.0	.0	2.5	
2	SUPER FLUSH 101	SUPER FLUSH 101 - SBM (12199)	20.00	bbl	10.	.0	.0	2.5	
3	Fresh Water		5.0	bbl	8.33	.0	.0	1.5	
4	SqueezeCem Lead Cement	SQUEEZECEM (TM) SYSTEM (452971)	200.0	sacks	15.8	1.17	5.03	3.0	5.03
5.03 Gal		FRESH WATER							
5	SqueezeCem Tail Cement	SQUEEZECEM (TM) SYSTEM (452971)	50.0	sacks	17.	.99	3.77	2.2	3.77
3.77 Gal		FRESH WATER							
6	Displacement Fluid		15.50	bbl	8.34	.0	.0	1.5	
Calculated Values		Pressures		Volumes					
Displacement	16.0	Shut In: Instant		Lost Returns		Cement Slurry	50.5	Pad	
Top Of Cement		5 Min		Cement Returns	0	Actual Displacement	15.5	Treatment	
Frac Gradient		15 Min		Spacers	35	Load and Breakdown		Total Job	101
Rates									
Circulating		Mixing	3	Displacement	1.5	Avg. Job	2		
Cement Left In Pipe	Amount	Reason							
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					

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Sold To #: 300721	Ship To #: 3009904	Quote #:	Sales Order #: 900754215
Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS	Customer Rep: Applegate, Cole		
Well Name: SG	Well #: 342-22	API/UWI #: 05-045-21752	
Field: GRAND VALLEY	City (SAP): PARACHUTE	County/Parish: Garfield	State: Colorado
Legal Description:			
Lat: N 39.426 deg. OR N 39 deg. 25 min. 33.982 secs.		Long: W 108.088 deg. OR W -109 deg. 54 min. 43.25 secs.	
Contractor: Workover		Rig/Platform Name/Num: workover	
Job Purpose: Squeeze Perfs			Ticket Amount:
Well Type: Development Well		Job Type: Squeeze Perfs	
Sales Person: MAYO, MARK		Srv Supervisor: SMITH, DUSTIN	MBU ID Emp #: 418015

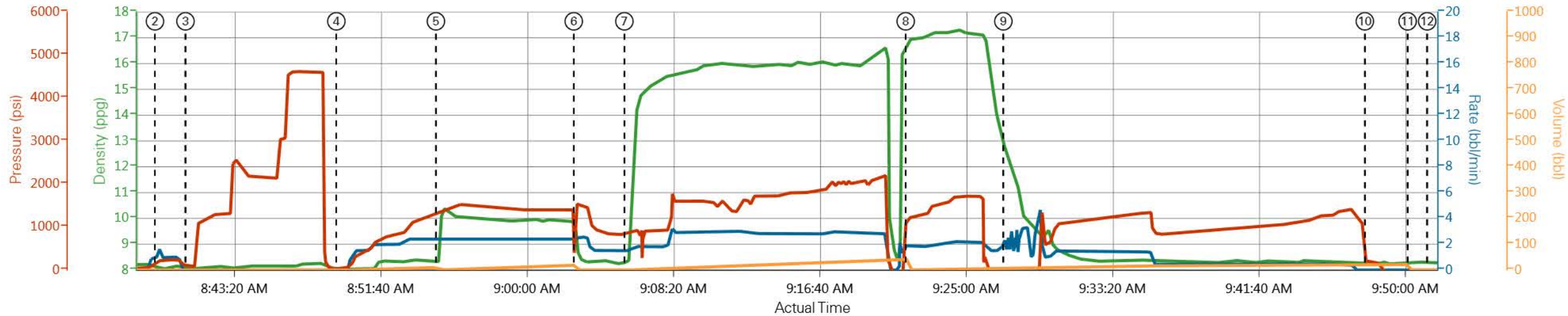
Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	09/18/2013 02:00							ELITE # 2
Depart Yard Safety Meeting	09/18/2013 04:30							ALL HES EMPLOYEES
Arrive At Loc	09/18/2013 05:30							ARRIVED ON LOCATION 1 1/2 HOURS EARLY DIDNT START CHARGING TIME UNTIL REQUESTED ON LOCATION TIME HES WAIT UNTIL RIG CREW ARRIVED ON LOCATION
Assessment Of Location Safety Meeting	09/18/2013 06:30							ALL HES EMPLOYEES
Pre-Rig Up Safety Meeting	09/18/2013 06:40							ALL HES EMPLOYEES
Rig-Up Equipment	09/18/2013 06:50							1 HT-400 PUMP TRUCK (ELITE # 2) 1 660 BULK TRUCK 1 BODY LOAD BULK TRUCK 1 SUPERFLUSH TRANSPORT 1 F-550 PICKUP
Pre-Job Safety Meeting	09/18/2013 08:15							ALL HES EMPLOYEES AND RIG CREW
Rig-Up Completed	09/18/2013 08:36							
Start Job	09/18/2013 08:36							TUBING SET @ 4140 2 3/8 4.7# J-55 RETAINER @ 4140 PERFS @ 4206' BP @ 4220' 4 1/2 11.6 # CSG
Test Lines	09/18/2013 08:40					4616.0		PRESSURE TEST OK

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pump Spacer 1	09/18/2013 08:49		2.5	10		1220.0		FRESH H2O SPACER
Pump Spacer 2	09/18/2013 08:54		2.5	20		1475.0		20 BBL SUPER FLUSH 101
Pump Spacer 1	09/18/2013 09:02		1.5	5		480.0		FRESH H2O SPACER
Pump Lead Cement	09/18/2013 09:05		3	41.7		2140.0		200 SKS 15.8 PPG 1.17 YIELD 5.03 GAL/SK LEAD CEMENT WEIGHT VERIFIED VIA MUD SCALES THROUGHOUT LEAD CEMENT
Pump Tail Cement	09/18/2013 09:21		2.2	8.8		1800.0		50 SKS 17.0 PPG .99 YIELD 3.77 GAL/SK TAIL CEMENT WEIGHT VERIFIED VIA MUD SCALES THROUGHOUT TAIL CEMENT WHILE MIXING CEMENT UP TO TAIL WEIGHT OPERATOR HIT THE KICKOUTS ON THE PUMPT TRUCK PRESSURED UP TO 2350 PSI RESET KICKOUTS AND RESUMED PUMPING
Pump Displacement	09/18/2013 09:27		1.5	10		1345.0		FRESH H2O DISPLACEMENT ONCE WE WENT TO DISPLACEMENT WE WERE NOT MOVING FLUID HAD TO ADJUST RATE UNTIL BEGAN MOVING FLUID AND THEN SLOWED TO 1.5 BPM
Pump Displacement	09/18/2013 09:35		0.5	5.5	15.5	1421.0		AS PER COMPANY REP SLOWED RATE TO 0.5 BPM @ 10 BBLS GONE ON DISPLACEMENT PUMPED REMAINDER OF DISPLACEMENT @ 0.5 BPM
Activity Description	Date/Time	Cht	Rate bbl/min	Volume bbl		Pressure psig		Comments

Cementing Job Log

		#		Stage	Total	Tubing	Casing	
Shutdown	09/18/2013 09:47							SHUT DOWN .5 BBLs SHORT OF CALCULATED DISPLACEMENT AS PER COMPANY REP
End Job	09/18/2013 09:50							NO RETURNS THROUGHOUT JOB FINAL SQUEEZE PRESSURE 1421 PSI NO SUGAR WAS USED AND WAS REMOVED FROM THE TICKET
Other	09/18/2013 09:51							RIG POOH UP OUT OF RETAINER AND REVERSED OUT REVERSED OUT .5 BBL OF CEMENT
Pre-Rig Down Safety Meeting	09/18/2013 10:00							ALL HES EMPLOYEES
Pre-Convoy Safety Meeting	09/18/2013 10:50							ALL HES EMPLOYEES
Crew Leave Location	09/18/2013 11:00							THANK YOU FOR USING HALLIBURTON CEMENT DUSTIN SMITH AND CREW

WPX - SG 342-22 - SQUEEZE



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

- | | | | |
|-----------------------------|---|---------------------------------------|--|
| ① Start Job 8.05;0;1;0 | ④ Pump H2O spacer 8.07;0;42;0 | ⑦ Pump Lead Cement 8.28;1.5;851;0 | ⑩ Shutdown 8.27;0;206;21.2 |
| ② Fill Lines 8.08;1;197;0.5 | ⑤ Pump Super Flush 101 Soacer 8.32;2.4;1323;0.1 | ⑧ Pump Tail Cement 16.91;1.9;1214;0 | ⑪ End Job 8.22;0;-116;0 |
| ③ Test Lines 8.1;0;91;1.8 | ⑥ Pump H2O Spacer 8.98;2.5;1518;0.1 | ⑨ Pump Displacement 12.59;1.5;-81;2.2 | ⑫ Rig Pull Above Retainer / Reverse Out 8.3;0;-117;0 |

▼ **HALLIBURTON** | iCem® Service

Created: 2013-09-18 07:32:22, Version: 2.0.606

Edit

Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS

Job Date : 9/18/2013 7:49:14 AM

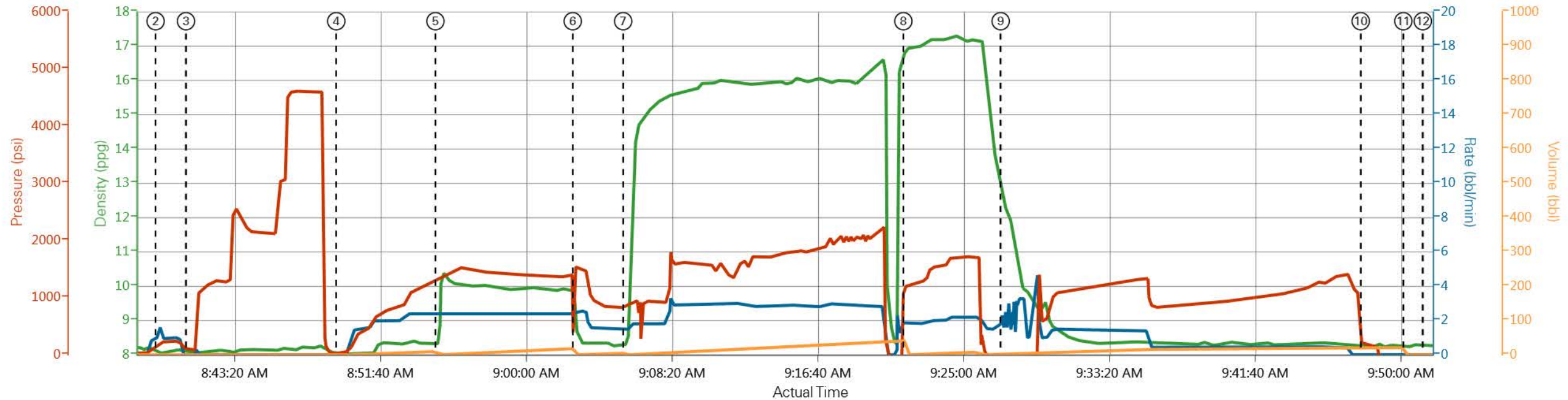
Well : SG 342-22

Representative: COLE APPLGATE

Sales Order #: 900754215

ELITE # 2: DUSTIN SMITH / ROB EICKHOFF

WPX - SG 342-22 - SQUEEZE



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

▼ **HALLIBURTON** | iCem® Service

Created: 2013-09-18 07:32:22, Version: 2.0.606

Edit

Customer: WPX ENERGY ROCKY MOUNTAIN LLC-
EBUS

Job Date : 9/18/2013 7:49:14 AM

Well : SG 342-22

Representative: COLE APPLGATE

Sales Order #: 900754215

ELITE # 2: DUSTIN SMITH / ROB EICKHOFF

HALLIBURTON

Water Analysis Report

Company: WPX

Submitted by: DUSTIN SMITH

Attention:

Lease SG

Well # 342-22

Date: 9/18/2013

Date Rec.: 9/18/2013

S.O.# 900754215

Job Type: SQUEEZE

Specific Gravity	<i>MAX</i>	1
pH	<i>8</i>	7
Potassium (K)	<i>5000</i>	250 Mg / L
Calcium (Ca)	<i>500</i>	250 Mg / L
Iron (FE2)	<i>300</i>	0 Mg / L
Chlorides (Cl)	<i>3000</i>	0 Mg / L
Sulfates (SO ₄)	<i>1500</i>	<200 Mg / L
Chlorine (Cl ₂)		0 Mg / L
Temp	<i>40-80</i>	65 Deg
Total Dissolved Solids		340 Mg / L

Respectfully: DUSTIN SMITH

Title: CEMENTING SUPERVISOR

Location:

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

Sales Order #: 900754215	Line Item: 10	Survey Conducted Date: 9/18/2013
Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS		Job Type (BOM): CMT SQUEEZE PERFORATIONS BOM
Customer Representative:		API / UWI: (leave blank if unknown) 05-045-21752
Well Name: SG		Well Number: 342-22
Well Type: Development Well	Well Country: United States of America	
H2S Present:	Well State: Colorado	Well County: 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	9/18/2013
Survey Interviewer	The survey interviewer is the person who initiated the survey.	DUSTIN SMITH (HX37079)
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	

CUSTOMER SIGNATURE

Sales Order #: 900754215	Line Item: 10	Survey Conducted Date: 9/18/2013
Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS		Job Type (BOM): CMT SQUEEZE PERFORATIONS BOM
Customer Representative:		API / UWI: (leave blank if unknown) 05-045-21752
Well Name: SG		Well Number: 342-22
Well Type: Development Well	Well Country: United States of America	
H2S Present:	Well State: Colorado	Well County: Garfield

KEY PERFORMANCE INDICATORS

General	
Survey Conducted Date	9/18/2013
The date the survey was conducted	

Cementing KPI Survey	
Type of Job	0
Select the type of job. (Cementing or Non-Cementing)	
Select the Maximum Deviation range for this Job	Vertical
What is the highest deviation for the job you just completed? This may not be the maximum well deviation.	
Total Operating Time (hours)	3
Total Operating Hours Including Rig-up, Pumping, Rig-down. Enter in decimal format.	
HSE Incident, Accident, Injury	No
HSE Incident, Accident, Injury. This should be recordable incidents only.	
Was the job purpose achieved?	Yes
Was the job delivered correctly as per customer agreed design?	
Operating Hours (Pumping Hours)	1.5
Total number of hours pumping fluid on this job. Enter in decimal format.	
Customer Non-Productive Rig Time (hrs)	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.	
Type of Rig Classification Job Was Performed	Drilling Rig (Portable)
Type Of Rig (classification) Job Was Performed On	
Number Of JSAs Performed	6
Number Of Jsas Performed	
Number of Unplanned Shutdowns	0
Unplanned shutdown is when injection stops for any period of time.	
Was this a Primary Cement Job (Yes / No)	No

Sales Order #: 900754215	Line Item: 10	Survey Conducted Date: 9/18/2013
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Customer Representative:		API / UWI: (leave blank if unknown) 05-045-21752
Well Name: SG		Well Number: 342-22
Well Type: Development Well	Well Country: United States of America	
H2S Present:	Well State: Colorado	Well County: Garfield

Primary Cement Job= Casing job, Liner job, or Tie-back job.	
Was this a Plug or a Squeeze Job? Please select the appropriate choice	No
Was this a Primary or a Remedial Job? Kick off plug, Plug to Abandon, LCM plug or Planned Liner Top Squeeze, Squeeze of existing perforations, Squeeze of casing leak	No
Mixing Density of Job Stayed in Designed Density Range (0-100%) Density Range defined as +/- .20 ppg. Calculation: Total BBLs cement mixed at designed density divided by total BBLs of cement multiplied by 100	90
Was Automated Density Control Used? Was Automated Density Control (ADC) Used ?	Yes
Pump Rate (percent) of Job Stayed At Designed Pump Rate 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	90
Nbr of Remedial Sqz Jobs Rqd - Competition Number Of Remedial Squeeze Jobs Required After Primary Job Performed By Competition	0
Nbr of Remedial Plug Jobs Rqd - HES Number Of Remedial Plug Jobs Needed After Primary Plug Pumped By HES	0
Nbr of Remedial Sqz Jobs Rqd - HES Number Of Remedial Squeeze Jobs Required After Primary Job Performed By HES	0

HALLIBURTON

Rockies, Grand Junction

Lab Results- Lead

Job Information

Request/Slurry	2069731/1	Rig Name		Date	17/SEP/2013
Submitted By	Bradley Pruett	Job Type	Perforation Squeeze	Bulk Plant	Grand Junction
Customer	WPX Energy, Inc.	Location	Garfield	Well	SG 342-22

Well Information

Casing/Liner Size	4.5"	Depth MD	1262 m / 4140 ft	BHST	66°C / 150°F
Hole Size	8.75"	Depth TVD	1262 m / 4140 ft	BHCT	53°C / 127°F
Pressure	214 bar / 3100 psi				

Cement Information - Lead Design

<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	<u>Cement Properties</u>		
Mountain G	Bulk Blend	18.09.13	Tank 29			
Fresh Water	Lab	12.03.13	N/A	Slurry Density	15.798	lbm/gal
				Slurry Yield	1.17	ft3/sack
Cal-Seal 60	Bulk Blend	18.09.13	Tank 15 & 18	Water Requirement	5.03	gal/sack
HALAD-344 (PB)	Bulk Blend	18.09.13	B413183 A	Total Mix Fluid	5.03	gal/sack
HALAD-413 (PB)	Bulk Blend	18.09.13	ZM3F02 58A0			
				Water Source	Fresh Water	
				Water Chloride		

Operation Test Results Request ID 2069731/1

Mixability (0 - 5) - 0 is not mixable

Mixability rating (0 - 5)	Avg rpm mixing under load
4.5	12000

API Fluid Loss

Test Temp (°F)	Test Pressure (psi)	Test Time (min)	Meas. Vol.	Calc. ISO FL (<30 min)	Conditioning time (min)
127	1000	1.95	36	282	30

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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)
127	3100	9	1:01	1:12	1:19	1:31	12	25	10	24

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HALLIBURTON

Rockies, Grand Junction

Lab Results- Tail

Job Information

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Submitted By	Bradley Pruett	Job Type	Perforation Squeeze	Bulk Plant	Grand Junction
Customer	WPX Energy, Inc.	Location	Garfield	Well	SG 342-22

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Cement Information - Tail Design

<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	<u>Cement Properties</u>		
Mountain G	Bulk Blend	18.09.13	Tank 29			
Fresh Water	Lab	12.03.13	N/A	Slurry Density	17.000	lbm/gal
				Slurry Yield	0.99	ft3/sack
CFR-3 (PB)	Bulk Blend	18.09.13	1101201 203	Water Requirement	3.77	gal/sack
				Total Mix Fluid	3.77	gal/sack
				Water Source	Fresh Water	
				Water Chloride		

Operation Test Results Request ID 2069732/1

Mixability (0 - 5) - 0 is not mixable

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

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)
127	3100	9	0:50	0:56	1:01	1:06	7	25	10	19

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