
WPX ENERGY ROCKY MOUNTAIN LLC-EBUS

**SG 13-23
RULISON
Garfield County , Colorado**

**Squeeze Perfs
22-Jul-2013**

Post Job Report

The Road to Excellence Starts with Safety

Sold To #: 300721	Ship To #: 2903424	Quote #:	Sales Order #: 900607529
Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS		Customer Rep: Dunnick, Brian	
Well Name: SG		Well #: 13-23	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		Srvc Supervisor: DEUSSEN, EDWARD	MBU ID Emp #: 485182

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
BANKS, BRENT A	4.5	371353	DEUSSEN, EDWARD Eric	4.5	485182	KEANE, JOHN Donovon	4.5	486519

Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10551730C	75 mile	10867304	75 mile	10998054	75 mile	11259881	75 mile
11808841	75 mile						

Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
7-22-13	4.5	4.5						
TOTAL			Total is the sum of each column separately					

Job

Formation Name	Job	Date	Time	Time Zone
Formation Depth (MD)	Top	Bottom	Called Out	22 - Jul - 2013 04:00 MST
Form Type	BHST	On Location	22 - Jul - 2013 07:40	MST
Job depth MD	680. ft	Job Depth TVD	680. ft	Job Started 22 - Jul - 2013 09:02 MST
Water Depth	Wk Ht Above Floor	2. ft	Job Completed	22 - Jul - 2013 10:36 MST
Perforation Depth (MD)	From	To	Departed Loc	22 - 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				712	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
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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	Injection Test	FRESH WATER	4.00	bbl	8.34	.0	.0	1.0		

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	
2	SqueezeCem Tail Cement	SQUEEZECEM (TM) SYSTEM (452971)	50.0	sacks	16.	1.15	4.89	0.8	4.89	
4.89 Gal		FRESH WATER								
3		Displacement								
Calculated Values		Pressures								
Displacement		9.5								
Top Of Cement		FRESH WATER	9.00	bbl	8.33	.0	.0	1.0		
Frac Gradient		Volumes								
Rates		Shut In: Instant	530	Lost Returns		Cement Slurry		10.3	Pad	
Circulating		5 Min		Cement Returns		0	Actual Displacement		9.5	Treatment
Cement Left In Pipe		Amount	15 Min	Spacers		4	Load and Breakdown			Total Job 23.8
Frac Ring # 1 @										
The Information Stated Herein Is Correct	Customer Representative Signature	Mixing	1.0	Displacement		1.0	Avg. Job		1.0	

The Road to Excellence Starts with Safety

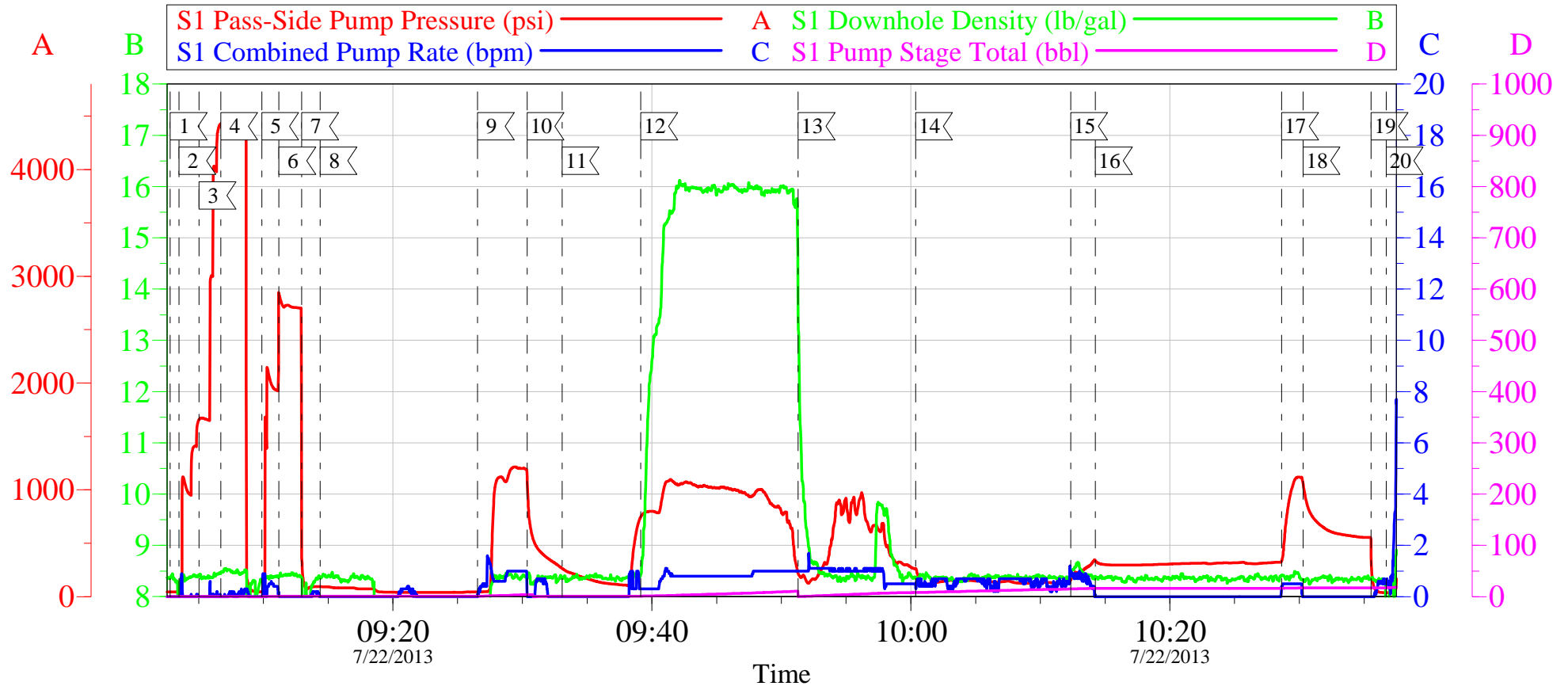
Sold To #: 300721		Ship To #: 2903424		Quote #:		Sales Order #: 900607529	
Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS				Customer Rep: Dunnick, Brian			
Well Name: SG			Well #: 13-23			API/UWI #:	
Field: RULISON		City (SAP): PARACHUTE		County/Parish: Garfield		State: Colorado	
Legal Description:							
Lat:				Long:			
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			Srvc Supervisor: DEUSSEN, EDWARD			MBU ID Emp #: 485182	

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	07/22/2013 04:00							
Pre-Convoy Safety Meeting	07/22/2013 06:40							ALL HES PERSONNEL
Crew Leave Yard	07/22/2013 06:50							1 ELITE, 1 660, 1 PICKUP
Arrive At Loc	07/22/2013 07:40							FIRST ON LOCATION
Assessment Of Location Safety Meeting	07/22/2013 07:50							
Pre-Rig Up Safety Meeting	07/22/2013 08:00							ALL HES PERSONNEL
Rig-Up Equipment	07/22/2013 08:10							MANIFOLD ON GROUND, 1 HARD LINE TO BACKSIDE, 1 HARD LINE TO WASH UP TANK, 1 WATER LINE TO DAY TANK, 1 BULK HOSE TO 660
Pre-Job Safety Meeting	07/22/2013 08:50							ALL HES PERSONNEL AND RIG CREW
Start Job	07/22/2013 09:02							4 PERFS @ 680', BRIDGE PLUG @ 712', BRADEN HEAD SQUEEZE, MAX PRESSURE 3500 PSI, RIG INJECTION TESTED TO 1250 PSI @ 3/4 BPM
Pump Water	07/22/2013 09:03		0.8	0.5			31.0	FILL LINES
Pressure Test	07/22/2013 09:06							PRESSURED UP TO 4411 PSI - PRESSURE HELD WELL
Pump Spacer 1	07/22/2013 09:09						2700.0	INJECTION TEST ATTEMPTED

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Shutdown	07/22/2013 09:11							RIG TO CLEAN THEIR LINES THROUGH THEIR PUMPS, ESTABLISH RETURNS
Pump Spacer 1	07/22/2013 09:26		1	4			1216.0	INJECTION TEST
Shutdown	07/22/2013 09:30							ISIP ESTABLISHED @ 530 PSI
Pump Tail Cement	07/22/2013 09:39		0.8	10.3			1040.0	200 SKS, 15.8 PPG, 1.15 YIELD, 4.94 GAL/SK
Pump Displacement	07/22/2013 09:51		1	7			981.0	FRESH WATER
Slow Rate	07/22/2013 09:58		0.5	1.5	8.5		478.0	
Shutdown	07/22/2013 10:00							HESITATE 10 MINUTES, CLOSE BRADEN HEAD VALVE
Pump Displacement	07/22/2013 10:12		1	0.5	9		345.0	SQUEEZE ON CEMENT
Shutdown	07/22/2013 10:14							HESITATE 15 MINUTES
Pump Displacement	07/22/2013 10:28		0.5	0.5	9.5		1118.0	SQUEEZE ON CEMENT
Shutdown	07/22/2013 10:30							SQUEEZE PRESSURE LEVELED OFF AT 650 PSI
Release Casing Pressure	07/22/2013 10:35							
End Job	07/22/2013 10:36							DID NOT USE SUGAR / NO ADD HOURS
Post-Job Safety Meeting (Pre Rig-Down)	07/22/2013 10:50							
Rig-Down Equipment	07/22/2013 11:00							
Pre-Convoy Safety Meeting	07/22/2013 11:45							
Crew Leave Location	07/22/2013 12:00							THANK YOU FOR USING HALLIBURTON AND ED DEUSSEN AND CREW

WPX - SG 13-23

SQUEEZE



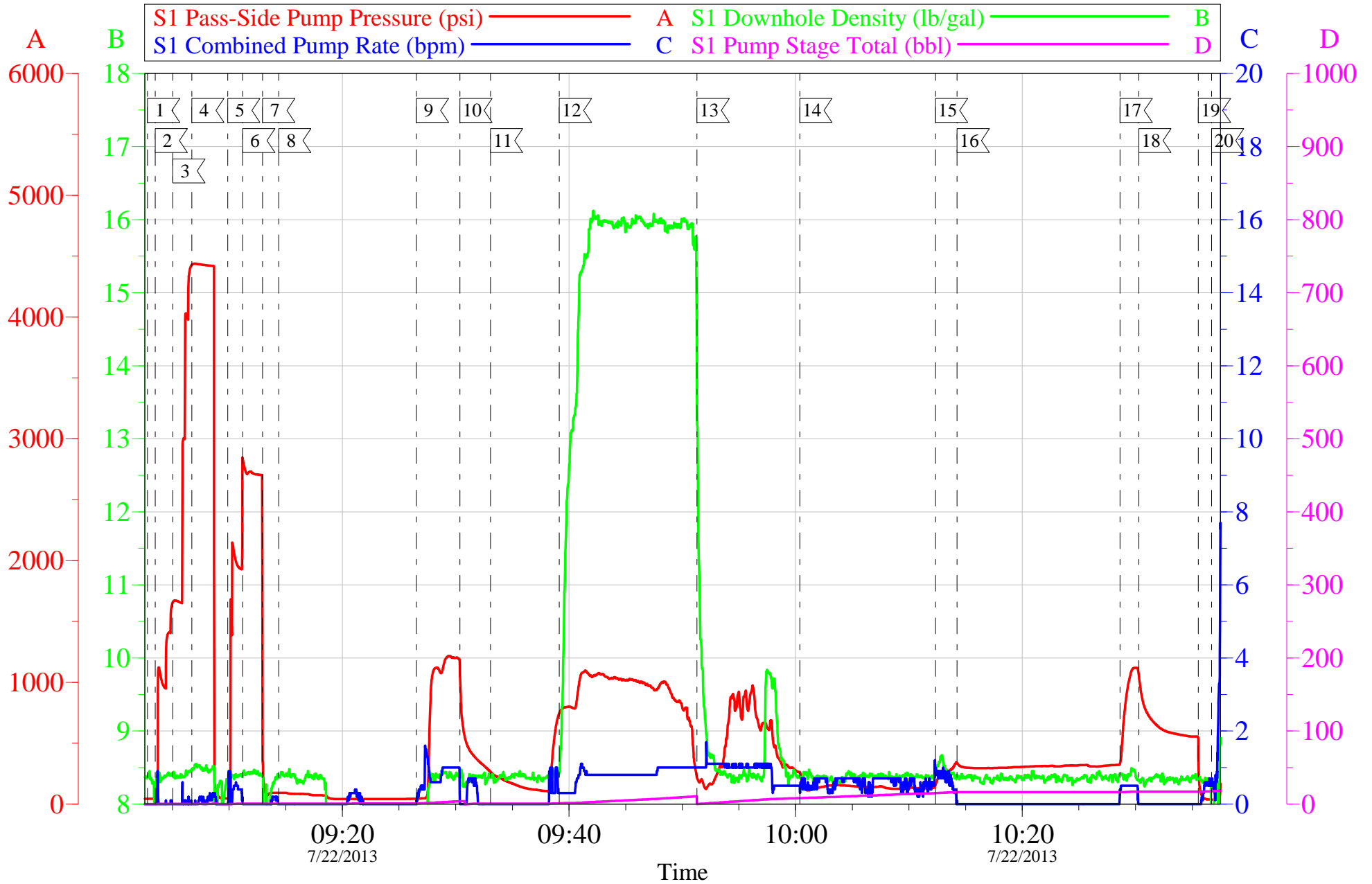
Local Event Log					
1	START JOB	09:02:49	2	FILL LINES	09:03:29
3	5TH GEAR STALLOUT	09:05:02	4	PRESSURE TEST	09:06:42
5	PUMP INJECTION TEST	09:09:53	6	SHUTDOWN	09:11:12
7	RELEASE PRESSURE	09:12:58	8	RIG CLEAR THEIR LINES	09:14:23
9	PUMP INJECTION TEST	09:26:32	10	SHUTDOWN/GET ISIP	09:30:23
11	MIX UP TUB	09:33:05	12	PUMP TAIL CEMENT	09:39:09
13	PUMP DISPLACEMENT	09:51:18	14	SHUTDOWN/HESITATE	10:00:22
15	SQUEEZE ON CEMENT	10:12:20	16	SHUTDOWN/HESITATE	10:14:15
17	SQUEEZE ON CEMENT	10:28:38	18	SHUTDOWN	10:30:17
19	RELEASE PRESSURE	10:35:33	20	END JOB	10:36:43

Customer: WPX	Job Date: 22-Jul-2013	Sales Order #: 900607529
Well Description: SG 13-23	Job Type: SQUEEZE	ADC Used: YES
Company Rep: KYLE KOHL	Cement Supervisor: ED DEUSSEN	Elite #2: JOHN KEANE

OptiCem v6.4.10
22-Jul-13 10:45

WPX - SG 13-23

SQUEEZE



Customer: WPX
Well Description: SG 13-23
Company Rep: KYLE KOHL

Job Date: 22-Jul-2013
Job Type: SQUEEZE
Cement Supervisor: ED DEUSSEN

Sales Order #: 900607529
ADC Used: YES
Elite #2: JOHN KEANE

OptiCem v6.4.10
22-Jul-13 10:45

HALLIBURTON

Water Analysis Report

Company: WILLIAMS

Submitted by: ED DEUSSEN

Attention: J.TROUT

Lease SG

Well # 13-23

Date: 6/11/2013

Date Rec.: 7/22/2013

S.O.# 900607529

Job Type: SQUEEZE

Specific Gravity	<i>MAX</i>	1
pH	<i>8</i>	6.7
Potassium (K)	<i>5000</i>	0 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
Temp	<i>40-80</i>	62 Deg
Total Dissolved Solids		520 Mg / L

Respectfully: ED DEUSSEN

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 its use.

HALLIBURTON

Rockies, Grand Junction

Lab Results- Tail

Job Information

Request/Slurry	2050739/12	Rig Name		Date	02/JUL/2013
Submitted By	Bradley Pruett	Job Type	Perforation Squeeze	Bulk Plant	Grand Junction
Customer	WPX Energy, Inc.	Location		Well	

Well Information

Casing/Liner Size	4.5"	Depth MD	244 m / 800 ft	BHST	34°C / 94°F
Hole Size	8.75"	Depth TVD	244 m / 800 ft	BHCT	27°C / 80°F
Pressure	48 bar / 700 psi				

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	Lab	24.06.13	Tank 29			
Fresh Water	Lab	12.03.13	N/A	Slurry Density	15.998	lbm/gal
CaCl2 (Calcium Chloride) 94-97 % Salt	Lab	27.06.13	364BB0 611	Slurry Yield	1.15	ft3/sack
				Water Requirement	4.89	gal/sack
HALAD-413 (PB)	Bulk Blend	24.05.13	ZM3D02 40A0	Total Mix Fluid	4.89	gal/sack
HALAD-567	Chemicals	16.02.12	010912-06			
SUPER CBL	Lab	27.06.13	13L0024			
				Water Source	Fresh Water	
				Water Chloride		

Pilot Test Results Request ID 2050739/12

API Fluid Loss

Test Temp (°F)	Test Pressure (psi)	Test Time (min)	ISO FL (cc/30 min)	Meas. Vol.	Conditioning time (min)
80	1000	30	52	26	0

API Rheology

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Temp (°F)	300	200	100	60	30	6	3	Cond Time (min)	PV/YP
81	137	99	59	41	25	10	7	0	129.46 / 11.16

Free Fluid API 10B-2 / ISO 10426-2

Heat Time (min)	Cond. Time (min)	Static time (min)	Incl. (deg)	% Fluid
0	0	120	45	0

Mixability (0 - 5) - 0 is not mixable

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

Static Gel Strength (MACS II)

Temp (°F)	Pressure (psi)	Time CSGS (hh:mm)	Time 100 lb/100ft2 (h:m)	Time 200 lb/100ft2 (hh:mm)	Time 300 lb/100ft2 (hh:mm)	Time 400 lb/100ft2 (hh:mm)	Time 500 lb/100ft2 (hh:mm)	CSGS or 100-500 lb/100ft2 (hh:mm)	Test speed [deg/min]	Cond. time (min)
94	700	1:17	1:00	1:04	1:07	1:10	1:12	0:12	0.22	30

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)
80	700	13	10	0:50	0:54	0:58	1:03	1:11

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)
80	700	13	12	0:47	0:51	0:56	1:04	1:08

UCA Comp. Strength

End Temp (°F)	Pressure (psi)	50 psi (hh:mm)	500 psi (hh:mm)	12 hr CS (psi)	24 hr CS (psi)	48 hr CS (psi)	End CS (psi)	End Time (hrs)
94	3000	2:32	4:37	1748	2951	3914	4315	72

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Sales Order #: 900607529	Line Item: 10	Survey Conducted Date: 7/22/2013
Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS		Job Type (BOM): CMT SQUEEZE PERFORATIONS BOM
Customer Representative:		API / UWI: (leave blank if unknown) AFEYS4EPXFKMPKUQAAA
Well Name: SG		Well Number: 13-23
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	7/22/2013
Survey Interviewer	The survey interviewer is the person who initiated the survey.	EDWARD DEUSSEN (HB57194)
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 #: 900607529	Line Item: 10	Survey Conducted Date: 7/22/2013
Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS		Job Type (BOM): CMT SQUEEZE PERFORATIONS BOM
Customer Representative:		API / UWI: (leave blank if unknown) AFEYS4EPXFKMPKUQAAA
Well Name: SG		Well Number: 13-23
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	7/22/2013
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)	4.5
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)	2
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	5
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

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Customer Representative:		API / UWI: (leave blank if unknown) AFEYS4EPXFKMPKUQAAA
Well Name: SG		Well Number: 13-23
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	98
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	99
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