

**HALLIBURTON**

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

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**FEDERAL RGU 22-27-198**  
**SULFUR CREEK**  
Rio Blanco County , Colorado

## **Cement Multiple Stages**

05-Aug-2013

## **Post Job Report**

## The Road to Excellence Starts with Safety

Sold To #: 300721	Ship To #: 3014164	Quote #:	Sales Order #: 900644545
Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS	Customer Rep: RAGSDALE, TED		
Well Name: FEDERAL RGU	Well #: 22-27-198	API/UWI #: 05-103-11959	
Field: SULFUR CREEK	City (SAP): MEEKER	County/Parish: Rio Blanco	State: Colorado
Lat: N 39.936 deg. OR N 39 deg. 56 min. 10.356 secs.	Long: W 108.38 deg. OR W -109 deg. 37 min. 12.194 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: ARNOLD, EDWARD	MBU ID Emp #: 439784	

## Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
ARNOLD, EDWARD John	0.0	439784	MILLER II, MATTHEW Reginald	0.0	425164	SALAZAR, PAUL Omar	0.0	445614

## Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10567589C	60 mile	10867322	60 mile	10998512	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
8-5-2013	10.5	6						

TOTAL Total is the sum of each column separately

## Job

## Job Times

Formation Name	Top	Bottom	Called Out	Date	Time	Time Zone
Formation Depth (MD)			On Location	05 - Aug - 2013	07:00	MST
Form Type		BHST	Job Started	05 - Aug - 2013	12:00	MST
Job depth MD	3762. ft	Job Depth TVD	Job Completed	05 - Aug - 2013	17:05	MST
Water Depth		Wk Ht Above Floor	Departed Loc	05 - Aug - 2013	20:36	MST
Perforation Depth (MD)	From	To		05 - Aug - 2013	22:30	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				1600	3762		
OPEN HOLE				14.75				.	1600		
SURFACE CASING	New		9.625	8.921	36.		I-80	.	3755		

## 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	9 5/8"	1	HES
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
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Stage/Plug #: 1

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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		40.00	bbl	8.33	.0	.0	4	
2	VersaCem GJ1 1st Stage Lead	VERSACEM (TM) SYSTEM (452010)	615.0	sacks	12.85	1.77	9.34	7	9.34
9.34 Gal		FRESH WATER							
3	VersaCem GJ2 1st Stage tail	VERSACEM (TM) SYSTEM (452010)	185.0	sacks	12.8	1.96	10.95	7	10.95
10.95 Gal		FRESH WATER							
4	Displacement		287.00	bbl	8.33	.0	.0	8	
5	Fresh Water Spacer		20.00	bbl	8.33	.0	.0	4	
6	VersaCem GJ2 2nd Stage Tail	VERSACEM (TM) SYSTEM (452010)	800.0	sacks	12.8	1.96	10.95	7	10.95
10.95 Gal		FRESH WATER							
7	Displacement		128.00	bbl	8.33	.0	.0	8	
Calculated Values		Pressures		Volumes					
Displacement	415.9	Shut In: Instant		Lost Returns		Cement Slurry	537.5	Pad	
Top Of Cement	SURFACE	5 Min		Cement Returns	85	Actual Displacement	415.9	Treatment	
Frac Gradient		15 Min		Spacers	60	Load and Breakdown		Total Job	1013.4
Rates									
Circulating	RIG	Mixing	7	Displacement	8	Avg. Job	7		
Cement Left In Pipe	Amount	26.1FT	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					



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Field: SULFUR CREEK	City (SAP): MEEKER	County/Parish: Rio Blanco	State: Colorado
Legal Description:			
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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: ARNOLD, EDWARD	MBU ID Emp #: 439784	

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	08/05/2013 07:00							
Pre-Convoy Safety Meeting	08/05/2013 09:15							Including entire cement crew.
Crew Leave Yard	08/05/2013 09:30							
Arrive At Loc	08/05/2013 12:00							Rig still Running casing.
Assessment Of Location Safety Meeting	08/05/2013 15:00							Water; PH 7.5; KCL 0; So4 <200; Fe 3; Calcium 250; Chlorides 0; Temp 78; TDS 310.
Pre-Rig Up Safety Meeting	08/05/2013 15:25							Including entire cement crew.
Rig-Up Equipment	08/05/2013 15:30							1 Elite # 3; 1 660 bulk truck; 2 field storage silo's; 1 hard line to floor; 1 line to upright; 1 line to rig tank. 9.625" compact head. Multi stage job, using customer supplied plug set.
Rig-Up Completed	08/05/2013 16:35							
Pre-Job Safety Meeting	08/05/2013 16:45							Including everyone on location.
Start Job	08/05/2013 17:05							TD 3762; TP 3755.8; Tool 1664.9; SJ 26.1; OH 14 1/2" to 1600 13 1/2" to TD; Casing 9.625" 36# J-55 with 307' of 40# J-55 above tool; Mud 9.3 ppg.
Pump Water	08/05/2013 17:11		2	2			80.0	Fill lines with fresh water.

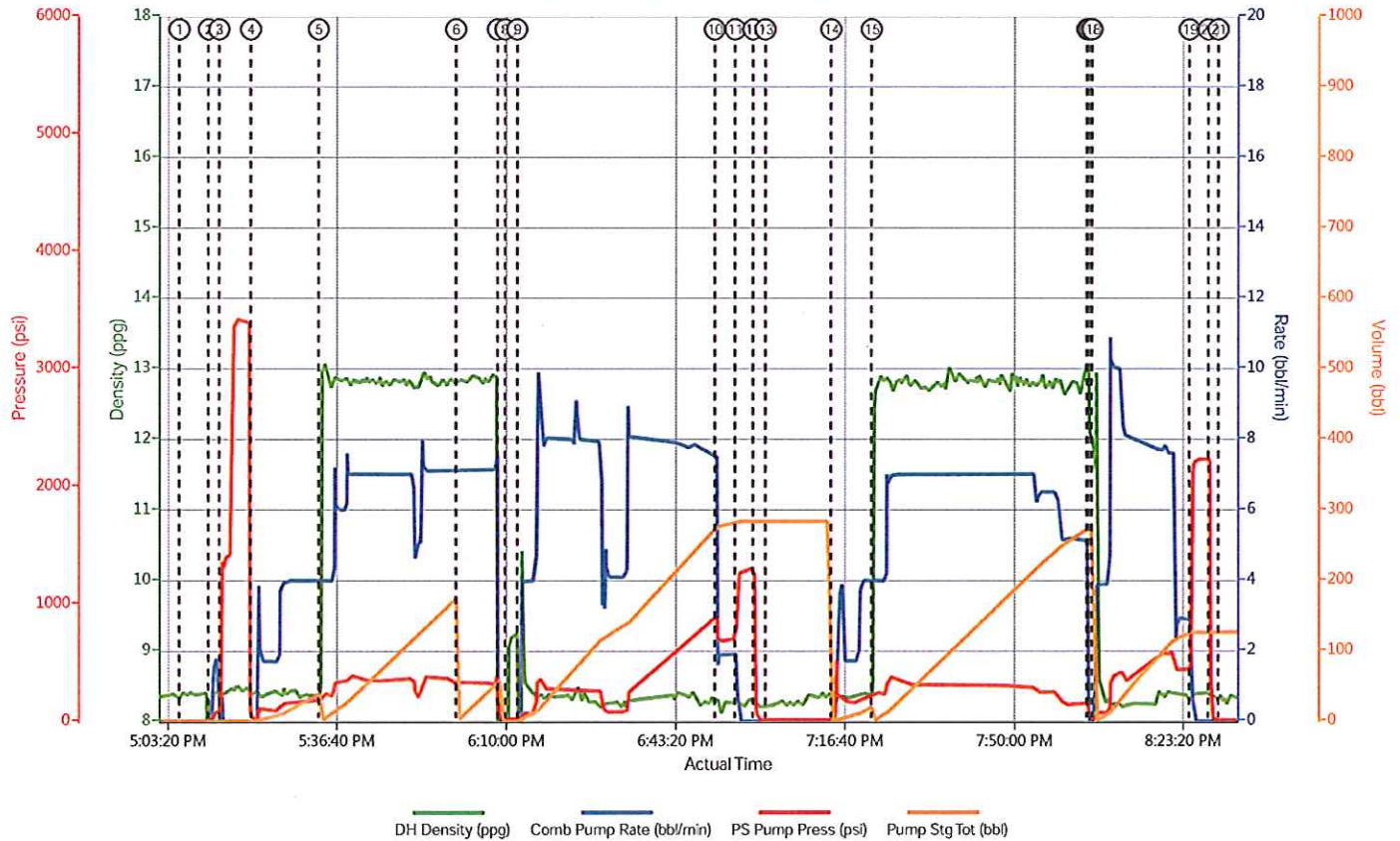
Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Test Lines	08/05/2013 17:13					3300.0		Good pressure test, no leaks.
Pump Spacer 1	08/05/2013 17:20		4	40			176.0	40 BBL fresh water spacer.
Pump 1st Stage Lead Slurry	08/05/2013 17:33		7	193.8			400.0	615 sks Stage 1 Lead Cement, 12.8 ppg, 1.77 cf3, 9.34 gal/sk.
Pump 1st Stage Tail Slurry	08/05/2013 18:00		7	64.5			350.0	185 sks Stage 1 Tail Cement, 12.8 ppg, 1.96 cf3, 10.34 gal/sk.
Shutdown	08/05/2013 18:08							
Drop Plug	08/05/2013 18:10							Placed Wiper Dart in side casing.
Pump Displacement	08/05/2013 18:12		8	277.8			890.0	Fresh water displacement. Slow rate at 118 BBL's gone to 4 BBL/MIN for 20 BBL's to allow wiper plug to pass through tool.
Slow Rate	08/05/2013 18:51		2	10			695.0	Slow rate 10 BBL's prior to bumping the plug.
Bump Plug	08/05/2013 18:55				287.8		1200.0	Bumped plug, took 500 PSI over.
Check Floats	08/05/2013 18:58							Floats held, 1.6 BBL back
Drop Opening Device For Multiple Stage Cementer	08/05/2013 19:01							Allow 10 min for device to reach tool. Opening pressure at 600 psi.
Next Stage	08/05/2013 19:10							
Pump Spacer 1	08/05/2013 19:12		4	20			550.0	20 BBL fresh water spacer. Tool opened at 550 psi.
Pump 2nd Stage Tail Slurry	08/05/2013 19:22		7	279.2			320.0	800 sks Stage Tail Cement, 12.8 ppg, 1.96 cf3, 10.34 gal/sk.
Shutdown	08/05/2013 20:04							
Drop Plug	08/05/2013 20:05							Drop closing device for multi stage cementer.
Pump Displacement	08/05/2013 20:05		8	118.1			610.0	Fresh Water displacement.
Slow Rate	08/05/2013 20:21		2	10			450.0	Slow rate last 10 bbl's of displacement prior to bumping plug.
Bump Plug	08/05/2013 20:24				128.1		2300.0	Bump plug. Take to 2300 psi. to close tool.

## Cementing Job Log

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Check Floats	08/05/2013 20:28							Floats held, 1 BBL back.
End Job	08/05/2013 20:36							50 bbl's good cement from first stage and 35 bbl's good cement from second stage. Job over. 1 add hour.
Pre-Rig Down Safety Meeting	08/05/2013 20:40							Discuss job and rig down.
Rig-Down Equipment	08/05/2013 20:45							
Rig-Down Completed	08/05/2013 22:00							
Pre-Convoy Safety Meeting	08/05/2013 22:15							Discuss route and safety.
Crew Leave Location	08/05/2013 22:30							
Other	08/05/2013 22:30							Thank you for using Halliburton. Ed Arnold and Crew.



# WPX - RGU 22-27-198 - MULTI STAGE SURFACE



- |   |   |  |  |  |  |  |
|---|---|--|--|--|--|--|
| <ul style="list-style-type: none"> <li>Start Job</li> <li>Fill Lines</li> <li>Test Lines</li> </ul> | <ul style="list-style-type: none"> <li>Pump Spacer 1</li> <li>Pump 1st Stage Lead Slurry</li> <li>Pump 1st Stage Tail Slurry</li> </ul> | <ul style="list-style-type: none"> <li>Shutdown</li> <li>Drop Plug</li> <li>Pump Displacement</li> </ul> | <ul style="list-style-type: none"> <li>Slow Rate</li> <li>Bump Plug</li> <li>Check Floats</li> </ul> | <ul style="list-style-type: none"> <li>Drop Opening Device For Multiple Stage Cementer</li> <li>Pump Spacer 1</li> <li>Pump 2nd Stage Tail Slurry</li> </ul> | <ul style="list-style-type: none"> <li>Shutdown</li> <li>Drop Plug</li> <li>Pump Displacement</li> </ul> | <ul style="list-style-type: none"> <li>Bump Plug</li> <li>20 Check Floats</li> <li>21 End Job</li> </ul> |
|---|---|--|--|--|--|--|