HALLIBURTON
Cementing

WPX ENERGY ROCKY MOUNTAIN LLC-EBUS

PA 331-27

Nabors 576

Post Job Summary
Cement Production Casing

Date Prepared: 12/28/2014
Job Date: 12/12/2014

Submitted by: Aaron Katz – Grand Junction Cement Engineer

HALLIBURTON

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 300721	**Ship To #:** 3207602	**Quote #:**	**Sales Order #:** 0901926360
Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS		**Customer Rep:**	
Well Name: FEDERAL	**Well #:** PA 331-27		**API/UWI #:** 05-045-22243-00
Field: PARACHUTE	**City (SAP):** RIFLE	**County/Parish:** GARFIELD	**State:** COLORADO
Legal Description: 27-6S-95W-2360FNL-648FEL			
Contractor:		**Rig/Platform Name/Num:** Nabors 576	
Job BOM: 7523			
Well Type: DIRECTIONAL GAS			
Sales Person: HALAMERICA\HB50180		**Srvc Supervisor:** Andrew Brennecke	

Job

Formation Name				
Formation Depth (MD)	**Top**		**Bottom**	
Form Type			**BHST**	
Job depth MD	8915ft		**Job Depth TVD**	
Water Depth			**Wk Ht Above Floor**	3
Perforation Depth (MD)	**From**		**To**	

Well Data

Description	New / Used	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Casing		9.625	9.001	32.3			0	2933	0	0
Casing		4.5	4	11.6			0	8915		0
Open Hole Section			8.75				2933	8925	0	0

Tools and Accessories

Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make
Guide Shoe	4.5	1		8915		**Top Plug**	4.5	1	HES
Float Shoe						**Bottom Plug**			
Float Collar	4.5	1		8887		**SSR plug set**			
Insert Float						**Plug Container**	4.5	1	HES
Stage Tool						**Centralizers**	4.5		

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/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Fresh Water	Fresh Water	10	bbl	8.34			4	

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal

2	EconoCem GJ2	ECONOCEM (TM) SYSTEM	415	sack	12.7	1.66		8	8.51
8.51 Gal		FRESH WATER							

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	ThermaCem GJ2	THERMACEM (TM) SYSTEM	670	sack	13.5	1.74		8	7.61
7.61 Gal		FRESH WATER							

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
4	Fresh Water Displacement	Fresh Water Displacement	137.7	bbl	8.34			10	

Cement Left In Pipe	Amount	28 ft	Reason	Shoe Joint

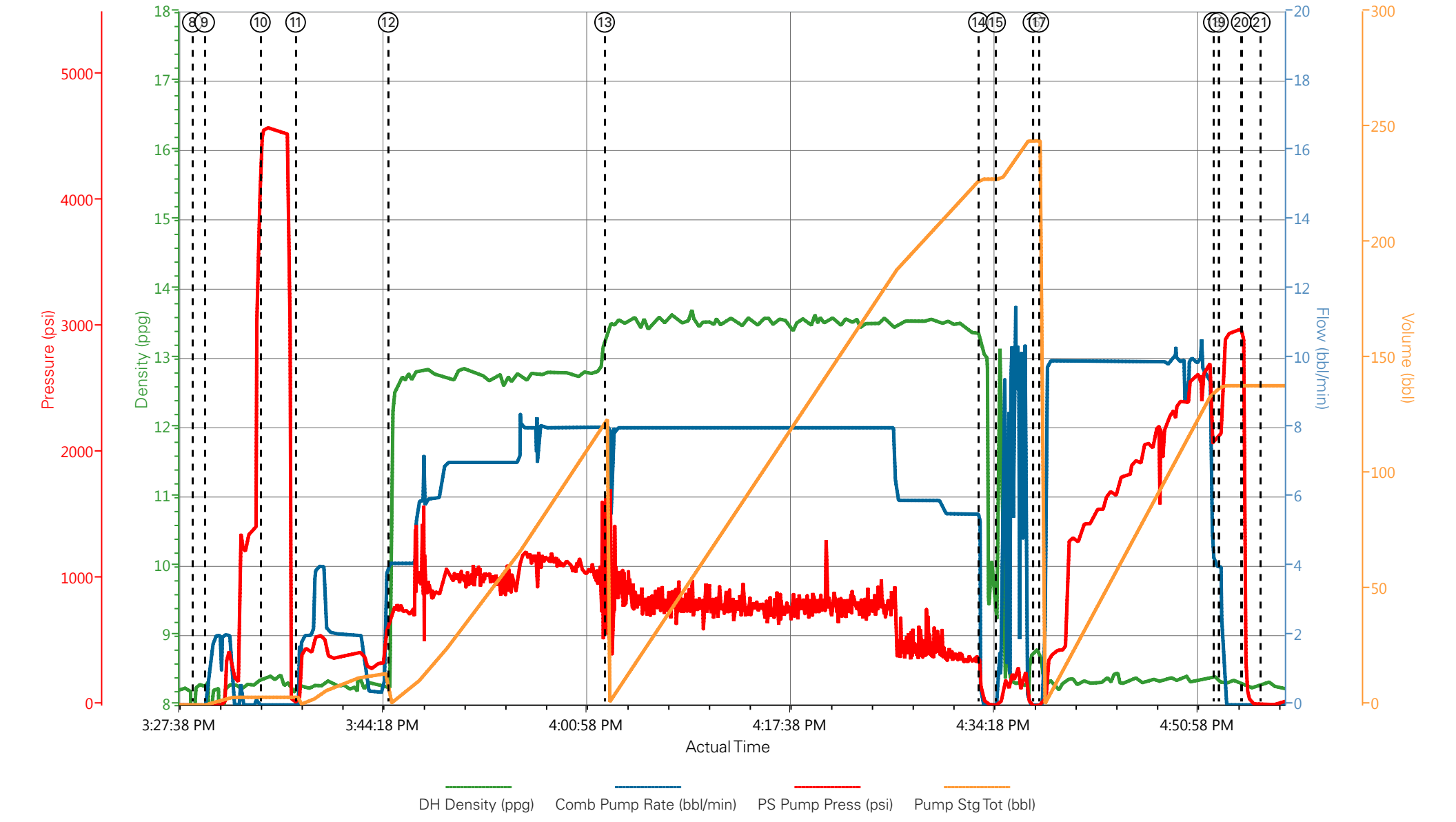
Comment

1.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comment
Event	1	Call Out	12/12/2014	07:30:00	USER					
Event	2	Pre-Convoy Safety Meeting	12/12/2014	10:45:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	12/12/2014	11:00:00	USER					
Event	4	Arrive at Location from Service Center	12/12/2014	12:15:00	USER					RIG READY, BLEW TAIL CEMENT INTO SILO BEFORE BRINGING TRUCKS ONTO LOCATION
Event	5	Pre-Rig Up Safety Meeting	12/12/2014	13:30:00	USER					
Event	6	Rig-Up Completed	12/12/2014	14:45:54	USER					1-ELITE, 1-660 BULK TRAILER, 1-1700 SILO, 4.5" QUICK LATCH PLUG CONTAINER, 2" PUMPING IRON, 4" SUCTION HOSE
Event	7	Pre-Job Safety Meeting	12/12/2014	15:15:00	USER					ALL HES AND RIG CREW PRESENT
Event	8	Start Job	12/12/2014	15:29:00	USER	8.35	0.00	2.00	0.0	TD- 8925', TP-8915.22', SJ-28.28', CSG-4.5" I-80 11.6#, OH-8.75", MUD-11.7PPG, VISC 63, SCSG- 2933'
Event	9	Prime Pumps	12/12/2014	15:30:00	COM5	8.33	2.00	443.00	2.0	FRESH WATER
Event	10	Test Lines	12/12/2014	15:34:33	COM5	8.38	0.30	4565.00	2.2	PRESSURE HELD ON LINES
Event	11	Pump Spacer 1	12/12/2014	15:37:26	COM5	8.34	4.00	551.00	14.0	FRESH WATER
Event	12	Pump Lead Cement	12/12/2014	15:45:01	COM5	12.70	8.00	1183.00	122.7	415SKS, 12.7PPG, 1.66CF/SK, 8.51GAL/SK
Event	13	Pump Tail Cement	12/12/2014	16:02:43	COM5	13.51	8.00	803.00	207.6	670SKS, 13.5PPG, 1.74CF/SK, 7.61GAL/SK
Event	14	Shutdown	12/12/2014	16:33:19	COM5					
Event	15	Clean Lines	12/12/2014	16:34:43	USER					CLEANED LINES TO WASH UP TRUCK
Event	16	Drop Top Plug	12/12/2014	16:37:47	USER					PLUG DROP VERIFIED BY COMPANY REP
Event	17	Pump Displacement	12/12/2014	16:38:15	COM5	8.42	10.00	2713.00	128.0	1-GAL MMCR, 3- 1LB BE6, KCL WATER
Event	18	Slow Rate	12/12/2014	16:52:32	USER	8.36	4.00	2094.00	10.0	SLOW RATE LAST 10 BBLS
Event	19	Bump Plug	12/12/2014	16:52:58	COM5	8.32	4.00	2360.00	137.7	PLUG BUMPED
Event	20	Check Floats	12/12/2014	16:54:49	USER	8.32	0.00	2963.00	137.7	FLOATS HELD, 2 BBLS BACK TO DISPLACEMENT TANK
Event	21	End Job	12/12/2014	16:56:23	USER	8.33	0.00	1.00	137.7	GOOD RETURNS THROUGH OUT JOB, PIPE WAS RECIPROCATED

Event	22	Crew Leave Location	12/12/2014	17:52:58	USER	THANK YOU FOR CHOOSING HALLIBURTON, ANDREW BRENNECKE AND CREW

WPX - PA 331-27 - 4.5" PRODUCTION

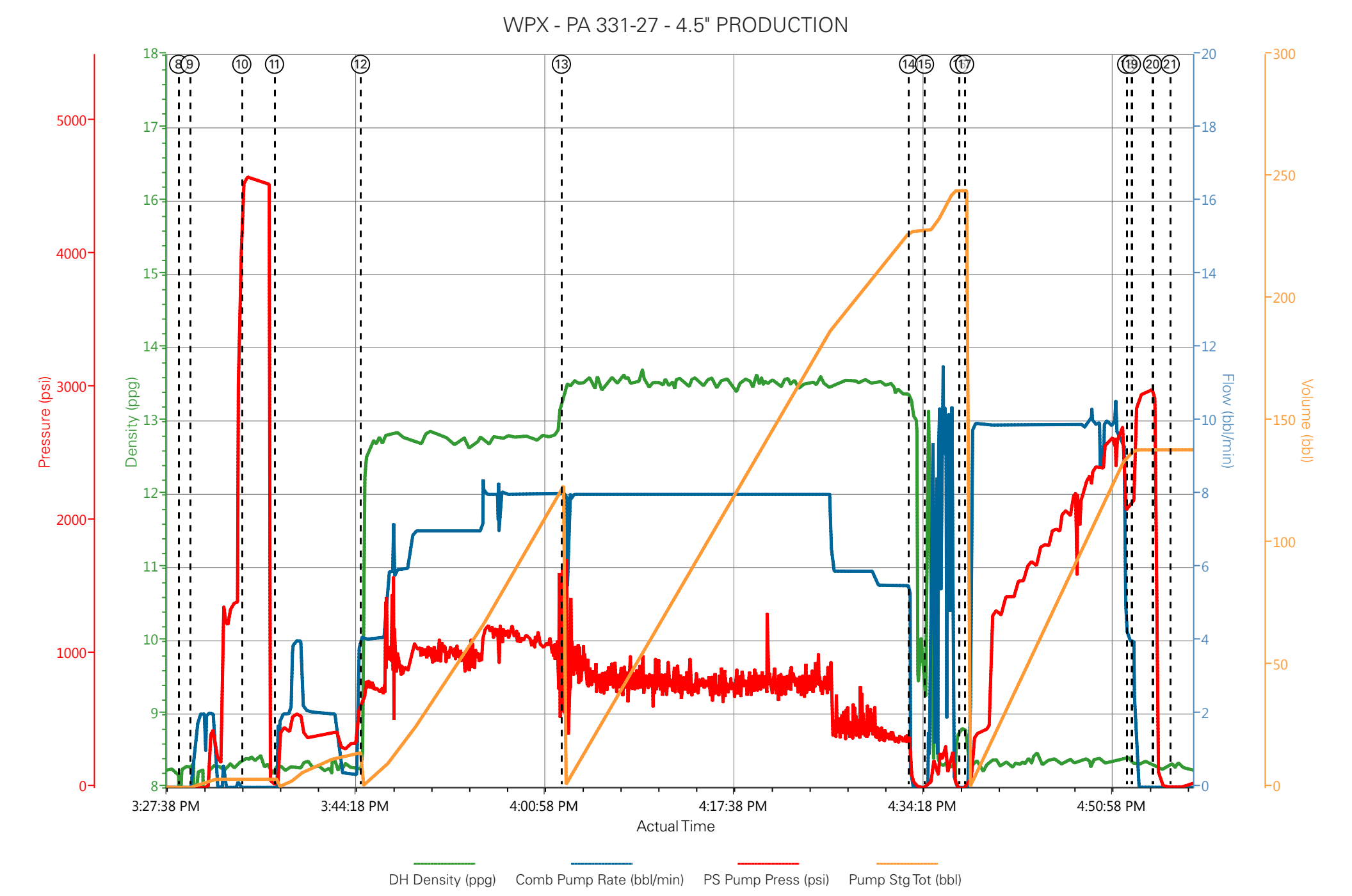


① Call Out n/a;n/a;n/a;n/a
② Pre-Convoy Safety Meeting n/a;n/a;n/a;n/a
③ Crew Leave Yard n/a;n/a;n/a;n/a
④ Arrive at Location from Service Center n/a;n/a;n/a;n/a
⑤ Pre-Rig Up Safety Meeting n/a;n/a;n/a;n/a
⑥ Rig-Up Completed 8.26;2.2;65;4
⑦ Pre-Job Safety Meeting 8.23;0;8;0
⑧ Start Job 8.23;0;-2;0
⑨ Prime Pumps
⑩ Test Lines 8.39

HALLIBURTON | iCem® Service

Created: 2014-12-12 14:40:06, Version: 3.0.148 Edit

Customer : WPX ENERGY ROCKY MOUNTAIN LLC-EBUS
Job Date : 12/12/2014 2:40:46 PM
Well : PA 331-27
Representative : RICK OAKS
Sales Order # : 901926360
ELITE#2 : A.BRENNECKE/S.WARDELL



HALLIBURTON | iCem® Service

Created: 2014-12-12 14:40:06, Version: 3.0.148 Edit

Customer : WPX ENERGY ROCKY MOUNTAIN LLC-EBUS

Job Date : 12/12/2014 2:40:46 PM

Well : PA 331-27

Representative : RICK OAKS

Sales Order # : 901926360

ELITE#2 : A.BRENNECKE/S.WARDELL

HALLIBURTON

Water Analysis Report

Company:	**WPX**	**Date:**	**12/12/2014**
Submitted by:	**A.BRENNECKE**	**Date Rec.:**	**12/12/2014**
Attention:	**E.RUSSEL**	**S.O.#**	**901926360**
Lease	**PA**	**Job Type:**	**PRODUCTION**
Well #	**331-27**		

Specific Gravity	***MAX***	**1**	
pH	***8***	**7**	
Potassium (K)	***5000***	**200**	**Mg / L**
Calcium (Ca)	***500***	**120**	**Mg / L**
Iron (FE2)	***300***	**0**	**Mg / L**
Chlorides (Cl)	***3000***	**0**	**Mg / L**
Sulfates (SO_4)	***1500***	**>400**	**Mg / L**
Chlorine (Cl_2)		**0**	**Mg / L**
Temp	***40-80***	**68**	**Deg**
Total Dissolved Solids		**710**	**Mg / L**

Respectfully: **A.BRENNECKE**

Title: **CEMENTING SUPERVISOR**

Location: **Grand Junction, CO**

HALLIBURTON

CUSTOMER SURVEY

Sales Order #:	**Line Item:**	**Survey Conducted Date:**
0901926360	10	12/12/2014
Customer:		**Job Type (BOM):**
WPX ENERGY ROCKY MOUNTAIN LLC-EBUS		CMT PRODUCTION CASING BOM
Customer Representative:		**API / UWI: (leave blank if unknown)**
		05-045-22243-00
Well Name:		**Well Number:**
FEDERAL		0080244863
Well Type:	**Well Country:**	
DIRECTIONAL GAS	USA	
H2S Present:	**Well State:**	**Well County:**
No	COLORADO	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**	**12/12/2014**
Survey Interviewer	**The survey interviewer is the person who initiated the survey.**	**HB58348**
Customer Participation	**Did the customer partipcipate 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

HALLIBURTON

CUSTOMER SURVEY

Sales Order #:	**Line Item:**	**Survey Conducted Date:**
0901926360	10	12/12/2014
Customer:		**Job Type (BOM):**
WPX ENERGY ROCKY MOUNTAIN LLC-EBUS		CMT PRODUCTION CASING BOM
Customer Representative:		**API / UWI: (leave blank if unknown)**
		05-045-22243-00
Well Name:		**Well Number:**
FEDERAL		0080244863
Well Type:	**Well Country:**	
DIRECTIONAL GAS	USA	
H2S Present:	**Well State:**	**Well County:**
No	COLORADO	GARFIELD

KEY PERFORMANCE INDICATORS

General	
Survey Conducted Date The date the survey was conducted	12/12/2014

Cementing KPI Survey	
Type of Job Select the type of job. (Cementing or Non-Cementing)	0
Select the Maximum Deviation range for this Job What is the highest deviation for the job you just completed? This may not be the maximum well deviation.	Deviated
Total Operating Time (hours) Total Operating Hours Including Rig-up, Pumping, Rig-down. Enter in decimal format.	5
HSE Incident, Accident, Injury HSE Incident, Accident, Injury. This should be recordable incidents only.	No
Was the job purpose achieved? Was the job delivered correctly as per customer agreed design?	Yes
Pumping Hours Total number of hours pumping fluid on this job. Enter in decimal format.	2
Type of Rig Classification Job Was Performed Type Of Rig (classification) Job Was Performed On	Drilling Rig (Portable)
Number Of JSAs Performed Number Of Jsas Performed	5
Was this a Primary Cement Job (Yes / No) Primary Cement Job= Casing job, Liner job, or Tie-back job.	Yes
Number of Unplanned Shutdowns Unplanned shutdown is when injection stops for any period of time.	0
Customer Non-Productive Rig Time (hrs)	0

HALLIBURTON

CUSTOMER SURVEY

Sales Order #:	**Line Item:**	**Survey Conducted Date:**
0901926360	10	12/12/2014
Customer:		**Job Type (BOM):**
WPX ENERGY ROCKY MOUNTAIN LLC-EBUS		CMT PRODUCTION CASING BOM
Customer Representative:		**API / UWI: (leave blank if unknown)**
		05-045-22243-00
Well Name:		**Well Number:**
FEDERAL		0080244863
Well Type:	**Well Country:**	
DIRECTIONAL GAS	USA	
H2S Present:	**Well State:**	**Well County:**
No	COLORADO	GARFIELD

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.	
Was the non productive time or the unplanned shutdown caused by a problem with a piece of equipment? Was the non productive time or the unplanned shutdown caused by a problem with a piece of equipment?	No
Did We Run Wiper Plugs? Did We Run Top And Bottom Casing Wiper Plugs?	Top
If a top plug was run, was the plug bumped? (Yes/No/N/A) If a top plug was run, was the plug bumped? (Yes/No/N/A)	Yes
If applicable, was Halliburton float equipment used? (Yes/No/N/A) If applicable, was Halliburton float equipment used? (Yes/No/N/A)	NA
If applicable, did the floats hold? (Yes/No/N/A) If applicable, did the floats hold? (Yes/No/N/A)	Yes
Mixing Density of Job Stayed in Designed Density Range (0-100%) Density Range defined as +/- .20 ppg. Calculation: Total BBLs cment mixed at designed density divided by total BBLs of cement multiplied by 100	97
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	8
If applicable, were there returns throughout the job? (Yes/No/N/A) If applicable, were there returns throughout the job? (Yes/No/N/A)	YES
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