HALLIBURTON

Cementing

WPX ENERGY ROCKY MOUNTAIN LLC-EBUS

RWF 334-25

Nabors 577

Post Job Summary
Cement Surface Casing

Date Prepared: 8/6/2014
Job Date: 8/6/2014

Submitted by: Tony Eschete - Cement Engineer

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Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 300721	**Ship To #:** 3123576	**Quote #:**	**Sales Order #:** 0901561578
Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS		**Customer Rep:** LUKE HUBBARD	
Well Name: SAVAGE	**Well #:** RWF 334-25		**API/UWI #:** 05-045-21996-00
Field: RULISON	**City (SAP):** RIFLE	**County/Parish:** GARFIELD	**State:** COLORADO
Legal Description: SW SE-25-6S-94W-1147FSL-1391FEL			
Contractor: NABORS DRLG		**Rig/Platform Name/Num:** NABORS 577	
Job BOM: 7521			
Well Type: DIRECTIONAL GAS			
Sales Person: HALAMERICA\HB50180		**Srvc Supervisor:** Eric Carter	

Job

Formation Name				
Formation Depth (MD)	**Top**	1134 FT.	**Bottom**	1134 FT.
Form Type			**BHST**	
Job depth MD	1134ft		**Job Depth TVD**	
Water Depth			**Wk Ht Above Floor**	5 FT.
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	0	9.625	9.001	32.3	8 RD	J-55	0	1134	0	0
Open Hole Section			13.5				0	1134	0	0

Tools and Accessories

Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make
Guide Shoe						**Top Plug**	9.625	1	HES
Float Shoe						**Bottom Plug**			
Float Collar						**SSR plug set**			
Insert Float						**Plug Container**	9.625	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 ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Fresh Water	Fresh Water	20	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	VariCem GJ1	VARICEM (TM) CEMENT	145	sack	12.3	2.38	13.75	8	
13.70 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	VariCem GJ1	VARICEM (TM) CEMENT	165	sack	12.8	2.11	11.75	8	
11.71 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	85.7	bbl	8.34			10	

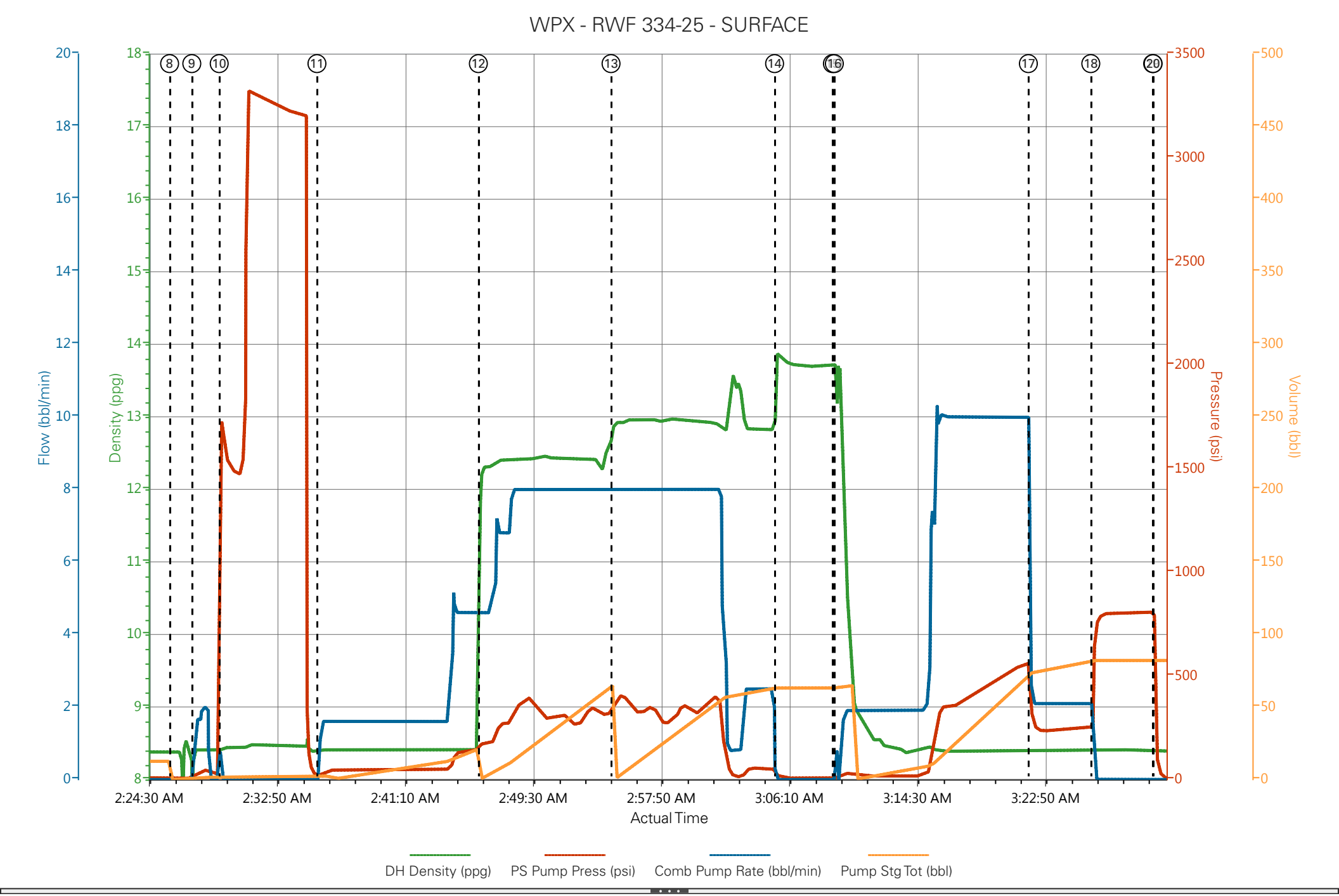
Cement Left In Pipe	Amount	45 ft	Reason	Shoe Joint

Comment

3.5 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DH Density (ppg)	PS Pump Press (psi)	Comb Pump Rate (bbl/min)	Pump Stg Tot (bbl)	Comment
Event	1	Arrive at Location from Other Job or Site	8/5/2014	03:30:00	USER					RIG RIH WITH DP
Event	2	Call Out	8/5/2014	10:00:00	USER					
Event	3	Assessment Of Location Safety Meeting	8/6/2014	01:00:00	USER					ATTENDED BY ALL HES CREW
Event	4	Other	8/6/2014	01:10:00	USER					SPOT EQUIPMENT
Event	5	Pre-Rig Up Safety Meeting	8/6/2014	01:20:00	USER					ATTENDED BY ALL HES CREW
Event	6	Rig-Up Equipment	8/6/2014	01:30:00	USER					
Event	7	Pre-Job Safety Meeting	8/6/2014	02:00:00	USER					ATTENDED BY ALL HES CREW, RIG CREW AND COMPANY REP
Event	8	Start Job	8/6/2014	02:26:00	USER					TP 1134', MW 9.4 PPG, CASING 9.625", 32.3#, H-40, SJ 45', HOLE 13.5", RIG CIRCULATED FOR 1 HR PRIOR TO JOB AT 13 BPM
Event	9	Other	8/6/2014	02:27:26	USER	8.34	45	2	2	FILL LINES
Event	10	Test Lines	8/6/2014	02:29:13	USER					PRESSURED UP TO 3380 PSI, PRESSURE HELD
Event	11	Pump Spacer	8/6/2014	02:35:35	USER	8.34	140	4.5	20	FRESH WATER
Event	12	Pump Lead Cement	8/6/2014	02:46:05	USER	12.3	360	8	61.5	145 SKS VARICEM MIXED AT 12.3 PPG, 2.38 YIELD, 13.75 GL/SK
Event	13	Pump Tail Cement	8/6/2014	02:54:43	USER	12.8	340	8	62	165 SKS VARICEM MIXED AT 12.8 PPG, 2.11 YIELD, 11.75 GL/SK
Event	14	Shutdown	8/6/2014	03:05:22	USER					
Event	15	Drop Top Plug	8/6/2014	03:09:08	USER					PLUG LAUNCHED
Event	16	Pump Displacement	8/6/2014	03:09:15	USER	8.34	530	10	75.7	FRESH WATER
Event	17	Slow Rate	8/6/2014	03:21:53	USER	8.34	250	2	10	
Event	18	Bump Plug	8/6/2014	03:25:57	USER		810			PLUG LANDED
Event	19	Check Floats	8/6/2014	03:29:00	USER					FLOATS HELD
Event	20	End Job	8/6/2014	03:30:00	USER					GOOD CIRCUALTION THROUGH OUT JOB, 8 BBLS CEMENT TO SURFACE, CASING NOT MOVED DURING JOB

Event	21	Post-Job Safety Meeting (Pre Rig-Down)	8/6/2014	03:35	USER	ATTENDED BY ALL HES CREW
Event	22	Rig-Down Equipment	8/6/2014	03:40	USER	
Event	23	Depart Location Safety Meeting	8/6/2014	04:20	USER	ATTENDED BY ALL HES CREW
Event	24	Crew Leave Location	8/6/2014	04:30	USER	THANK YOU FOR USING HALLIBURTON CEMENT, ERIC CARTER AND CREW



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Created: 2014-08-06 00:34:04, Version: 3.0.121 Edit

Customer : WPX ENERGY ROCKY MOUNTAIN LLC-EBUS

Job Date : 8/6/2014 12:55:45 AM

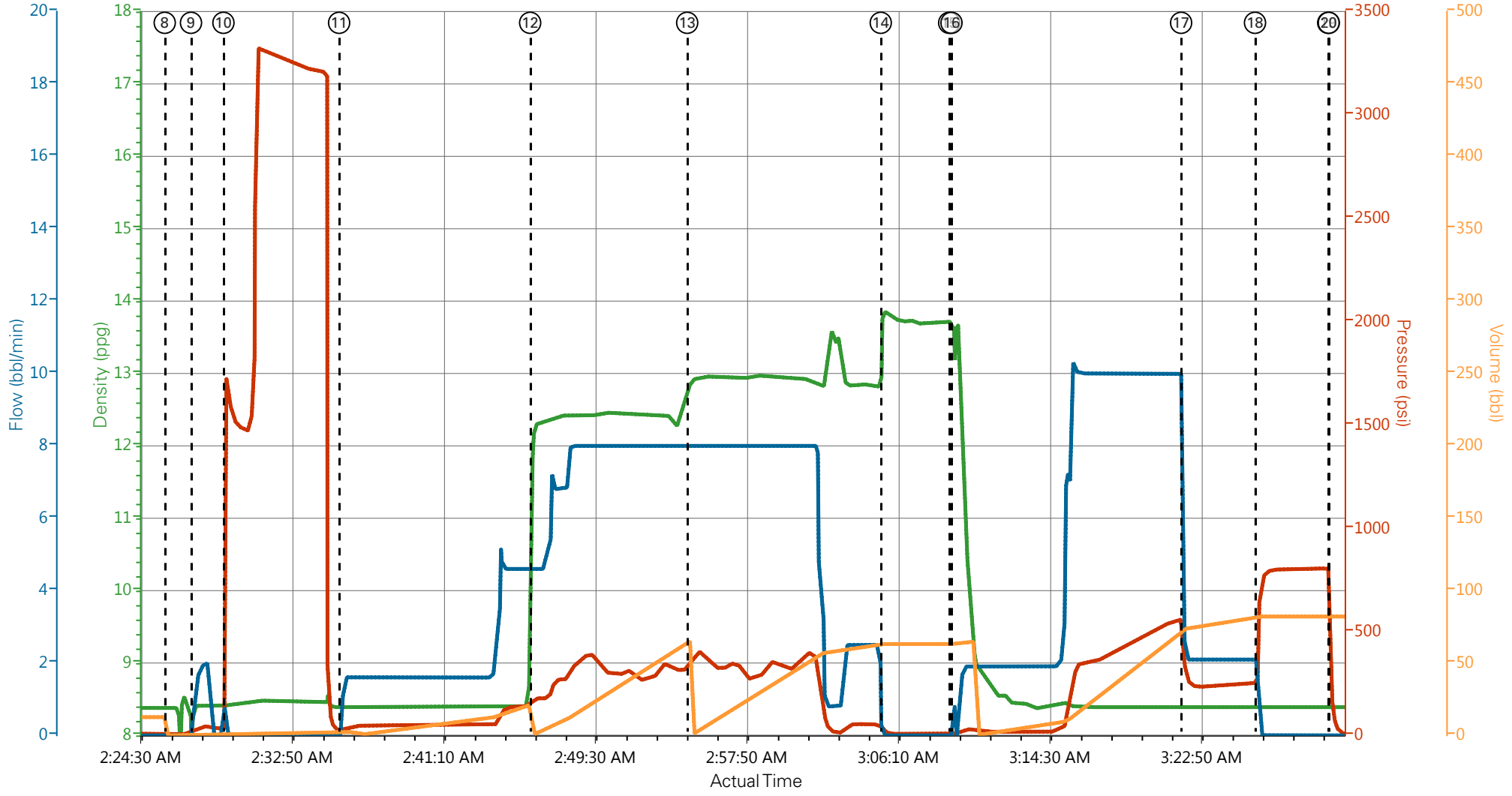
Well : RWF 334-25

Representative : LUKE HUBBARD

Sales Order # : 901561578

ERIC CARTER : KEVIN BENNETT/ELITE 7

WPX - RWF 334-25 - SURFACE



① Arrive at Location from Other Job or Site n/a;n/a;n/a;n/a
② Call Out n/a;n/a;n/a;n/a
③ Assessment Of Location Safety Meeting 8.38;7;0;0
④ Other 8.38;7;0;0
⑤ Pre-Rig Up Safety Meeting 8.38;7;0;0
⑥ Rig-Up Equipment 8.38;7;0;0
⑦ Pre-Job Safety Meeting 8.38;7;0;12.6
⑧ Start Job 8.38;9;0;0
⑨ Other 8.42;29;1.1;0
⑩ Test Lines 8.44;1711;0;1.7
⑪ Pump Spacer 8.39;20;1.1;1.7
⑫ Pump Lead Cement 12.17;172;4.6;0.7
⑬ Pump Tail Cement 12.9;348;8;65.4
⑭ Shutdown 13.84;19;0;63.1
⑮ Drop Top Plug 13.72;7;0.2;63.1
⑯ Pump Displacement 13.22;9;0.8;63.2
⑰ Slow Rate 8.39;33
⑱ Bump Plug 8.4;55
⑲ Check Floats 8.4;2
20 End Job 8.39;147

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Well : RWF 334-25
Representative : LUKE HUBBARD
Sales Order # : 901561578
ERIC CARTER : KEVIN BENNETT/ELITE 7

JOB PROCEDURE

NABORS 577

Pre-Planned Job Procedure Single Stage

EVENT #	EVENT	VOLUME	SACKS	WEIGHT	YIELD	GAL/ SK
1	Start Job		Rate	8	10	4
6	Test Lines	3000.0				
9	WATER SPACER	20.0				
13	Lead Cement	61.5	145	12.3	2.38	13.75
15	Tail Cement	62.0	165	12.8	2.11	11.75
	SHUTDOWN					
	DROP PLUG					
22	Displacement	85.7		Mud Wt.	9.4	
1085	Slow Rate	75.7		Casing	9.625	32.3
26	Land Plug	237		Open Hole	13.5	
	Release Psi / Job Over	737				
	Check Floats					
2	END JOB					
				Disp Fluid	8.4	
			Do Not Overdisplace			

DISPLACEMENT	TOTAL PIPE	SHOE JOINT LENGTH	ANN FACTOR	BBL/FT	H2O REQ.
85.70	1134	45.00	0.0870	0.0787	199.3

PSI to Lift Pipe	431.1	******Use Mud Scales on Each Tier******
Total Displacement	85.70	

CALCULATED DIFFERENTIAL PSI	237	TOTAL FLUID PUMPED	229.2

Collapse	1400	Burst	2270	S.O.#	901561578

HOT	672.0	TOT	462.0	Company Rep: **LUKE HUBBARD**
Bbls to Pit	21.3			

HALLIBURTON

Water Analysis Report

Company:	**WPX**	**Date:**	**8/6/2014**
Submitted by:	**ERIC CARTER**	**Date Rec.:**	**8/6/2014**
Attention:	**J.Trout**	**S.O.#**	**901561578**
Lease	**NABORS 577**	**Job Type:**	**SURFACE**
Well #	**RWF 334-25**		

Specific Gravity	***MAX***	**1**	
pH	***8***	**7**	
Potassium (K)	***5000***	**0**	**Mg / L**
Hardness	***500***	**250**	**Mg / L**
Iron (FE2)	***300***	**0**	**Mg / L**
Chlorides (Cl)	***3000***	**0**	**Mg / L**
Sulfates (SO_4)	***1500***	**<200**	**Mg / L**
Temp	***40-80***	**76**	**Deg**
Total Dissolved Solids		**450**	**Mg / L**

Respectfully: **ERIC CARTER**

Title: **CEMENTING SUPERVISOR**

Location: **Grand Junction, CO**

HALLIBURTON

CUSTOMER SURVEY

Sales Order #:	**Line Item:**	**Survey Conducted Date:**
0901561578	10	8/6/2014
Customer:		**Job Type (BOM):**
WPX ENERGY ROCKY MOUNTAIN LLC-EBUS		CMT SURFACE CASING BOM
Customer Representative:		**API / UWI: (leave blank if unknown)**
LUKE HUBBARD		05-045-21996-00
Well Name:		**Well Number:**
SAVAGE		0080125651
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**	**8/6/2014**
Survey Interviewer	**The survey interviewer is the person who initiated the survey.**	**HX15491**
Customer Participation	**Did the customer partipcipate in this survey? (Y/N)**	**Yes**
Customer Representative	**Enter the Customer representative name**	**LUKE HUBBARD**
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**	

CUSTOMER SIGNATURE

HALLIBURTON

CUSTOMER SURVEY

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LUKE HUBBARD		05-045-21996-00
Well Name:		**Well Number:**
SAVAGE		0080125651
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	8/6/2014

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.	Vertical
Total Operating Time (hours) Total Operating Hours Including Rig-up, Pumping, Rig-down. Enter in decimal format.	3
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
Operating Hours (Pumping Hours) Total number of hours pumping fluid on this job. Enter in decimal format.	1.5
Customer Non-Productive Rig Time (hrs) 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
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
Number of Unplanned Shutdowns Unplanned shutdown is when injection stops for any period of time.	0
Was this a Primary Cement Job (Yes / No)	Yes

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CUSTOMER SURVEY

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LUKE HUBBARD		05-045-21996-00
Well Name:		**Well Number:**
SAVAGE		0080125651
Well Type:	**Well Country:**	
DIRECTIONAL GAS	USA	
H2S Present:	**Well State:**	**Well County:**
No	COLORADO	GARFIELD

Primary Cement Job= Casing job, Liner job, or Tie-back job.	
Did We Run Wiper Plugs? Did We Run Top And Bottom Casing Wiper Plugs?	Top
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
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	95
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