HALLIBURTON

Cementing

WPX ENERGY ROCKY MOUNTAIN LLC-EBUS

RWF 533-25

Nabors 577

Post Job Summary
Cement Surface Casing

Date Prepared: 7/30/2014
Job Date: 7/27/2014

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 #:** 3123573	**Quote #:** 0021874349	**Sales Order #:** 0901539318
Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS		**Customer Rep:** Luke Hubbard	
Well Name: SAVAGE	**Well #:** RWF 533-25		**API/UWI #:** 05-045-21993-00
Field: RULISON	**City (SAP):** RIFLE	**County/Parish:** GARFIELD	**State:** COLORADO
Legal Description: SW SE-25-6S-94W-1154FSL-1391FEL			
Contractor: NABORS DRLG		**Rig/Platform Name/Num:** NABORS 577	
Job BOM: 7521			
Well Type: DIRECTIONAL GAS			
Sales Person: HALAMERICA\HB50180		**Srvc Supervisor:** Carlton Kukus	

Job

Formation Name				
Formation Depth (MD)	**Top**		**Bottom**	
Form Type			**BHST**	
Job depth MD	1135ft		**Job Depth TVD**	
Water Depth			**Wk Ht Above Floor**	5ft
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	New	9.625	9.001	32.3	8 RD	J-55	0	1135	0	1135
Open Hole Section			13.5				0	1145	0	1145

Tools and Accessories

Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make
Guide Shoe	9.625	1		1135		**Top Plug**	9.625	1	HES
Float Shoe	9.625	1				**Bottom Plug**	9.625		HES
Float Collar	9.625	1		1088		**SSR plug set**	9.625		HES
Insert Float	9.625	1				**Plug Container**	9.625	1	HES
Stage Tool	9.625	1				**Centralizers**	9.625		HES

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		8	13.77

13.70 Gal	FRESH WATER
0.25 lbm	POLY-E-FLAKE (101216940)

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		8	11.77
0.25 lbm		POLY-E-FLAKE (101216940)							
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	85.6	bbl	8.34			10	

Cement Left In Pipe	Amount	47 ft	Reason	Shoe Joint

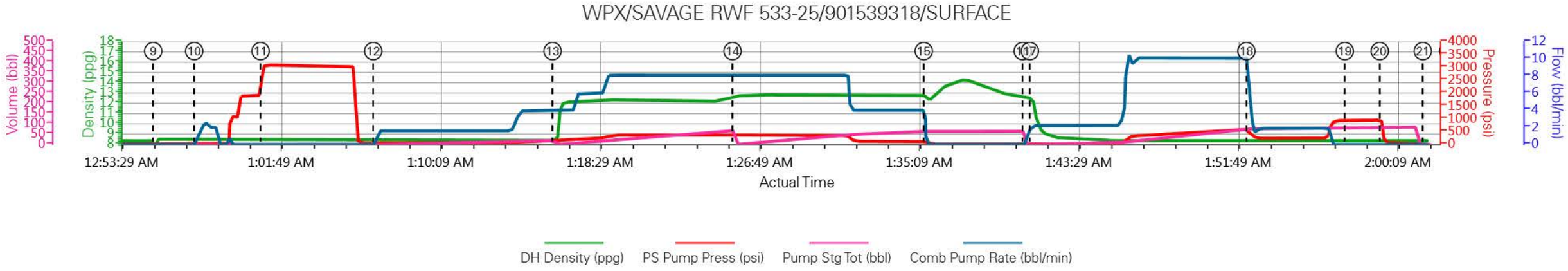
Comment 15 BBLS OF CEMENT TO SURFACE

1.0 Real-Time Job Summary

1.1 Job Event Log

Type	Seq. No.	Activity	Date	Time	Source	DH Density (ppg)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comb Pump Rate (bbl/min)	Comment
Event	1	Call Out	7/26/2014	17:50:00	USER					HES CREW CALLED OUT AT 17:50
Event	2	Pre-Convoy Safety Meeting	7/26/2014	19:00:00	USER					ALL HES EMPLOYEES
Event	3	Crew Leave Yard	7/26/2014	19:15:00	USER					2-F-550 PICKUPS, 1-ELITE PUMP TRUCK, 1-660 BULK TRUCK
Event	4	Arrive At Loc	7/26/2014	21:30:00	USER					HES ARRIVED 30 MINS EARLY RIG WAS RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	7/26/2014	21:45:00	USER					RIG WAS RUNNING CASING HES WAITED TO SPOT EQUIPMENT DUE TO SMALL LOCATION
Event	6	Pre-Rig Up Safety Meeting	7/26/2014	23:30:00	USER					ALL HES EMPLOYEES
Event	7	Rig-Up Equipment	7/26/2014	23:45:00	USER					RIG UP IRON TO THE STAND PIPE, BULK HOSE TO THE BULK TRUCK AND WATER HOSE TO THE UPRIGHT AND DAY TANK
Event	8	Pre-Job Safety Meeting	7/27/2014	00:30:00	USER	8.38	52.00	2.3	3.00	ALL HES EMPLOYEES AND RIG CREW TO GO OVER JOB PROCEDURES
Event	9	Start Job	7/27/2014	00:55:16	COM5	8.17	22.00	0.0	0.00	TD: 1145FT TP: 1135FT SJ: 47FT OH: 13.5 CSG: 9.625 32.3# J-55 MUD WT: 10#
Event	10	Prime Pumps	7/27/2014	00:57:24	USER	8.45	24.00	0.0	0.50	FILL LINES TO PRESSURE TEST
Event	11	Test Lines	7/27/2014	01:00:52	USER	8.47	3060.00	2.0	0.00	PRESSURE TEST TO 3000 PSI, PRESSURE TEST OK
Event	12	Pump Spacer 1	7/27/2014	01:06:45	COM5	8.39	144	20	4	20 BBL FRESH WATER SPACER
Event	13	Pump Lead Cement	7/27/2014	01:16:07	COM5	12.3	366	67	8	145 SKS OF VARICEM CEMENT 12.3 PPG 2.38 YIELD 13.77 GAL/SK WEIGHT OF CEMENT VERIFIED VIA MUD SCALES THROUGHOUT LEAD CEMENT
Event	14	Pump Tail Cement	7/27/2014	01:25:31	COM5	12.8	367	64	8	165 SKS OF VARICEM CEMENT 12.8 PPG 2.11 YIELD 11.77 GAL/SK WEIGHT OF TAIL CEMENT VERIFIED VIA MUD SCALES THROUGHOUT TAIL CEMENT
Event	15	Shutdown	7/27/2014	01:35:31	USER	12.54	79.00	64.1	0.00	SHUTDOWN END OF CEMENT/HES WASHED UP ON TOP OF THE PLUG
Event	16	Drop Plug	7/27/2014	01:40:41	USER	12.66	13.00	0.0	0.00	PLUG AWAY NO PROBLEMS

Event	17	Pump Displacement	7/27/2014	01:41:03	COM5	8.34	579	75	10	FRESH WATER DISPLACEMENT
Event	18	Slow Rate	7/27/2014	01:52:22	USER	8.39	249	76.5	2	SLOW RATE TO BUMP THE PLUG
Event	19	Bump Plug	7/27/2014	01:57:30	COM5	8.40	256	85.6	0.00	BUMPED PLUG AT 256 PSI TOOK TO 960 PSI
Event	20	Check Floats	7/27/2014	01:59:20	USER	8.40	960	85.6	0.00	FLOATS HELD .5 BBLS BACK TO TANKS
Event	21	End Job	7/27/2014	02:01:35	COM5	8.38	5.00	0.0	0.00	THANK YOU FOR CHOOSING HALLIBURTON CEMENT CARL KUKUS AND CREW
Event	22	Pre-Rig Down Safety Meeting	7/27/2014	02:02:54	USER					ALL HES CREW
Event	23	Rig Down Lines	7/27/2014	02:15:00	USER					RIG DOWN ALL EQUIPMENT AND PUT AWAY AND SECURE
Event	24	Pre-Convoy Safety Meeting	7/27/2014	02:45:00	USER					ALL HES EMPLOYEES
Event	25	Crew Leave Location	7/27/2014	03:00:00	USER					2-F-550 PICKUPS, 1-ELITE PUMP TRUCK, 1-660 BULK TRUCK



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 Loc n/a;n/a;n/a;n/a
⑤ Assessment Of Location Safety Meeting n/a;n/a;n/a;n/a
⑥ Pre-Rig Up Safety Meeting n/a;n/a;n/a;n/a
⑦ Rig-Up Equipment n/a;n/a;n/a;n/a
⑧ Pre-Job Safety Meeting 8.38;52;2.3;3
⑨ Start Job 8.17;22;0;0
⑩ Fill Lines 8.45;24;0;0.5
⑪ Test Lines 8.47;3060;2;0
⑫ Pump Spacer 1 8.39;36;0;0
⑬ Pump Lead Cement 8.4;144;0.03;4
⑭ Pump Tail Cement 12.69;356;0.2;8.1
⑮ Shutdown 12.54;79;64.1;0
⑯ Drop Plug 12.66;13;0;0
⑰ Pump Displacement 12.39;36;0.5;2.2
⑱ Slow Rate 8.39;492;76.2;5.1
⑲ Bump Plug 8.4;943;84.4;0
20 Check Floats 8.4;514;84.4;0
21 End Job 8.38;5;0;0
22 Pre-Rig Down Safety Meeting n/a;n/a;n/a;n/a
23 Rig Down Lines n/a;n/a;n/a;n/a
24 Pre-Convoy Safety Meeting n/a;n/a;n/a;n/a
25 Crew Leave Location n/a;n/a;n/a;n/a

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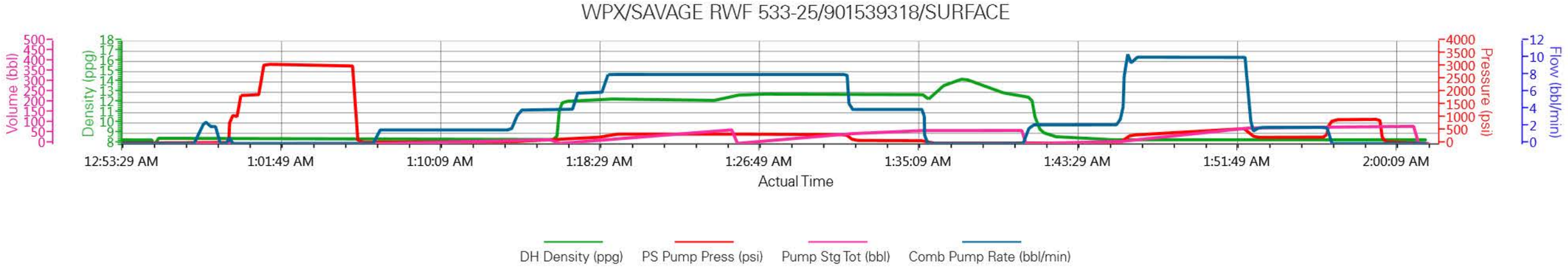
Created: 2014-07-26 22:08:53, Version: 3.0.121 Edit

Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS
Job Date: 7/27/2014 12:27:41 AM
Well: Savage RWF 533-25
Representative: Luke Hubbard
Sales Order #: 901539318
Supervisor/Operator: Carlton Kukus/Kevin Bennett E-7



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Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS

Job Date: 7/27/2014 12:27:41 AM

Well: Savage RWF 533-25

Representative: Luke Hubbard

Sales Order #: 901539318

Supervisor/Operator: Carlton Kukus/Kevin Bennett E-7

EVENT #	EVENT	VOLUME	SACKS	WEIGHT	YIELD	GAL/ SK
1	Start Job					
6	Test Lines	3000.0				
	Fresh Water Spacer	20.0		8.33		
	Lead Cement	61.5	145	12.3	2.38	13.77
15	Tail Cement	62.0	165	12.8	2.11	11.77
	SHUTDOWN/DROP PLUG	0.0				
23	Displace w/Fresh Water	85.6		8.34		
	SLOW RATE	75.6				
26	Land Plug	271.0		500	OVER	
2	Release Psi / Job Over	0.0				
			Do Not Overdisplace			

DISPLACEMENT	TOTAL PIPE	SHOE JOINT LENGTH	FLOAT COLLAR	BBL/FT	H2O REQ.
85.63	1135	47.00	1088.00	0.0787	199
PSI to Lift Pipe	461	******Use Mud Scales on Each Tier******			
Total Displacement	85.60				
CALCULATED DIFFERENTIAL PSI		271	TOTAL FLUID PUMPED		229
Collapse		Burst		SO#	901539318

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Water Analysis Report

Company:	WPX	**Date:**	7/26/2014
Submitted by:	Carl Kukus	**Date Rec.:**	7/26/2014
Attention:	J.Trout	**S.O.#**	901539318
Lease	SAVAGE	**Job Type:**	Surface
Well #	RWF 533-25		

Specific Gravity	*MAX*	1	
pH	*8*	7	
Potassium (K)	*5000*	200	Mg / L
Calcium (Ca)	*500*	120	Mg / L
Iron (FE2)	*300*	3	Mg / L
Chlorides (Cl)	*3000*	0	Mg / L
Sulfates (SO_4)	*1500*	200	Mg / L
Chlorine (Cl_2)		0	Mg / L
Temp	*40-80*	67	Deg
Total Dissolved Solids		250	Mg / L

Respectfully: Carl Kukus

Title: CEMENTING SUPERVISOR

Location: Grand Junction, CO

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CUSTOMER SURVEY

Sales Order #:	**Line Item:**	**Survey Conducted Date:**
0901539318	10	7/27/2014
Customer:		**Job Type (BOM):**
WPX ENERGY ROCKY MOUNTAIN LLC-EBUS		CMT SURFACE CASING BOM
Customer Representative:		**API / UWI: (leave blank if unknown)**
LUKE HUBBARD		05-045-21993-00
Well Name:		**Well Number:**
SAVAGE		0080125648
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**	**7/27/2014**
Survey Interviewer	**The survey interviewer is the person who initiated the survey.**	**HB44726**
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

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CUSTOMER SURVEY

Sales Order #:	**Line Item:**	**Survey Conducted Date:**
0901539318	10	7/27/2014
Customer:		**Job Type (BOM):**
WPX ENERGY ROCKY MOUNTAIN LLC-EBUS		CMT SURFACE CASING BOM
Customer Representative:		**API / UWI: (leave blank if unknown)**
LUKE HUBBARD		05-045-21993-00
Well Name:		**Well Number:**
SAVAGE		0080125648
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	7/27/2014

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
Pumping Hours Total number of hours pumping fluid on this job. Enter in decimal format.	1
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	6
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

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CUSTOMER SURVEY

Sales Order #:	**Line Item:**	**Survey Conducted Date:**
0901539318	10	7/27/2014
Customer:		**Job Type (BOM):**
WPX ENERGY ROCKY MOUNTAIN LLC-EBUS		CMT SURFACE CASING BOM
Customer Representative:		**API / UWI: (leave blank if unknown)**
LUKE HUBBARD		05-045-21993-00
Well Name:		**Well Number:**
SAVAGE		0080125648
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.	
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)	N/A
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	90
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