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# **NOBLE ENERGY INC E-BUSINESS**

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**BM 34-43A**

**Garfield County , Colorado**

## **Cement Surface Casing**

**19-Dec-2010**

### **Post Job Summary**

## The Road to Excellence Starts with Safety

Sold To #: 345242	Ship To #: UNKNOWN	Quote #:	Sales Order #: 7785365
Customer: NOBLE ENERGY INC E-BUSINESS	Customer Rep: PORTER, LANCE		
Well Name: BM	Well #: 34-43A	API/UWI #:	
Field:	City (SAP): Parachute	County/Parish: Garfield	State: Colorado
Contractor: H&P Drilling	Rig/Platform Name/Num: H&P 322		
Job Purpose: Cement Surface Casing			
Well Type: Development Well	Job Type: Cement Surface Casing		
Sales Person: METLI, MARSHALL	Srv Supervisor: MUHLESTEIN, RYAN	MBU ID Emp #:	453609

### Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
BLUST, CHARLES Thomas	26.5	386662	HAYES, JESSE Doug	26.5	403601	JENSEN, JESSE Robert	26.5	478774
MUHLESTEIN, RYAN Herrick	26.5	453609	PHILLIPS, MARK Bejar	26.5	445272	STEELE, BENJAMIN F	26.5	458599

### Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way

### Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
12/18/2010	18.5	15	12/19/10	8	4			
TOTAL	Total is the sum of each column separately							

### Job

Formation Name	Formation Depth (MD)	Top	Bottom	Form Type	Job depth MD	Job Depth TVD	Water Depth	Perforation Depth (MD)	From	To	Deparated Loc
				BHST	3356. ft	3356. ft					
						4. ft					

### 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 SECTION				14.75				.	3356.	.	
SURFACE CASING	Unknown		9.625	8.835	40.		J-55	.	3351.		

### Sales/Rental/3<sup>rd</sup> Party (HES)

Description	Qty	Qty uom	Depth	Supplier
R/A DENSOMETER W/CHART RECORDER,/JOB,ZI	1	JOB		
PORT. DAS W/CEMWIN;ACQUIRE W/HES, ZI	1	JOB		
ADC (AUTO DENSITY CTRL) SYS, /JOB,ZI	1	JOB		
SBM CMT, Superflush-XLC	840	GAL		

### Tools and Accessories

Type	Size	Qty	Make	Depth	Type	Size	Qty	Make	Depth	Type	Size	Qty	Make
Guide Shoe					Packer					Top Plug	9.625	1	HES
Float Shoe					Bridge Plug					Bottom Plug			
Float Collar				3307.5	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 ft <sup>3</sup> /sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
1	Water Spacer		10.00	bbl	8.4	.0	.0	5.0	
2	SUPER FLUSH - XLC	SUPERFLUSH-XLC - SBM (549694)	20.00	bbl	10.	.0	.0	5.0	
3	WATER SPACER		10.00	bbl	8.4	.0	.0	5.0	
4	Lead Cement	VERSACEM (TM) SYSTEM (452010)	1012.0	sacks	12.3	2.3	11.68	4.0	11.68
		11.68 Gal	FRESH WATER						
5	Tail Cement	VERSACEM (TM) SYSTEM (452010)	184.0	sacks	12.6	2.14	10.47	4.0	10.47
		10.47 Gal	FRESH WATER						
6	Displacement		251.00	bbl	8.4	.0	.0	5.0	
Calculated Values		Pressures		Volumes					
Displacement	251	Shut In: Instant		Lost Returns	641	Cement Slurry	485	Pad	
Top Of Cement	SURFACE	5 Min		Cement Returns	4	Actual Displacement	251	Treatment	
Frac Gradient		15 Min		Spacers	40	Load and Breakdown		Total Job	785
Rates									
Circulating	6.5	Mixing		4	Displacement	5.5	Avg. Job		4
Cement Left In Pipe	Amount	43.5 ft	Reason	Shoe Joint					
Frac Ring # 1 @	ID		Frac ring # 2 @	ID		Frac Ring # 3 @	ID		Frac Ring # 4 @
The Information Stated Herein Is Correct				Customer Representative Signature					

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 345242		<b>Ship To #:</b> UNKNOWN		<b>Quote #:</b>		<b>Sales Order #:</b> 7785365	
<b>Customer:</b> NOBLE ENERGY INC E-BUSINESS				<b>Customer Rep:</b> PORTER, LANCE			
<b>Well Name:</b> BM			<b>Well #:</b> 34-43A			<b>API/UWI #:</b>	
<b>Field:</b>		<b>City (SAP):</b> Parachute		<b>County/Parish:</b> Garfield			<b>State:</b> Colorado
<b>Legal Description:</b>							
<b>Lat:</b> N 0 deg. OR N 0 deg. 0 min. 0 secs.				<b>Long:</b> E 0 deg. OR E 0 deg. 0 min. 0 secs.			
<b>Contractor:</b> H&P Drilling			<b>Rig/Platform Name/Num:</b> H&P 322				
<b>Job Purpose:</b> Cement Surface Casing						<b>Ticket Amount:</b>	
<b>Well Type:</b> Development Well			<b>Job Type:</b> Cement Surface Casing				
<b>Sales Person:</b> METLI, MARSHALL			<b>Srv Supervisor:</b> MUHLESTEIN, RYAN			<b>MBU ID Emp #:</b> 453609	

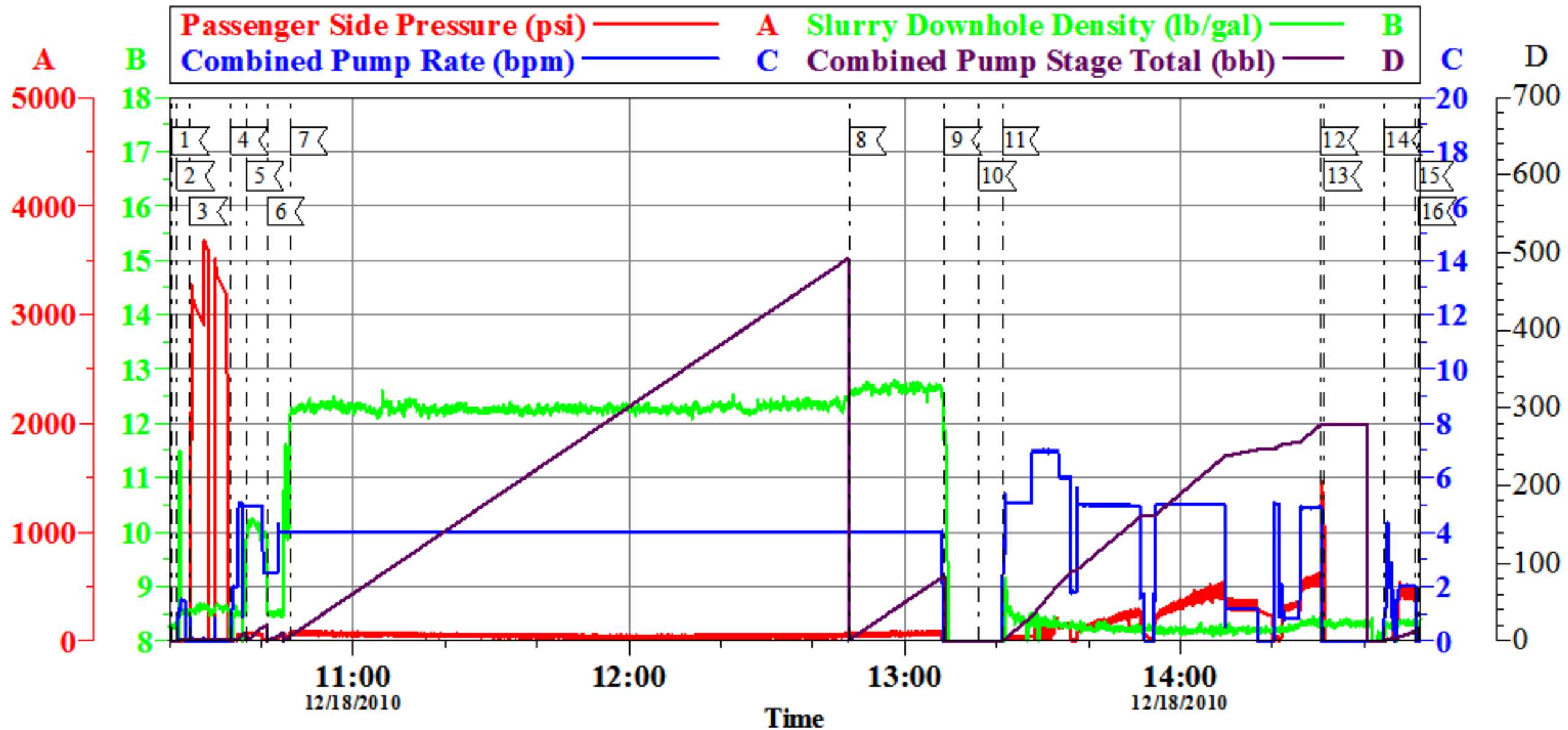
Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pre-Convoy Safety Meeting	12/18/2010 02:30							ALL HES EE'S
Arrive At Loc	12/18/2010 05:30							RIG STILL RUNNING, HES TRANSPORT ARRIVES WITH CREW
Pre-Rig Up Safety Meeting	12/18/2010 06:00							ALL HES EE'S
Rig-Up Equipment	12/18/2010 06:30							1 HT 400 PUMP, 1 BULK STORAGE BINS, 1 660 BULK TRAILER. 1 SUPERFLUSH TRANSPORT, 1 F-450 PICK-UP, 1 9 5/8 SWAGE, PLUG CONTAINER & QUICK LATCH NOT USED
Pre-Job Safety Meeting	12/18/2010 10:00							ALL HES EE'S, RIG CREW AND CO REP
Start Job	12/18/2010 10:26							TD-3356' TP-3351' SJ-43.5' FC 3307.5' CASING 9 5/8" 40# J-55 HOLE 14 3/4"
Pump Water	12/18/2010 10:27		2	2			.0	FRESH H2O TO FILL LINES
Test Lines	12/18/2010 10:34					3380.0		HELD PSI FOR 2 MIN, NO LEAKS
Pump Spacer 1	12/18/2010 10:38		5	10			40.0	FRESH H2O
Pump Spacer 2	12/18/2010 10:42		5	10			70.0	SUPER FLUSH-XLC
Pump Spacer 1	12/18/2010 10:46		5	10			30.0	FRESH H2O
Pump Lead Cement	12/18/2010 10:49		4	414.5			490.0	1012 SKS 12.3 PPG 2.3 FT3/SK 11.68 GAL/SK, ESTIMATED HOC IS AT 475' FROM SURF

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	12/18/2010 12:00							
Pump Tail Cement	12/18/2010 12:53		4	70.1			310.0	184 SKS 12.6 PPG 2.14 FT3/SK 10.47 GAL/SK,
Shutdown	12/18/2010 13:15							
Drop Top Plug	12/18/2010 13:20							VERIFY PLUG LAUNCHED
Pump Displacement	12/18/2010 13:25		5	250.7			560.0	FRESH H2O DISPLACEMENT, NO RETURNS, 0 CEMENT TO SURFACE
Shutdown	12/18/2010 14:15							SHUT DOWN TO SWAP WATER SOURCE
Resume	12/18/2010 14:30		5	200				RESUME H2O DISPLACEMENT
Bump Plug	12/18/2010 14:36							PLUG BUMPED AT 560 PSI PRESSURED UP TO 1300 PSI
Check Floats	12/18/2010 14:37							FLOATS HELD, 1 BBL BACK TO PUMP TRUCK
Pump Water	12/18/2010 14:50		3	15			100.0	PUMP SUGAR WATER THRU PARASITE LINE, CIRCULATED AT 100 PSI, FLOW NOTED TO SURFACE AT 1 BBLS AWAY
Shutdown	12/18/2010 14:56							
End Job	12/18/2010 14:58							RETURNS AT 390 BBLS AWAY ON LEAD CMT, RIG CIRCULATE 1 HR PRIOR TO CMT, MUD 9.4#, FV 37, PV 10, YP 6, TEMP 75, 150 LBS SUGAR USED
Other	12/18/2010 15:00							WAITING TO TOPOUT
Other	12/18/2010 15:01							HES TRANSPORT DEPARTS LOCATION 10 HRS CHARGED
Start Job	12/19/2010 02:09							START 1ST TOP OUT
Pump Cement	12/19/2010 02:10		1.5	30			50.0	150 SKS 15.8 PPG 1.15 FT3/SK 5 GAL/SK, 0 BBLS TO SURFACE

Activity Description	Date/Time	Cht #	Rate bbl/ min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Shutdown	12/19/2010 02:28							
End Job	12/19/2010 02:29							
Start Job	12/19/2010 05:45							
Pump Cement	12/19/2010 05:48		1.5	40			60.0	200 SKS 15.8 PPG 1.15 FT3/SK 5 GAL/SK, 4 BBLS CMT TO SURFACE
Shutdown	12/19/2010 06:03							
End Job	12/19/2010 06:04							
Pre-Rig Down Safety Meeting	12/19/2010 06:10							ALL HES EE'S
Rig-Down Equipment	12/19/2010 06:15							
Pre-Convoy Safety Meeting	12/19/2010 07:55							ALL HES EE'S
Crew Leave Location	12/19/2010 08:00							THANKS FOR USING HALLIBURTON CEMENT, RYAN MUHLESTEIN AND CREW

# NOBLE

## BM34-43A 9 5/8" SURFACE



Local Event Log					
1	START JOB	10:20:33	2	FILL LINES	10:21:44
			3	TEST LINES	10:24:30
4	PUMP H2O SPACER	10:33:27	5	PUMP SUPER FLUSH	10:36:44
			6	PUMP H2O SPACER	10:41:16
7	PUMP LEAD CMT	10:46:17	8	PUMP TAIL CMT	12:47:53
			9	SHUTDOWN	13:08:41
10	DROP PLUG	13:16:09	11	PUMP DISPLACEMENT	13:21:13
			12	BUMP PLUG	14:30:35
13	CHECK FLOATS	14:31:23	14	PUMP SUGAR H2O	14:44:22
			15	SHUTDOWN	14:51:13
16	END JOB	14:51:57			

Customer: NOBLE  
Well Description: BM34-43A  
Customer Rep: LANCE PORTER

Job Date: 18-Dec-2010  
Job type: SURFACE  
Service Supervisor: RYAN MUHLESTEIN

Sales Order #: 7785365  
ADC Used: YES  
Operator/ Pump: MARK PHILLIPS/ ELITE 1

OptiCem v6.4.6  
20-Dec-10 03:18

<b>Sales Order #:</b> 7785365	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 12/19/2010
<b>Customer:</b> NOBLE ENERGY INC E-BUSINESS		<b>Job Type (BOM):</b> CMT SURFACE CASING BOM
<b>Customer Representative:</b> LANCE PORTER		<b>API / UWI: (leave blank if unknown)</b> AFEYKYMJGVJMY1GEAAA
<b>Well Name:</b> BM		<b>Well Number:</b> 34-43A
<b>Well Type:</b> Development Well	<b>Well Country:</b> United States of America	
<b>H2S Present:</b> Yes	<b>Well State:</b> Colorado	<b>Well County:</b> 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	12/19/2010
Survey Interviewer	The survey interviewer is the person who initiated the survey.	RYAN MUHLESTEIN (HB21105)
Customer Participation	Did the customer participate in this survey? (Y/N)	Yes
Customer Representative	Enter the Customer representative name	LANCE PORTER
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	<p> CALLED  APPROX. AT  NOON FOR TOP  OUT CEMENT.  ARRIVED ON  LOCATION  APPROX. 11 PM.  DID NOT STAMP  TICKET. PLEASE  ADJUST ADD  HOURS ON  PUMPING  EQUIPMENT.  THANKS </p>
Job DVA	Did we provide job DVA above our normal service today? Circle Y or N	No
Time	Please enter hours in decimal format to nearest quarter hour.	



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<b>H2S Present:</b> Yes	<b>Well State:</b> Colorado	<b>Well County:</b> Garfield

<b>Other</b>	<b>Enter short text for other efficiencies gained.</b>	
<b>Customer Initials</b>	<b>Customer's Initials</b>	
<b>Please provide details</b>	<b>Please describe how the job efficiencies were gained.</b>	

<b>CUSTOMER SIGNATURE</b>
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<b>Well Name:</b> BM		<b>Well Number:</b> 34-43A
<b>Well Type:</b> Development Well	<b>Well Country:</b> United States of America	
<b>H2S Present:</b> Yes	<b>Well State:</b> Colorado	<b>Well County:</b> Garfield

### KEY PERFORMANCE INDICATORS

General	
<b>Survey Conducted Date</b> The date the survey was conducted	12/19/2010

Cementing KPI Survey	
<b>Type of Job</b> Select the type of job. (Cementing or Non-Cementing)	0
<b>Select the Maximum Deviation range for this Job</b> What is the highest deviation for the job you just completed? This may not be the maximum well deviation.	Vertical
<b>Total Operating Time (hours)</b> Total Operating Hours Including Rig-up, Pumping, Rig-down. Enter in decimal format.	26.5
<b>HSE Incident, Accident, Injury</b> HSE Incident, Accident, Injury. This should be recordable incidents only.	No
<b>Was the job purpose achieved?</b> Was the job delivered correctly as per customer agreed design?	Yes
<b>Operating Hours (Pumping Hours)</b> Total number of hours pumping fluid on this job. Enter in decimal format.	8
<b>Customer Non-Productive Rig Time (hrs)</b> 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
<b>Type of Rig Classification Job Was Performed</b> Type Of Rig (classification) Job Was Performed On	Drilling Rig (Portable)
<b>Number Of JSAs Performed</b> Number Of Jsas Performed	6
<b>Number of Unplanned Shutdowns</b> Unplanned shutdown is when injection stops for any period of time.	0
<b>Was this a Primary Cement Job (Yes / No)</b>	Yes

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<b>H2S Present:</b> Yes	<b>Well State:</b> Colorado	<b>Well County:</b> Garfield

Primary Cement Job= Casing job, Liner job, or Tie-back job.	
<b>Did We Run Wiper Plugs?</b> Did We Run Top And Bottom Casing Wiper Plugs?	Top
<b>Mixing Density of Job Stayed in Designed Density Range (0-100%)</b> Density Range defined as +/- .20 ppg. Calculation: Total BBLs cement mixed at designed density divided by total BBLs of cement multiplied by 100	98
<b>Was Automated Density Control Used?</b> Was Automated Density Control (ADC) Used ?	Yes
<b>Pump Rate (percent) of Job Stayed At Designed Pump Rate</b> 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	98
<b>Nbr of Remedial Sqz Jobs Rqd - Competition</b> Number Of Remedial Squeeze Jobs Required After Primary Job Performed By Competition	0
<b>Nbr of Remedial Plug Jobs Rqd - HES</b> Number Of Remedial Plug Jobs Needed After Primary Plug Pumped By HES	0
<b>Nbr of Remedial Sqz Jobs Rqd - HES</b> Number Of Remedial Squeeze Jobs Required After Primary Job Performed By HES	0