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# **BILL BARRETT CORPORATION E-BILL**

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**KAUFMAN 21C-25-692  
MAMM CREEK  
Garfield County , Colorado**

**Cement Surface Casing**  
**08-Dec-2011**

**Job Site Documents**

## The Road to Excellence Starts with Safety

Sold To #: 343492	Ship To #: 2894960	Quote #:	Sales Order #: 9112144
Customer: BILL BARRETT CORPORATION E-BILL	Customer Rep: Lauer, Casey		
Well Name: KAUFMAN	Well #: 21C-25-692	API/UWI #: 05-045-21147	
Field: MAMM CREEK	City (SAP): UNKNOWN	County/Parish: Garfield	State: Colorado
Lat: N 39.502 deg. OR N 39 deg. 30 min. 8.773 secs.	Long: W 100.618 deg. OR W -101 deg. 22 min. 53.839 secs.		
Contractor: PROPETRO	Rig/Platform Name/Num: PROPETRO		
Job Purpose: Cement Surface Casing			
Well Type: Development Well	Job Type: Cement Surface Casing		
Sales Person: FLING, MATTHEW	Srvc 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	6	439784	BRENNECKE, ANDREW Bailey	6	486345	RAMSEY, STANTON Michael	6	477609

## Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10783493	120 mile	10822007	120 mile	11360871	120 mile	11542767	120 mile
11583933	120 mile						

## Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
12.8.2011	6	2						

**TOTAL** Total is the sum of each column separately

## Job

Formation Name					Date				Time	Time Zone
Formation Depth (MD)		Top	Bottom		Called Out	07 - Dec - 2011	23:00	MST		
Form Type		BHST			On Location	08 - Dec - 2011	03:30	MST		
Job depth MD		745. ft		Job Depth TVD		745. ft	Job Started	08 - Dec - 2011	07:05	MST
Water Depth		Wk Ht Above Floor			. ft	Job Completed	08 - Dec - 2011	07:53	MST	
Perforation Depth (MD)		From	To		Departed Loc	08 - Dec - 2011	09:30	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				12.387				.	745.		
Surface Casing	Unknown		9.625	8.921	36.		J-55	.	727.8		

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

Description	Qty	Qty uom	Depth	Supplier
PLUG,CMTG,TOP,9 5/8,HWE,8.16 MIN/9.06 MA	1	EA		
R/A DENSOMETER W/CHART RECORDER,/JOB,ZI	1	JOB		
ADC (AUTO DENSITY CTRL) SYS, /JOB,ZI	1	JOB		
PORT. DATA ACQUIS. W/OPTICEM RT W/HES	1	EA		

## 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					Retainer					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 ft <sup>3</sup> /sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
1	WATER SPACER		20.00	bbl	8.34	.0	.0	4	
2	Lead Cement	VERSACEM (TM) SYSTEM (452010)	120.0	sacks	12.3	2.38	13.77	6	13.77
	0.25 lbm	POLY-E-FLAKE (101216940)							
	13.77 Gal	FRESH WATER							
3	Tail Cement	SWIFTCEM (TM) SYSTEM (452990)	120.0	sacks	14.2	1.43	6.85	6	6.85
	0.25 lbm	POLY-E-FLAKE (101216940)							
	6.85 Gal	FRESH WATER							
4	DISPLACEMENT		52.00	bbl	8.4			6	
<b>Calculated Values</b>		<b>Pressures</b>		<b>Volumes</b>					
Displacement	52.8	Shut In: Instant		Lost Returns		Cement Slurry	81.4	Pad	
Top Of Cement	SURFACE	5 Min		Cement Returns	17	Actual Displacement	52.8	Treatment	
Frac Gradient		15 Min		Spacers	20	Load and Breakdown		Total Job	154.2
<b>Rates</b>									
Circulating		Mixing	6	Displacement	6	Avg. Job			6
Cement Left In Pipe	Amount	45.2 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*

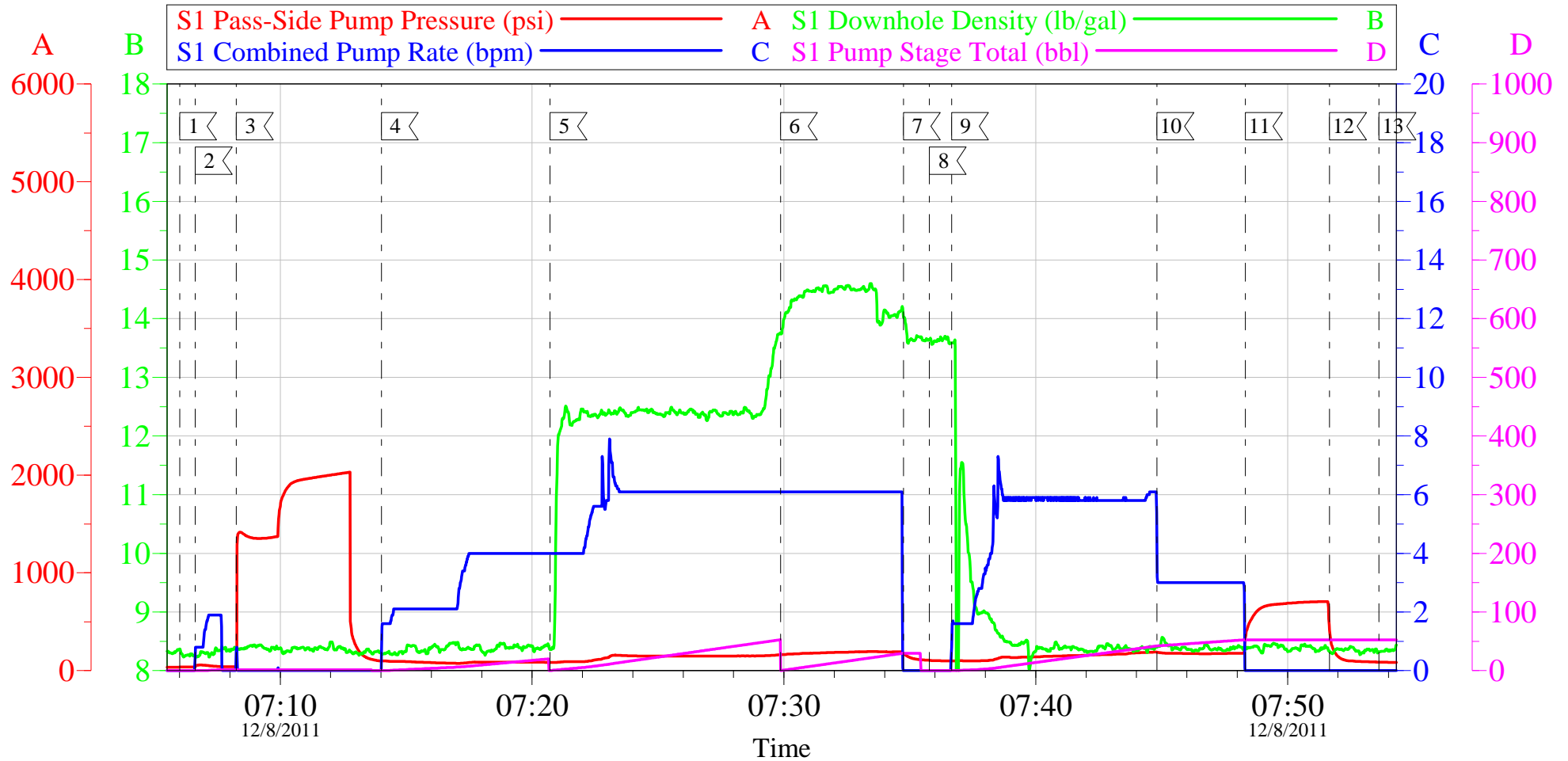
<b>Sold To #:</b> 343492	<b>Ship To #:</b> 2894960	<b>Quote #:</b>	<b>Sales Order #:</b> 9112144
<b>Customer:</b> BILL BARRETT CORPORATION E-BILL		<b>Customer Rep:</b> Lauer, Casey	
<b>Well Name:</b> KAUFMAN		<b>Well #:</b> 21C-25-692	<b>API/UWI #:</b> 05-045-21147
<b>Field:</b> MAMM CREEK	<b>City (SAP):</b> UNKNOWN	<b>County/Parish:</b> Garfield	<b>State:</b> Colorado
<b>Legal Description:</b>			
<b>Lat:</b> N 39.502 deg. OR N 39 deg. 30 min. 8.773 secs.		<b>Long:</b> W 100.618 deg. OR W -101 deg. 22 min. 53.839 secs.	
<b>Contractor:</b> PROPETRO		<b>Rig/Platform Name/Num:</b> PROPETRO	
<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> FLING, MATTHEW		<b>Srv Supervisor:</b> ARNOLD, EDWARD	<b>MBU ID Emp #:</b> 439784

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	12/07/2011 21:00							Crew returning from service center with new bulk truck. Pump truck stayed on location. No add hours.
Pre-Convoy Safety Meeting	12/08/2011 00:45							Including entire cement crew.
Crew Leave Yard	12/08/2011 01:00							
Arrive At Loc	12/08/2011 03:15							
Assessment Of Location Safety Meeting	12/08/2011 03:20							Water; PH 7; KCL 250; So4 <200; Fe 3; Calcium 120; Chlorides 0; Temp 40; TDS 190.
Pre-Rig Up Safety Meeting	12/08/2011 06:20							Including entire cement crew.
Rig-Up Equipment	12/08/2011 06:25							1 Elite # 1; 1 660 bulk truck; 1 hard line to well head; 1 line to upright, 9 5/8" screw in head
Rig-Up Completed	12/08/2011 06:45							
Pre-Job Safety Meeting	12/08/2011 06:50							Including everyone on location.
Start Job	12/08/2011 07:05							TD 745; TP 727.83; SJ 45.2; OH 12 3/8; Casing 9.625" 36# J-55; Air Drilled Hole.
Pump Water	12/08/2011 07:06		2	2			50.0	Fill lines with fresh water.
Test Lines	12/08/2011 07:08					1970.0		Good pressure test, no leaks.
Pump Spacer 1	12/08/2011 07:14		4	20			86.0	20 BBL fresh water spacer.

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pump Lead Cement	12/08/2011 07:20		6	50.8			160.0	120 sks Lead Cement, 12.3 ppg, 2.38 cf3, 13.77 gal/sk.
Pump Tail Cement	12/08/2011 07:29		6	30.6			170.0	120 sks Tail Cement, 14.2 ppg, 1.43 cf3, 6.85 gal/sk.
Shutdown	12/08/2011 07:34							
Drop Plug	12/08/2011 07:35							Plug left container.
Pump Displacement	12/08/2011 07:36		6	42.8			188.0	Fresh water displacement.
Slow Rate	12/08/2011 07:44		3	10			180.0	Slow rate 10 BBL's prior to bumping the plug.
Bump Plug	12/08/2011 07:48				52.8		704.0	Bumped plug, took 500 PSI over.
Check Floats	12/08/2011 07:51							Floats held, .5 BBL back. 17 BBL's Good cement to surface.
End Job	12/08/2011 07:53							
Pre-Rig Down Safety Meeting	12/08/2011 08:00							Including entire cement crew.
Rig-Down Equipment	12/08/2011 08:05							
Rig-Down Completed	12/08/2011 09:00							
Pre-Convoy Safety Meeting	12/08/2011 09:15							Including entire cement crew.
Crew Leave Location	12/08/2011 09:30							Crew leave location for Service Center or another location. Relive coming to relive current crew.
Other	12/08/2011 09:30							Thank You for using Halliburton. Ed Arnold and Crew.

# BILL BARRETT - KAUFMAN 21C-25-692

9 5/8" SURFACE



Customer: Bill Barrett  
Well Description: Kaufman 21C-25-692  
Company Rep: Casey Lauer

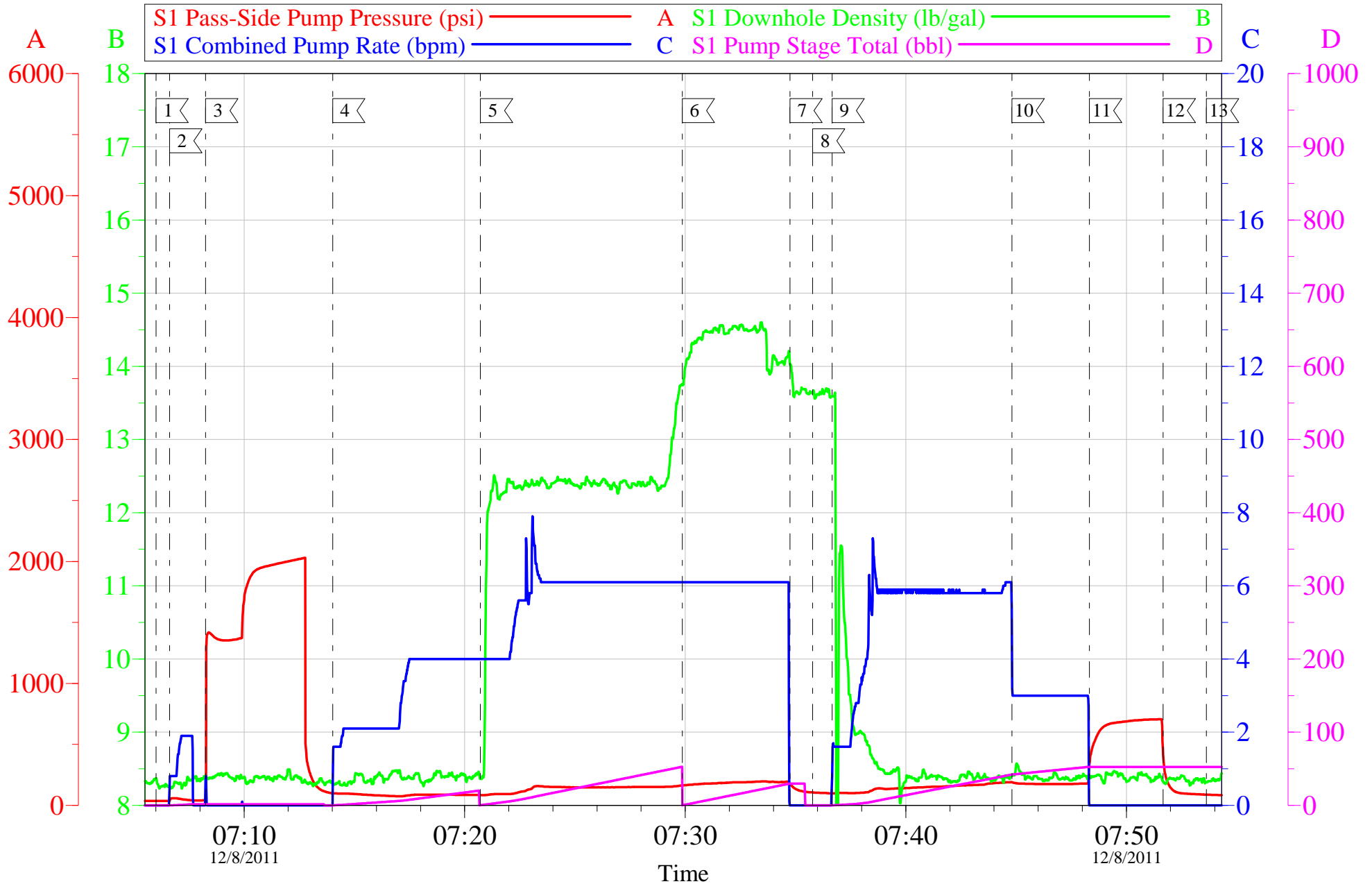
Job Date: 08-Dec-2011  
Job Type: Surface  
Cement Supervisor: Ed Arnold

Sales Order #: 9112144  
ADC Used: Yes  
Elite #1: Andrew Brennecke

OptiCem v6.4.10  
08-Dec-11 08:06

# BILL BARRETT - KAUFMAN 21C-25-692

9 5/8" SURFACE



Customer: Bill Barrett  
Well Description: Kaufman 21C-25-692  
Company Rep: Casey Lauer

Job Date: 08-Dec-2011  
Job Type: Surface  
Cement Supervisor: Ed Arnold

Sales Order #: 9112144  
ADC Used: Yes  
Elite #1: Andrew Brennecke

OptiCem v6.4.10  
08-Dec-11 08:07

# HALLIBURTON

## Water Analysis Report

Company:	Bill Barrett	Date:	12/8/2011
Submitted by:	ED ARNOLD	Date Rec.:	12/8/2011
Attention:	J.TROUT	S.O.#	9112144
Lease	Kaufman	Job Type:	Surface
Well #	21C-25-692		

Specific Gravity	MAX	1
pH	8	7
Potassium (K)	5000	250 Mg / L
Calcium (Ca)	500	120 Mg / L
Iron (FE2)	300	0 Mg / L
Chlorides (Cl)	3000	0 Mg / L
Sulfates (SO <sub>4</sub> )	1500	<200 Mg / L
Chlorine (Cl <sub>2</sub> )		0 Mg / L
Temp	40-80	40 Deg
Total Dissolved Solids		190 Mg / L

Respectfully: ED ARNOLD

Title: CEMENTING SUPERVISOR

Location: Grand Junction, CO

NOTICE: This report is limited to the described sample tested. Any person using or relying on this report agrees that Halliburton shall not be liable for any loss or damage whether due to act or omission resulting from such report or its use



<b>Sales Order #:</b> 9112144	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 12/8/2011
<b>Customer:</b> BILL BARRETT CORPORATION E-BILL		<b>Job Type (BOM):</b> CMT SURFACE CASING BOM
<b>Customer Representative:</b> CASEY LAUER		<b>API / UWI: (leave blank if unknown)</b> 05-045-21147
<b>Well Name:</b> KAUFMAN		<b>Well Number:</b> 21C-25-692
<b>Well Type:</b> Development Well	<b>Well Country:</b> United States of America	
<b>H2S Present:</b> No	<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	12/8/2011
Survey Interviewer	The survey interviewer is the person who initiated the survey.	EDWARD ARNOLD (HX46731)
Customer Participation	Did the customer participate in this survey? (Y/N)	Yes
Customer Representative	Enter the Customer representative name	CASEY LAUER
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

<b>Sales Order #:</b> 9112144	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 12/8/2011
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<b>Well Type:</b> Development Well	<b>Well Country:</b> United States of America	
<b>H2S Present:</b> No	<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	12/8/2011

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.	Deviated
<b>Total Operating Time (hours)</b> Total Operating Hours Including Rig-up, Pumping, Rig-down. Enter in decimal format.	2
<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.	1
<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	5
<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

<b>Sales Order #:</b> 9112144	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 12/8/2011
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<b>Customer Representative:</b> CASEY LAUER		<b>API / UWI: (leave blank if unknown)</b> 05-045-21147
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<b>Well Type:</b> Development Well	<b>Well Country:</b> United States of America	
<b>H2S Present:</b> No	<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	93
<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	97
<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