

Piceance Energy LLC-EBUS

Piceance Federal 28-19E

**Patterson 306**

# **Post Job Summary**

## **Cement Surface Casing**

Date Prepared: 10/22/2015

Job Date: 10/20/2015

Submitted by: Jenna Cook – Grand Junction Cement Engineer

## 1.0 Real-Time Job Summary

### 1.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Pass-Side Pump Pressure (psi)	Downhole Density (ppg)	Combined Pump Rate (bbl/min)	Pump Stage Total (bbl)	Comments
Event	1	Call Out	Call Out	10/20/2015	08:00:00	USER					O/L time 1400
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	10/20/2015	10:45:00	USER					
Event	3	Crew Leave Yard	Crew Leave Yard	10/20/2015	11:00:00	USER					1 Elite, 1 660, 1 pickup
Event	4	Arrive At Loc	Arrive At Loc	10/20/2015	13:00:00	USER					Rig still running casing
Event	5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	10/20/2015	13:15:00	USER					JSA completed - customer offered/received SDS - Water test ph 7.5, Cl 0, temp 60 degrees
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	10/20/2015	13:30:00	USER					
Event	7	Rig-Up Equipment	Rig-Up Equipment	10/20/2015	13:45:00	USER					1 hard line to standpipe, 1 water hose to upright, 1 bulk hose to 660
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	10/20/2015	14:10:00	USER					All HES personnel, rig crew, company rep - JSA completed
Event	9	Start Job	Start Job	10/20/2015	14:23:55	USER					TD 1623', TP 1613', SJ 44.05', Mud 9.1 ppg, 11" OH, 8 5/8" 24# J-55 csg
Event	10	Drop Bottom Plug	Drop Bottom Plug	10/20/2015	14:24:17	USER					
Event	11	Prime Pumps	Prime Lines	10/20/2015	14:24:41	USER	55	8.33	2.0	2.0	Fresh water
Event	12	Test Lines	Test Lines	10/20/2015	14:27:31	COM5	3649				Pressure held well
Event	13	Pump Spacer 1	Pump H2O Spacer	10/20/2015	14:29:08	COM5	95	8.33	4.0	40.0	Fresh water
Event	14	Pump Lead Cement	Pump Lead Cement	10/20/2015	14:39:37	COM5	390	12.3	7.5	84.1	192 sks, 12.3 ppg, 2.46 yield, 14.17 gal/sk
Event	15	Check Weight	Check weight	10/20/2015	14:42:08	COM5		12.3			Density measured at 12.3 ppg

Event	16	Pump Tail Cement	Pump Tail Cement	10/20/2015	14:51:56	COM5	405	12.8	7.5	50.9	131 sks, 12.8 ppg, 2.18 yield, 12.11 gal/sk
Event	17	Shutdown	Shutdown	10/20/2015	14:58:59	USER					Wash up on top of plug
Event	18	Drop Top Plug	Drop Top Plug	10/20/2015	15:01:19	USER					Plug launched
Event	19	Pump Displacement	Pump Displacement	10/20/2015	15:02:19	COM5	625	8.33	8.0	90.0	Fresh Water
Event	20	Slow Rate	Slow Rate	10/20/2015	15:16:07	USER	354	8.33	2.0	99.8	Good returns throughout job
Event	21	Bump Plug	Bump Plug	10/20/2015	15:20:28	COM5	388				30 bbls cement to surface
Event	22	Check Floats	Check Floats	10/20/2015	15:22:11	USER	1020				Floats held – ½ bbl flowback
Event	23	End Job	End Job	10/20/2015	15:22:56	USER					40 lbs sugar
Event	24	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	10/20/2015	15:30:00	USER					
Event	25	Rig-Down Equipment	Rig-Down Equipment	10/20/2015	15:35:00	USER					
Event	26	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	10/20/2015	15:55:00	USER					
Event	27	Crew Leave Location	Crew Leave Location	10/20/2015	16:00:00	USER					Thank you for using Halliburton - Ed Deussen and crew

The Road to Excellence Starts with Safety

Sold To #: 344919	Ship To #: 3681106	Quote #:	Sales Order #: 0902839115
Customer: PICEANCE ENERGY LLC - EBUS		Customer Rep: Matt Settles	
Well Name: PICEANCE FEDERAL	Well #: 28-19E	API/UWI #: 05-077-10254-00	
Field: VEGA	City (SAP): COLLBRAN	County/Parish: MESA	State: COLORADO
Legal Description: NE SW-28-9S-93W-2011FSL-2492FWL			
Contractor: PATTERSON-UTI ENERGY		Rig/Platform Name/Num: PATTERSON 306	
Job BOM: 7521			
Well Type: DIRECTIONAL GAS			
Sales Person: HALAMERICA\HX41066		Srvc Supervisor: Edward Deussen	

### Job

Formation Name	
Formation Depth (MD)	Top Bottom
Form Type	BHST
Job depth MD	1613ft Job Depth TVD
Water Depth	Wk Ht Above Floor
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		16	15.25	65			0	60		
Casing		8.625	8.097	24	8 RD (LT&C)		0	1613		
Open Hole Section			11				60	1623		

### Tools and Accessories

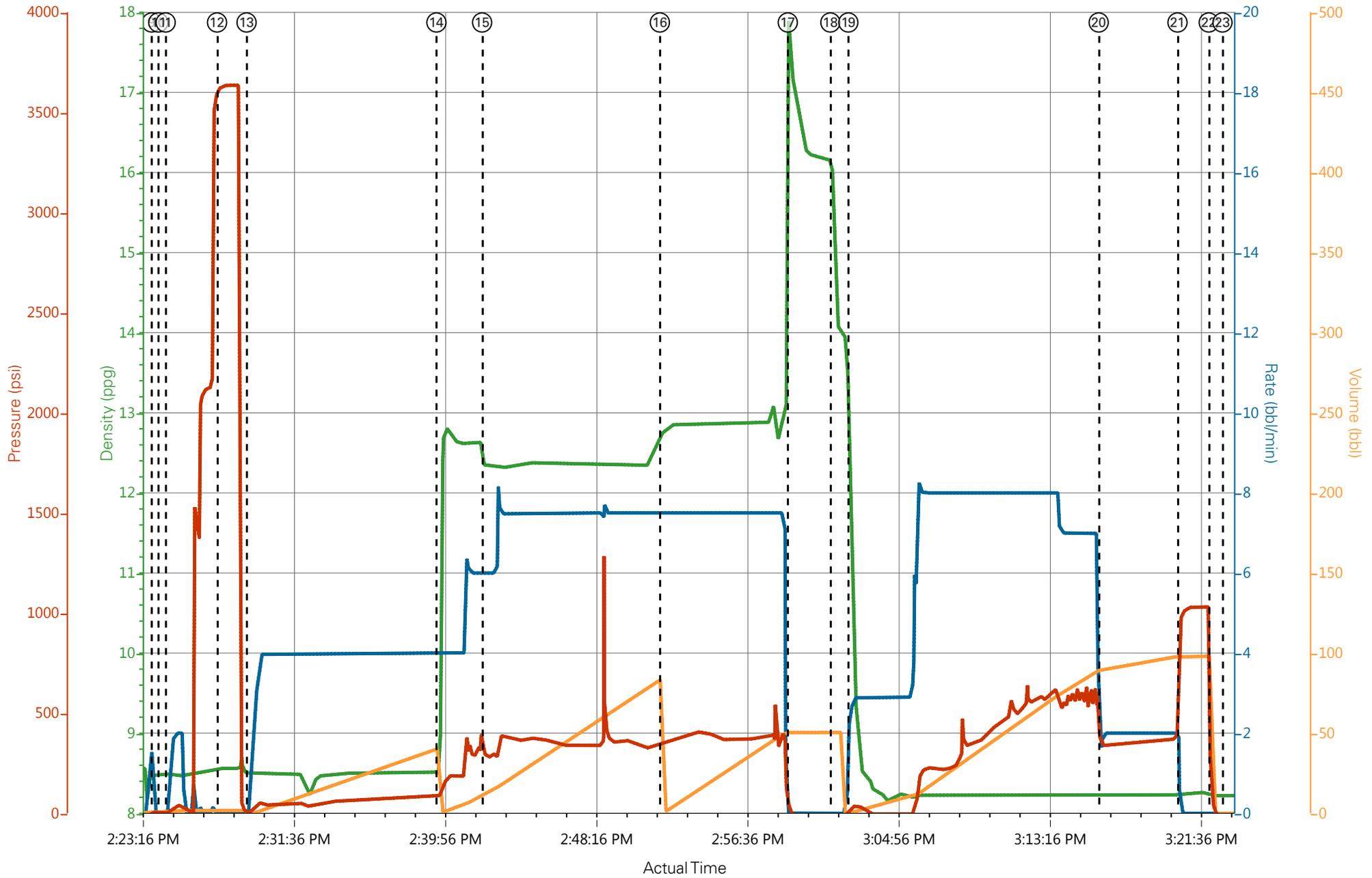
Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	8.625			1613	Top Plug	8.625	1	HES
Float Shoe					Bottom Plug	8.625	1	HES
Float Collar					SSR plug set			
Insert Float					Plug Container	8.625	1	HES
Stage Tool					Centralizers			

### Fluid Data

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
Stage/Plug #: 1									
1	Fresh Water	Fresh Water	40	bbl	8.33			4.0	
2	VariCem GJ5	VARICEM (TM) CEMENT	192	sack	12.3	2.46		7.5	14.17
14.17 Gal		FRESH WATER							

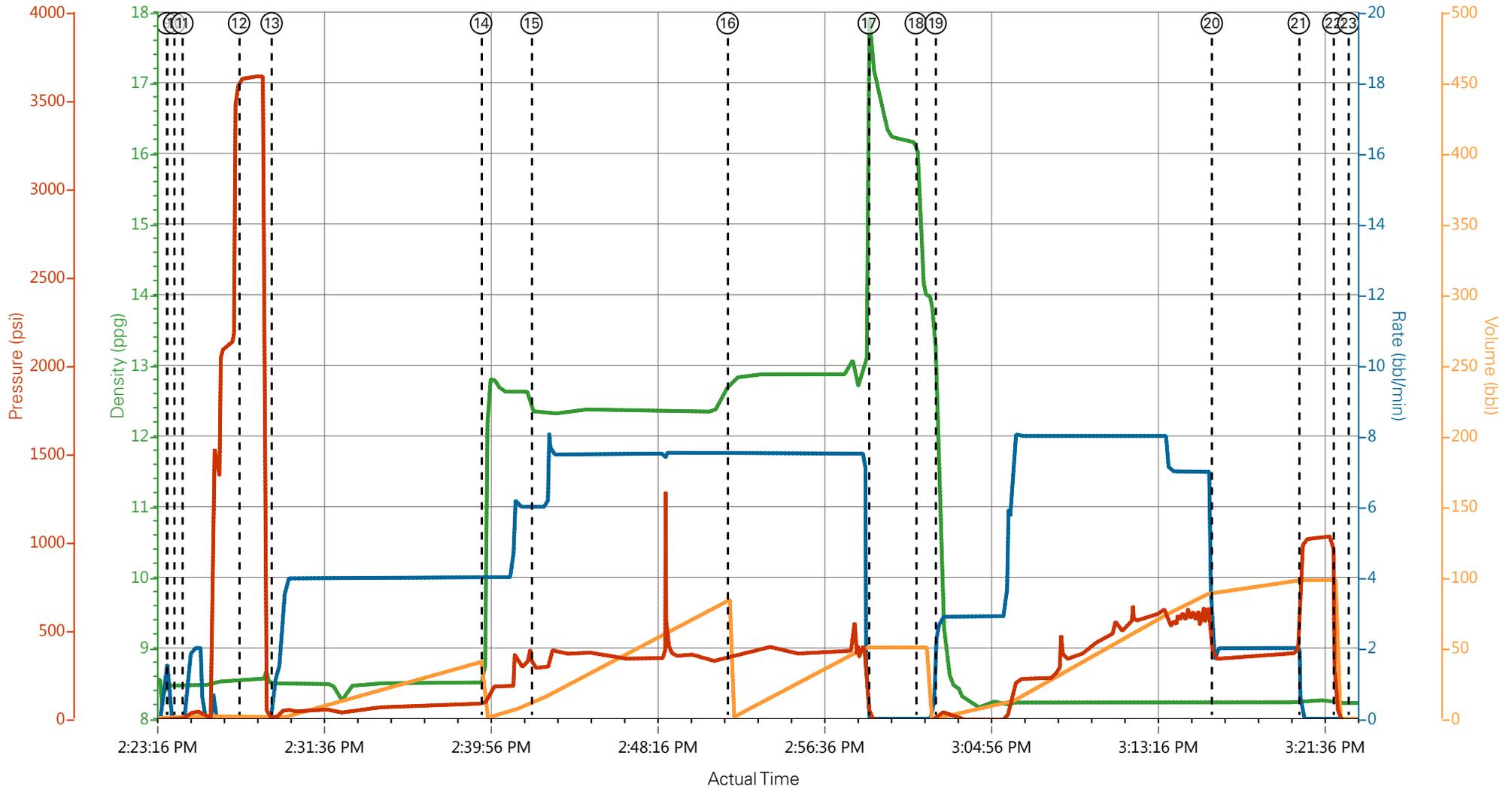
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal	
3	VariCem GJ5	VARICEM (TM) CEMENT	131	sack	12.8	2.18		7.5	12.11	
12.11 Gal		FRESH WATER								
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal	
4	Fresh Water Displacement	Fresh Water Displacement	99.8	bbl	8.3			8.0		
<b>Cement Left In Pipe</b>		<b>Amount</b>	44.05 ft		<b>Reason</b>			Shoe Joint		
<b>Plug Bumped?</b>		Yes	<b>Bump Pressure:</b> 354 psi		<b>Floats Held?</b>			Yes		
<b>Cement Returns:</b>		30 bbl								
<b>Comment</b>										

PICEANCE ENERGY - FED 28-19E - 8 5/8" SURFACE



DH Density (ppg) 8.22    Comb Pump Rate (bbl/min) 0    PS Pump Press (psi) -28.7    Pump Stg Tot (bbl) 0

# PICEANCE ENERGY - FED 28-19E - 8 5/8" SURFACE



DH Density (ppg) 8.23    Comb Pump Rate (bbl/min) 0    PS Pump Press (psi) -28.7    Pump Stg Tot (bbl) 0

- |   |                          |                    |                     |                                |
|---|--------------------------|--------------------|---------------------|--------------------------------|
| ① Call Out                              | ⑦ Rig-Up Equipment       | ⑬ Pump H2O Spacer  | ⑰ Pump Displacement | 25 Pre-Rig Down Safety Meeting |
| ② Pre-Convoy Safety Meeting             | ⑧ Pre-Job Safety Meeting | ⑭ Pump Lead Cement | 20 Slow Rate        | 26 Rig-Down Equipment          |
| ③ Crew Leave Yard                       | ⑨ Start Job              | ⑮ Check weight     | 21 Bump Plug        | 27 Pre-Convoy Safety Meeting   |
| ④ Arrive At Loc                         | ⑩ Drop Bottom Plug       | ⑯ Pump Tail Cement | 22 Check Floats     | 28 Crew Leave Location         |
| ⑤ Assessment Of Location Safety Meeting | ⑪ Prime Lines            | ⑰ Shutdown         | 23 End Job          |                                |
| ⑥ Pre-Rig Up Safety Meeting             | ⑫ Test Lines             | ⑱ Drop Top Plug    | 24 End Job          |                                |

▼ HALLIBURTON | iCem® Service

Created: 2015-10-20 10:10:43, Version: 4.2.393

Edit

Customer : PICEANCE ENERGY LLC  
 Representative : Matt Settles

Job Date : 10/20/2015 12:59:08 PM  
 Sales Order # : 902839115

Well : Piceance Fed 28-19E  
 Elite #1 : Ed Deussen / Carl Kukus

<b>Sales Order #:</b> 0902839115	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 10/20/2015
<b>Customer:</b> PICEANCE ENERGY LLC - EBUS		<b>Job Type (BOM):</b> CMT SURFACE CASING BOM
<b>Customer Representative:</b> MATT SETTLES		<b>API / UWI: (leave blank if unknown)</b> 05-077-10254-00
<b>Well Name:</b> PICEANCE FEDERAL		<b>Well Number:</b> 0080739660
<b>Well Type:</b> DIRECTIONAL GAS	<b>Well Country:</b> USA	
<b>H2S Present:</b> No	<b>Well State:</b> COLORADO	<b>Well County:</b> MESA

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	10/20/2015
Survey Interviewer	The survey interviewer is the person who initiated the survey.	HB57194
Customer Participation	Did the customer participate in this survey? (Y/N)	Yes
Customer Representative	Enter the Customer representative name	MATT SETTLES
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	

<b>CUSTOMER SIGNATURE</b>
---------------------------

<b>Sales Order #:</b> 0902839115	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 10/20/2015
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### KEY PERFORMANCE INDICATORS

General	
<b>Survey Conducted Date</b>	10/20/2015
The date the survey was conducted	

Cementing KPI Survey	
<b>Type of Job</b>	0
Select the type of job. (Cementing or Non-Cementing)	
<b>Select the Maximum Deviation range for this Job</b>	Vertical
What is the highest deviation for the job you just completed? This may not be the maximum well deviation.	
<b>Total Operating Time (hours)</b>	3
Total Operating Hours Including Rig-up, Pumping, Rig-down. Enter in decimal format.	
<b>HSE Incident, Accident, Injury</b>	No
HSE Incident, Accident, Injury. This should be recordable incidents only.	
<b>Was the job purpose achieved?</b>	Yes
Was the job delivered correctly as per customer agreed design?	
<b>Pumping Hours</b>	1
Total number of hours pumping fluid on this job. Enter in decimal format.	
<b>Type of Rig Classification Job Was Performed</b>	Drilling Rig (Portable)
Type Of Rig (classification) Job Was Performed On	
<b>Number Of JSAs Performed</b>	5
Number Of Jsas Performed	
<b>Was this a Primary Cement Job (Yes / No)</b>	Yes
Primary Cement Job= Casing job, Liner job, or Tie-back job.	
<b>Number of Unplanned Shutdowns</b>	0
Unplanned shutdown is when injection stops for any period of time.	
<b>Customer Non-Productive Rig Time (hrs)</b>	0

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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.	
<b>Was the non productive time or the unplanned shutdown caused by a problem with a piece of equipment?</b> Was the non productive time or the unplanned shutdown caused by a problem with a piece of equipment?	No
<b>Did We Run Wiper Plugs?</b> Did We Run Top And Bottom Casing Wiper Plugs?	Both
<b>If a top plug was run, was the plug bumped? (Yes/No/N/A)</b> If a top plug was run, was the plug bumped? (Yes/No/N/A)	Yes
<b>If applicable, was Halliburton float equipment used? (Yes/No/N/A)</b> If applicable, was Halliburton float equipment used? (Yes/No/N/A)	Not Available
<b>If applicable, did the floats hold? (Yes/No/N/A)</b> If applicable, did the floats hold? (Yes/No/N/A)	Yes
<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	95
<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	95
<b>If applicable, were there returns throughout the job? (Yes/No/N/A)</b> If applicable, were there returns throughout the job? (Yes/No/N/A)	Yes
<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