

Piceance Energy LLC - EBUS

Piceance 28-06W

**Patterson 306**

## **Post Job Summary**

# **Cement Surface Casing**

Date Prepared: 9/21/2015

Job Date: 9/10/2015

Submitted by: Patrick Ealey – Grand Junction Cement Engineer

## The Road to Excellence Starts with Safety

Sold To #: 344919	Ship To #: 3123919	Quote #:	Sales Order #: 0902732968
Customer: PICEANCE ENERGY LLC - EBUS	Customer Rep: MATT SETTLES		
Well Name: PICEANCE	Well #: 28-6W	API/UWI #: 05-077-09774-00	
Field: VEGA	City (SAP): COLLBRAN	County/Parish: MESA	State: COLORADO
Legal Description: SE NW-28-9S-93W-1566FNL-1333FWL			
Contractor: PATTERSON-UTI ENERGY	Rig/Platform Name/Num: PATTERSON 306		
Job BOM: 7521			
Well Type: DIRECTIONAL GAS			
Sales Person: HALAMERICA\HX41066	Srvc Supervisor: Eric Carter		

### Job

Formation Name	
Formation Depth (MD)	Top 82ft Bottom 1581ft
Form Type	BHST
Job depth MD	1571ft Job Depth TVD
Water Depth	Wk Ht Above Floor 4ft
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	82		0
Casing		8.625	8.097	24	8 RD (LT&C)		0	1571		0
Open Hole Section			11				82	1581	0	0

### Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe					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	8.625	18	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	40	bbl	8.33			6	

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 GJ5	VARICEM (TM) CEMENT	192	sack	12.3	2.46	14.17	8	
14.17 Gal		FRESH WATER							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
3	VariCem GJ5	VARICEM (TM) CEMENT	120	sack	12.8	2.18	12.11	8	
12.11 Gal		FRESH WATER							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
4	Fresh Water Displacement	Fresh Water Displacement	97	bbl	8.3			8	
Cement Left In Pipe		Amount	46 ft		Reason		Shoe Joint		
Comment									

## 1.0 Real-Time Job Summary

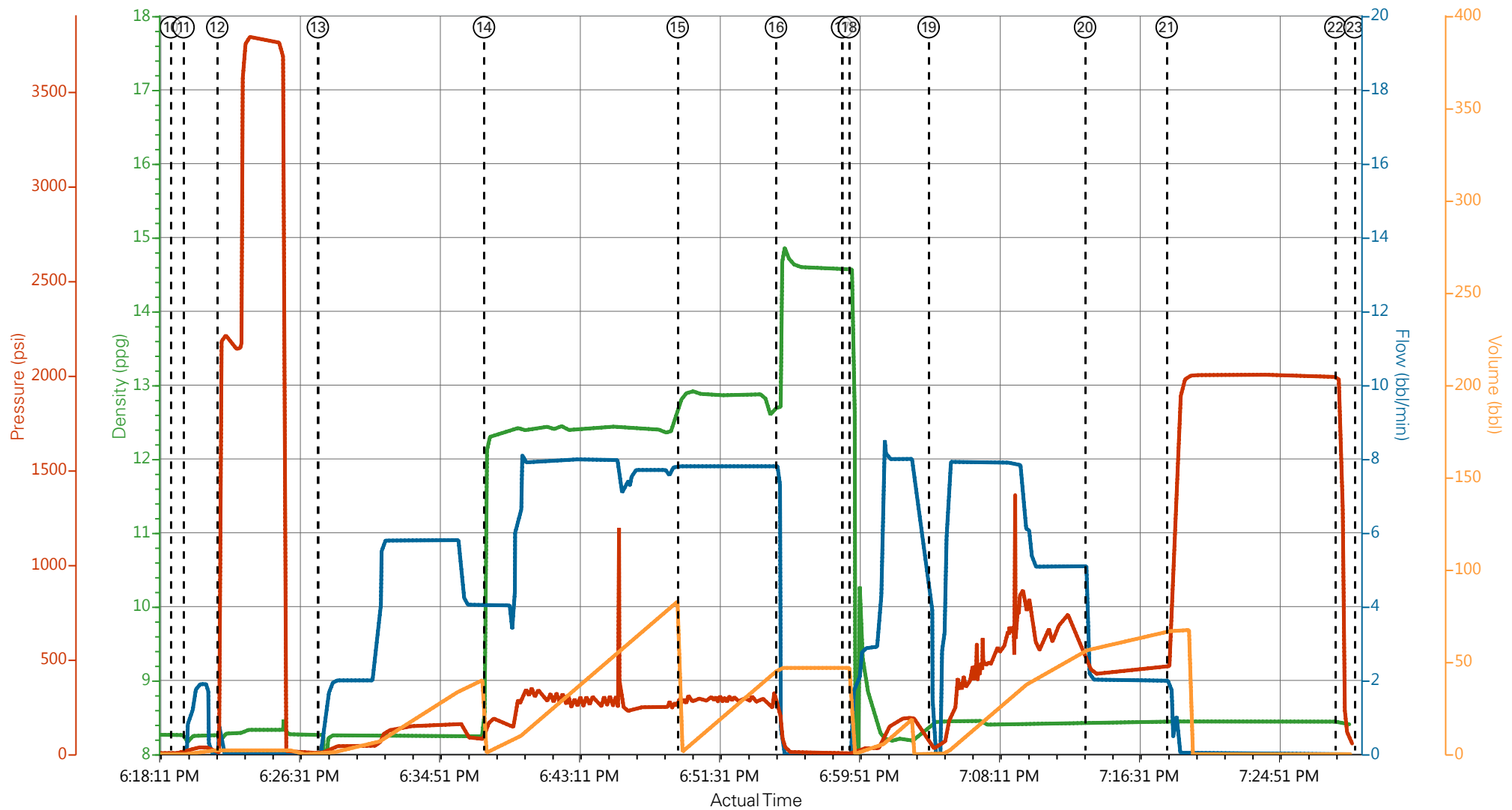
## 1.1 Job Event Log

Type	Seq. No.	Activity	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	9/10/2015	09:30:00	USER					
Event	2	Depart Yard Safety Meeting	9/10/2015	10:50:00	USER					ATTENDED BY ALL HES
Event	3	Crew Leave Yard	9/10/2015	11:00:00	USER					
Event	4	Arrive At Loc	9/10/2015	13:00:00	USER					RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	9/10/2015	17:00:00	USER					ATTENDED BY ALL HES
Event	6	Other	9/10/2015	17:10:00	USER					SPOT EQUIPMENT
Event	7	Pre-Rig Up Safety Meeting	9/10/2015	17:20:00	USER					ATTENDED BY ALL HES
Event	8	Rig-Up Equipment	9/10/2015	17:30:00	USER					
Event	9	Pre-Job Safety Meeting	9/10/2015	18:00:00	USER					ATTENDED BY ALL HES CREW, RIG CREW AND COMPANY REP
Event	10	Other	9/10/2015	18:19:02	USER					TP 1571', TD 1581', MW 9.4 PPG, CASING 8.625" 24# J-55, OH 11", CONDUCTOR CASING 16" 65# SET AT 82', RIG CIRCULATED FOR ½HR BEFORE JOB
Event	11	Other	9/10/2015	18:19:48	USER	8.34	2	39	2	FRESH WATER
Event	12	Test Lines	9/10/2015	18:21:48	USER					PRESSURED UP TO 3790 PSI, PRESSURE HELD
Event	13	Pump Spacer	9/10/2015	18:27:47	USER	8.34	6	160	40	FRESH WATER
Event	14	Pump Lead Cement	9/10/2015	18:37:41	USER	12.3	8	320	84.1	192 SKS VARICEM MIXED AT 12.3 PPG, 2.46 YIELD,

14.17 GAL/SK

Event	15	Pump Tail Cement	9/10/2015	18:49:12	USER	12.8	8	300	46.6	120 SKS VARICEM MIXED AT 12.8, 2.18 YIELD, 12.11 GAL/SK
Event	16	Shutdown	9/10/2015	18:55:04	USER					
Event	17	Drop Top Plug	9/10/2015	18:59:00	USER					PLUG LAUNCHED
Event	18	Pump Displacement	9/10/2015	18:59:24	USER	8.34	8	640	87	FRESH WATER
Event	19	Comment	9/10/2015	19:04:09	USER					FLECS COMPUTER ON ELITE TURNED OFF, HES SHUTDOWN AND WAITED FOR COMPUTER TO RESTART AND RESUMED PUMPING
Event	20	Slow Rate	9/10/2015	19:13:27	USER	8.34	2	425	10	
Event	21	Bump Plug	9/10/2015	19:18:19	USER			2000		PLUG LANDED
Event	22	Check Floats	9/10/2015	19:28:22	USER			1993		FLOATS HELD
Event	23	Other	9/10/2015	19:29:30	USER					GOOD CIRCULATION THROUGH OUT JOB, PIPE NOT MOVED DURING JOB, 20 BBLS CEMENT TO SURFACE
Event	24	Post-Job Safety Meeting (Pre Rig-Down)	9/10/2015	19:30:00	USER					ATTENDED BY ALL HES
Event	25	Rig-Down Equipment	9/10/2015	19:40:00	USER					
Event	26	Depart Location Safety Meeting	9/10/2015	20:20:00	USER					ATTENDED BY ALL HES
Event	27	Crew Leave Location	9/10/2015	20:30:00	USER					THANK YOU FOR USING HALLIBURTON CEMENT, ERIC CARTER AND CREW

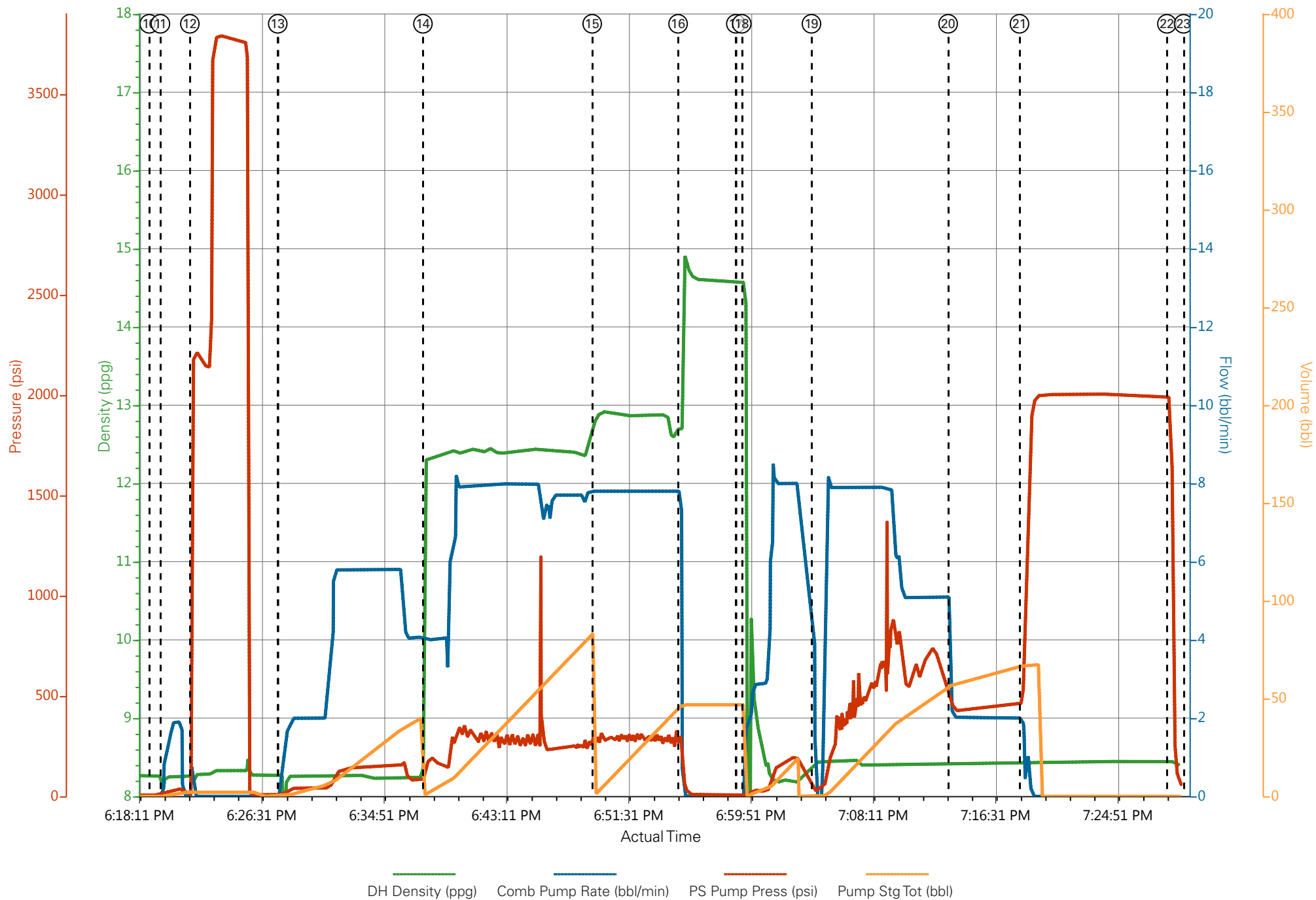
# PICEANCE ENERGY - PICEANCE 28-6W - 8.625" SURFACE



— DH Density (ppg)   
 — Comb Pump Rate (bbl/min)   
 — PS Pump Press (psi)   
 — Pump Stg Tot (bbl)

ng n/a;n/a;n/a;n/a	13 Pump Spacer 8.27;0;7;0	17 DropTop Plug 14.57;0;4;46.8	21 Bump Plug 8.42;2;468;66.7	25 Rig-Down Equipment n/a;n/a;n/a;n/a
0	14 Pump Lead Cement 12.32;4;147;1.1	18 Pump Displacement 14.57;0;4;0	22 Check Floats 8.44;0;1971;0	26 Depart Location Safety Meeting n/a;n/a;n/a;n/a
65;2.1	15 Pump Tail Cement 12.81;78;263;0.9	19 Comment 8.44;3.9;11;0.1	23 End Job n/a;n/a;n/a;n/a	27 Crew Leave Location n/a;n/a;n/a;n/a
	16 Shutdown 12.69;78;284;46.5	20 Slow Rate 8.43;2.2;487;56.8	24 Post-Job Safety Meeting (Pre Rig-Down) n/a;n/a;n/a;n/a	

# PICEANCE ENERGY - PICEANCE 28-6W - 8.625" SURFACE



# HALLIBURTON

## Water Analysis Report

Company: PICEANCE ENERGY  
Submitted by: ERIC CARTER  
Attention: J.Trout  
Lease: PATTERSON 306  
Well #: PICEANCE 28-6W

Date: 9/10/2015  
Date Rec.: 9/10/2015  
S.O.#: 902732968  
Job Type: SURFACE

Specific Gravity	<i>MAX</i>	<i>1</i>
pH	<i>8</i>	<i>6</i>
Potassium (K)	<i>5000</i>	<i>200</i> Mg / L
Hardness	<i>500</i>	<i>120</i> Mg / L
Iron (FE2)	<i>300</i>	<i>0</i> Mg / L
Chlorides (Cl)	<i>3000</i>	<i>0</i> Mg / L
Sulfates (SO <sub>4</sub> )	<i>1500</i>	<i>&lt;200</i> Mg / L
Temp	<i>40-80</i>	<i>65</i> Deg
Total Dissolved Solids		<i>370</i> Mg / L

Respectfully: ERIC CARTER

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

<b>Sales Order #:</b> 0902732968	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 9/10/2015
<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> 05-077-09774-00
<b>Well Name:</b> PICEANCE		<b>Well Number:</b> 0080127654
<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	9/10/2015
Survey Interviewer	The survey interviewer is the person who initiated the survey.	HX15491
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	NA

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

<b>Sales Order #:</b> 0902732968	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 9/10/2015
<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> 05-077-09774-00
<b>Well Name:</b> PICEANCE		<b>Well Number:</b> 0080127654
<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

### KEY PERFORMANCE INDICATORS

General	
<b>Survey Conducted Date</b> The date the survey was conducted	9/10/2015

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.	3
<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>Pumping Hours</b> Total number of hours pumping fluid on this job. Enter in decimal format.	1
<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>Was this a Primary Cement Job (Yes / No)</b> Primary Cement Job= Casing job, Liner job, or Tie-back job.	Yes
<b>Number of Unplanned Shutdowns</b> Unplanned shutdown is when injection stops for any period of time.	0
<b>Customer Non-Productive Rig Time (hrs)</b>	0

<b>Sales Order #:</b> 0902732968	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 9/10/2015
<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> 05-077-09774-00
<b>Well Name:</b> PICEANCE		<b>Well Number:</b> 0080127654
<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

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	92
<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	90
<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