

Piceance Energy LLC-EBUS

Piceance 28-08W

**Patterson 306**

## **Post Job Summary**

# **Cement Production Casing**

Date Prepared: 08/17/2015  
Job Date: 08/10/2015

Submitted by: Jenna Cook – Grand Junction Cement Engineer

## The Road to Excellence Starts with Safety

Sold To #: 344919	Ship To #: 3129705	Quote #:	Sales Order #: 0902651112
Customer: PICEANCE ENERGY LLC - EBUS	Customer Rep: ROGER FOSTER		
Well Name: PICEANCE	Well #: 28-08W	API/UWI #: 05-077-09776-00	
Field: VEGA	City (SAP): COLLBRAN	County/Parish: MESA	State: COLORADO
Legal Description: SW NW-28-9S-93W-1589FNL-1223FWL			
Contractor: PATTERSON-UTI ENERGY	Rig/Platform Name/Num: PATTERSON 306		
Job BOM: 7523			
Well Type: VERTICAL GAS			
Sales Person: HALAMERICA\HX41066	Srvc Supervisor: DAVID CAMPBELL		

### Job

Formation Name	
Formation Depth (MD)	Top
Form Type	BHST
Job depth MD	7834 FT
Water Depth	Wk Ht Above Floor 5 FT
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		8.625	7.921	32			0	1572		
Casing		4.5	4	11.6			0	7824		
Open Hole Section			7.875				1572	7834		

### Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	4.5	1		7824	Top Plug	4.5	1	HES
Float Shoe	4.5				Bottom Plug	4.5	1	HES
Float Collar	4.5	1		7744.21	SSR plug set			
Insert Float	4.5				Plug Container	4.5	1	HES
Stage Tool	4.5				Centralizers			

### 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	Tuned Spacer III	Tuned Spacer III	40	bbl	11	4.55	30	4		
37 gal/bbl		FRESH WATER								
123.25 lbm/bbl		BARITE, BULK (100003681)								
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	VersaCem	VERSACEM (TM) SYSTEM	898	sack	12.8	1.75		8	8.5
0.25 lbm		POLY-E-FLAKE (101216940)							
6 lbm		KOL-SEAL, BULK (100064233)							
8.50 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
3	ExpandaCem GJ4	EXPANDACEM (TM) SYSTEM	413	sack	13.3	1.89		8	8.66
20 %		SS-200 - BULK (102240841)							
0.25 lbm		POLY-E-FLAKE (101216940)							
8.66 Gal		FRESH WATER							
6 lbm		KOL-SEAL, BULK (100064233)							
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	Displacement	Displacement	120	bbl	8.34			10.4	
0.01 gal/bbl		MICRO MATRIX CEMENT RETARDER, 1 GAL PAIL (100003780)							
0.05 gal/bbl		CLA-WEB - TOTE (101985045)							
Cement Left In Pipe		Amount	80 ft		Reason			Shoe Joint	

## 2.0 Real-Time Job Summary

## 2.1 Job Event Log

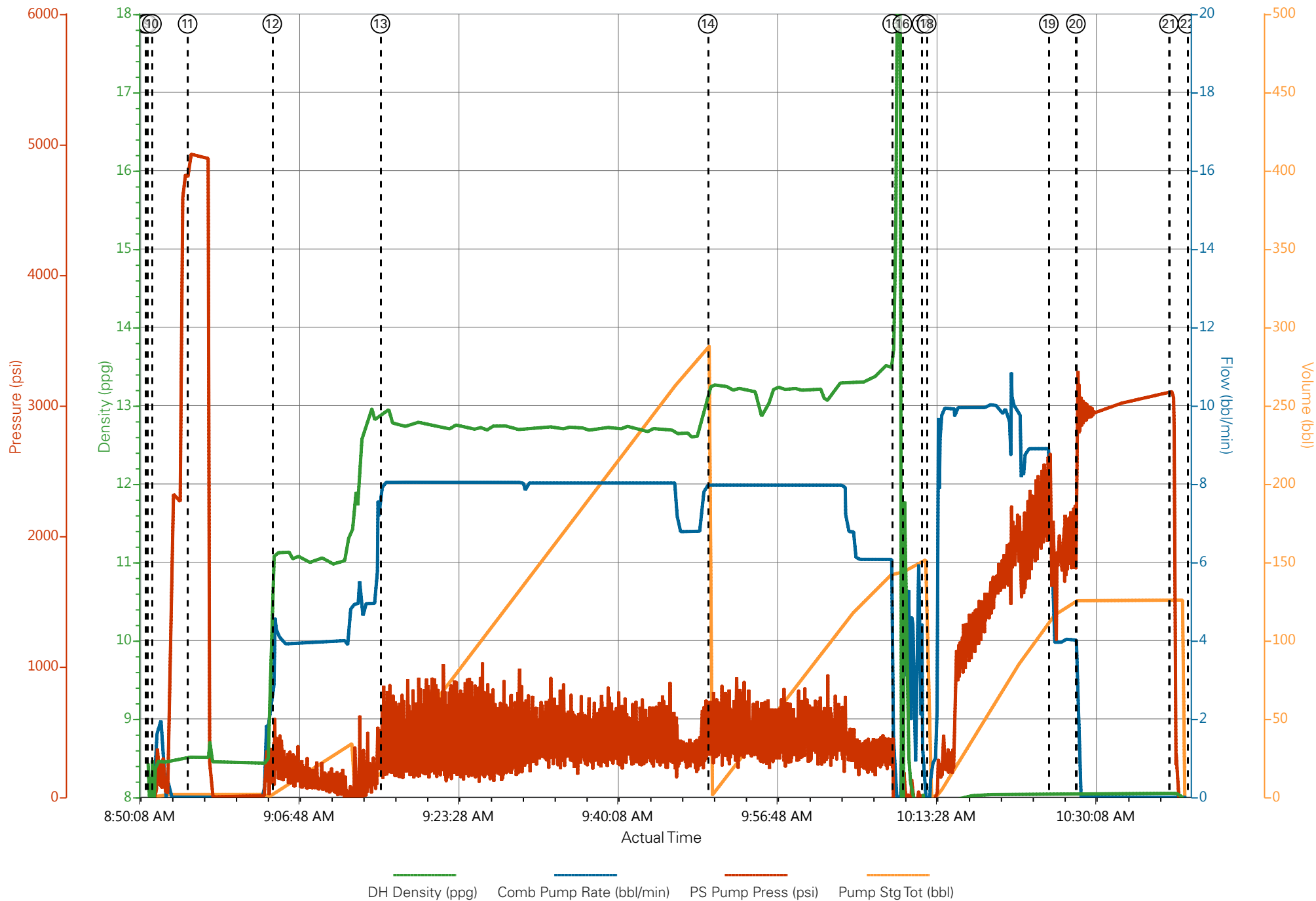
Type	Seq. No.	Activity	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	8/9/2015	20:00:00	USER					ELITE # 4
Event	2	Pre-Convoy Safety Meeting	8/9/2015	21:00:00	USER					ALL HES EMPLOYEES
Event	3	Arrive At Loc	8/10/2015	04:00:00	USER					ARRIVED 1 1/2 HOURS EARLY DID NOT START CHARGING HOURS UNTIL REQUESTED ON LOCATION TIME
Event	4	Assessment Of Location Safety Meeting	8/10/2015	04:30:00	USER					ALL HES EMPLOYEES
Event	5	Pre-Rig Up Safety Meeting	8/10/2015	04:45:00	USER					ALL HES EMPLOYEES
Event	6	Rig-Up Equipment	8/10/2015	05:00:00	USER					1 HT-400 PUMP TRUCK ( ELITE # 4) 2 660 BULK TRUCKS 1 F-550 PICKUP 1 SILO
Event	7	Pre-Job Safety Meeting	8/10/2015	08:30:00	USER					ALL HES EMPLOYEES AND RIG CREW RIG CIRCULATED FOR 1 HOUR @ 10 BBL/MIN PRIOR TO JOB GAS AT 1182 PRIOR TO JOB
Event	8	Start Job	8/10/2015	08:51:00	COM5					TD:7834 TP: 7824 CSG: 4 1/2 11.6# L-80 SJ: 79.79 OH: 7 7/8 MUD WEIGHT: 9.4 PPG SURFACE CSG: 8 5/8 24# SET @ 1572
Event	9	Drop Bottom Plug	8/10/2015	08:51:13	USER					PLUG AWAY NO PROBLEM
Event	10	Prime Pumps	8/10/2015	08:51:41	USER	8.33	2.0	254	2.0	FILL LINES FRESH WATER

Event	14	Test Lines	8/10/2015	08:55:25	COM5	8.33	0.0	4915	2.0	PRESSURE TEST OK
Event	32	Pump Spacer 1	8/10/2015	09:04:16	COM5	11.0	4.0	96	40.0	40 BBL 11.0 PPG 4.55 YIELD 30 GAL/SK TUNED SPACER III WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES
Event	48	Pump Lead Cement	8/10/2015	09:15:35	COM5	12.8	8.0	480	279.8	898 SKS 12.8 PPG 1.75 YIELD 8.5 GAL/SK LEAD CEMENT WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES
Event	81	Pump Tail Cement	8/10/2015	09:49:50	COM5	13.3	8.0	540	139	413 SKS 13.3 PPG 1.89 YIELD 8.66 GAL/SK TAIL CEMENT WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES
Event	138	Shutdown	8/10/2015	10:09:07	USER					
Event	142	Clean Lines	8/10/2015	10:10:11	USER					CLEAN PUMPS AND LINES FRESH WATER
Event	143	Drop Top Plug	8/10/2015	10:12:12	USER					PLUG AWAY NO PROBLEMS
Event	144	Pump Displacement	8/10/2015	10:12:43	COM5	8.4	10.0	2350	120	FRESH WATER DISPLACEMENT 5 GAL CLA- WEB 1 GAL MMCR
Event	145	Slow Rate	8/10/2015	10:25:30	USER	8.4	4.0	1858	110	SLOW RATE TO BUMP PLUG
Event	149	Bump Plug	8/10/2015	10:28:20	COM5	8.4	4.0	2130	120	PRESSURE PRIOR TO BUMPING PLUG @ 2130 BUMPED PLUG UP TO 3054 PSI HELD FOR 10 MIN CASING TEST AS PER COMPANY REP.
Event	163	Other	8/10/2015	10:38:04	COM5	8.4	0.0	3054	120	FLOATS HELD 1 1/2 BBL RETURNED BACK TO TRUCKS TANK
Event	165	End Job	8/10/2015	10:40:00	COM5					GOOD RETURNS THROUGHOUT JOB PIPE WAS STATIC THROUGHOUT JOB CIRCULATED 40 BBLS

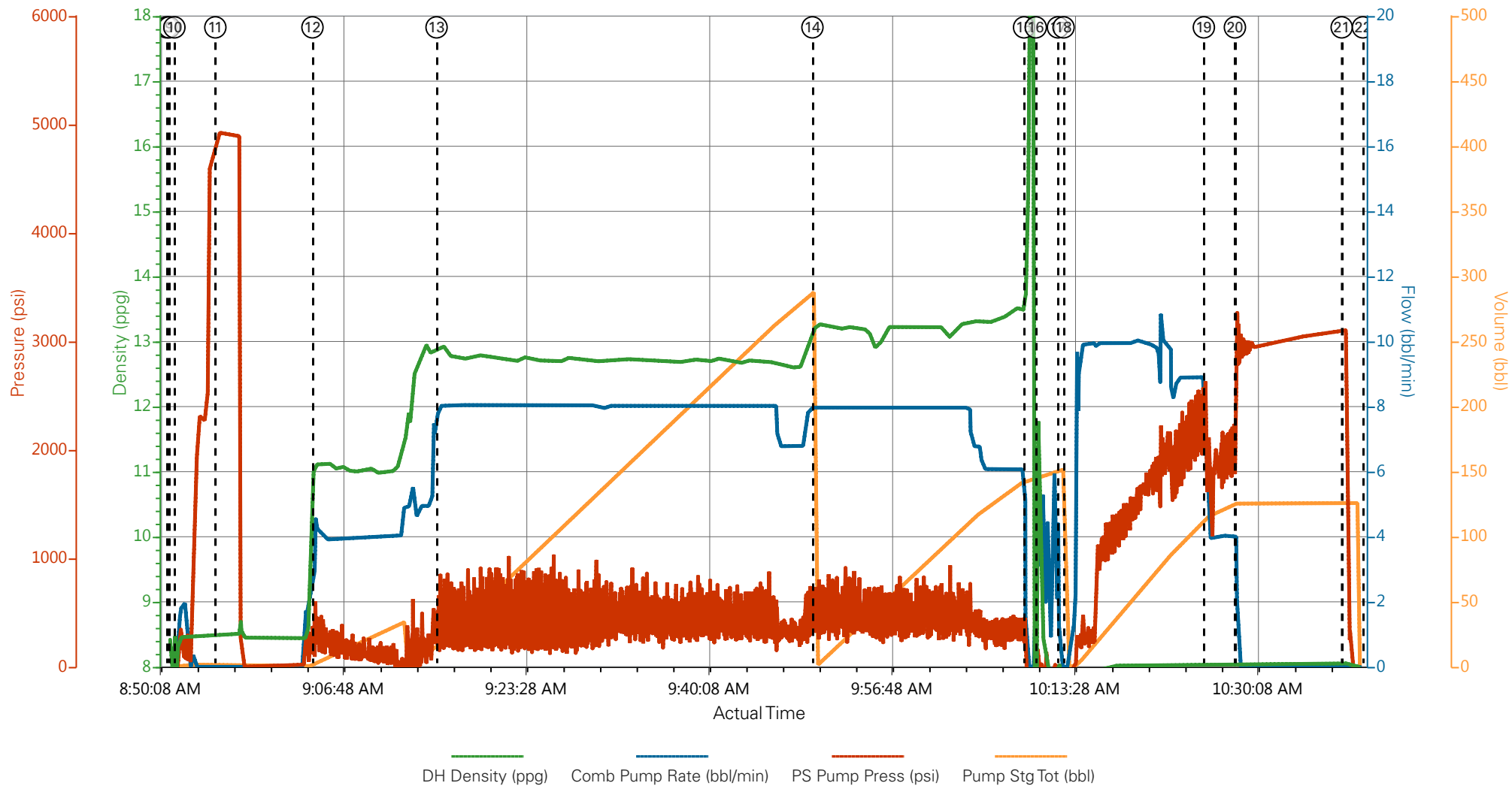
TUNED SPACER III AND 5  
BBL CEMENT TO SURFACE

Event	166	Pre-Rig Down Safety Meeting	8/10/2015	11:30:00	USER	ALL HES EMPLOYEES
Event	167	Rig-Down Equipment	8/10/2015	12:00:00	USER	
Event	168	Pre-Convoy Safety Meeting	8/10/2015	12:30:00	USER	ALL HES EMPLOYEES
Event	169	Crew Leave Location	8/10/2015	13:00:00	USER	THANK YOU FOR USING HALLIBURTON CEMENT DAVID CAMPBELL AND CREW

# PICEANCE ENERGY - PICEANCE 28-08W - 4 1/2 PRODUCTION



# PICEANCE ENERGY - PICEANCE 28-08W - 4 1/2 PRODUCTION



- |   |                     |                               |
|---|---------------------|-------------------------------|
| ① Call Out                              | ⑩ Fill Lines        | ⑲ Slow Rate                   |
| ② Pre-Convoy Safety Meeting             | ⑪ Test Lines        | ⑳ Bump Plug                   |
| ③ Arrive At Loc                         | ⑫ Tuned Spacer III  | ㉑ Check Floats                |
| ④ Assessment Of Location Safety Meeting | ⑬ Pump Lead Cement  | ㉒ End Job                     |
| ⑤ Pre-Rig Up Safety Meeting             | ⑭ Pump Tail Cement  | ㉓ Pre-Rig Down Safety Meeting |
| ⑥ Rig-Up Equipment                      | ⑮ Shutdown          | ㉔ Rig-Down Equipment          |
| ⑦ Pre-Job Safety Meeting                | ⑯ Clean Lines       | ㉕ Pre-Convoy Safety Meeting   |
| ⑧ Start Job                             | ⑰ Drop Top Plug     | ㉖ Crew Leave Location         |
| ⑨ Drop Bottom Plug                      | ⑱ Pump Displacement |                               |

▼ **HALLIBURTON** | iCem® Service

Created: 2015-08-10 04:31:07, Version: 4.1.107

Edit

Customer : PICEANCE ENERGY LLC - EBUS

Job Date : 8/10/2015 6:22:58 AM

Well : PICEANCE 28-08W

Representative : ROGER FOSTER

Sales Order # : 0902651112

ELITE # 4 : DAVID CAMPBELL / DIRK BRENNKECKE



<b>Sales Order #:</b> 0902651112	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 8/11/2015
<b>Customer:</b> PICEANCE ENERGY LLC - EBUS		<b>Job Type (BOM):</b> CMT PRODUCTION CASING BOM
<b>Customer Representative:</b> ROGER FOSTER		<b>API / UWI: (leave blank if unknown)</b> 05-077-09776-00
<b>Well Name:</b> PICEANCE		<b>Well Number:</b> 0080127656
<b>Well Type:</b> VERTICAL 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	8/11/2015
Survey Interviewer	The survey interviewer is the person who initiated the survey.	HX37079
Customer Participation	Did the customer participate in this survey? (Y/N)	Yes
Customer Representative	Enter the Customer representative name	ROGER FOSTER
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> 0902651112	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 8/11/2015
<b>Customer:</b> PICEANCE ENERGY LLC - EBUS		<b>Job Type (BOM):</b> CMT PRODUCTION CASING BOM
<b>Customer Representative:</b> ROGER FOSTER		<b>API / UWI: (leave blank if unknown)</b> 05-077-09776-00
<b>Well Name:</b> PICEANCE		<b>Well Number:</b> 0080127656
<b>Well Type:</b> VERTICAL 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	8/11/2015

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.	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>Pumping Hours</b> Total number of hours pumping fluid on this job. Enter in decimal format.	3
<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> 0902651112	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 8/11/2015
<b>Customer:</b> PICEANCE ENERGY LLC - EBUS		<b>Job Type (BOM):</b> CMT PRODUCTION CASING BOM
<b>Customer Representative:</b> ROGER FOSTER		<b>API / UWI: (leave blank if unknown)</b> 05-077-09776-00
<b>Well Name:</b> PICEANCE		<b>Well Number:</b> 0080127656
<b>Well Type:</b> VERTICAL 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)	Yes
<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	90
<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

# HALLIBURTON

## Water Analysis Report

Company: PICEANCE

Submitted by: DAVID CAMPBELL

Attention:

Lease PICEANCE

Well # 28-08W

Date: 8/10/2015

Date Rec.: 8/10/2015

S.O.# 902651112

Job Type: PRODUCTION

Specific Gravity	<i>MAX</i>	<b>1</b>
pH	<i>8</i>	<b>7</b>
Potassium (K)	<i>5000</i>	<b>400</b> Mg / L
Calcium (Ca)	<i>500</i>	<b>120</b> Mg / L
Iron (FE2)	<i>300</i>	<b>0</b> Mg / L
Chlorides (Cl)	<i>3000</i>	<b>0</b> Mg / L
Sulfates (SO <sub>4</sub> )	<i>1500</i>	<b>UNDER 200</b> Mg / L
Chlorine (Cl <sub>2</sub> )		<b>0</b> Mg / L
Temp	<i>40-90</i>	<b>64</b> Deg
Total Dissolved Solids		<b>330</b> Mg / L

Respectfully: DAVID CAMPBELL

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