

Piceance Energy LLC - EBUS

Piceance 28-06W

**Patterson 306**

# **Post Job Summary**

## **Cement Production Casing**

Date Prepared: 9/21/2015

Job Date: 9/13/2015

Submitted by: Patrick Ealey – Grand Junction Cement Engineer

*The Road to Excellence Starts with Safety*

Sold To #: 344919	Ship To #: 3123919	Quote #:	Sales Order #: 0902740307
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): COLBRAN	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: 7523			
Well Type: DIRECTIONAL GAS			
Sales Person: HALAMERICA\HX41066		Srcv Supervisor: DAVID CAMPBELL	
<b>Job</b>			

Formation Name	
Formation Depth (MD)	Top Bottom
Form Type	BHST
Job depth MD	7908 FT Job Depth TVD 7894 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	1571		
Casing		4.5	4	11.6	8 RD (LT&C)	L-80	0	7898	0	7894
Open Hole Section			7.875				1571	7908	0	7894

Tools and Accessories									
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make
Guide Shoe	4.5			7898		Top Plug	4.5	1	HES
Float Shoe						Bottom Plug	4.5	1	HES
Float Collar	4.5			7818.43		SSR plug set			
Insert Float						Plug Container	4.5	1	HES
Stage Tool						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
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2	VersaCem	VERSACEM (TM) SYSTEM	900	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/mi n	Total Mix Fluid Gal	
3	Expandacem	EXPANDACEM (TM) SYSTEM	413	sack	13.3	1.89		8	8.66	
0.25 lbm		POLY-E-FLAKE (101216940)								
8.66 Gal		FRESH WATER								
6 lbm		KOL-SEAL, BULK (100064233)								
20 %		SS-200 - BULK (102240841)								
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	Displacement	Displacement	121.2	bbl	8.4			8.4		
0.05 gal/bbl		CLA-WEB - TOTE (101985045)								
0.01 gal/bbl		MICRO MATRIX CEMENT RETARDER, 1 GAL PAIL (100003780)								
<b>Cement Left In Pipe</b>		<b>Amount</b>	80 ft		<b>Reason</b>			Shoe Joint		

## 1.0 Real-Time Job Summary

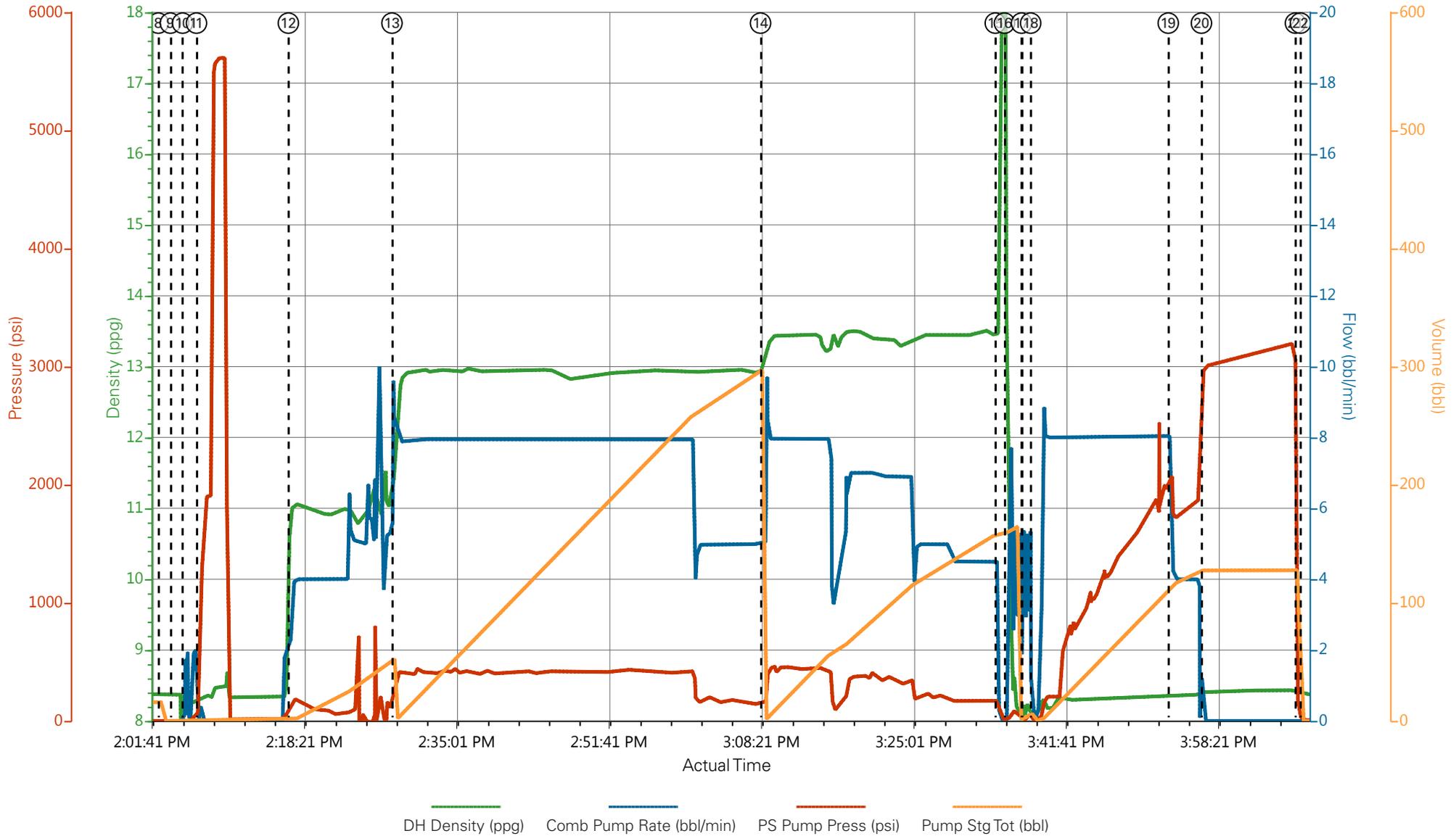
### 1.1 Job Event Log

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	9/13/2015	08:30:00	USER					ELITE # 4
Event	2	Pre-Convoy Safety Meeting	9/13/2015	10:30:00	USER					ALL HES EMPLOYEES
Event	3	Arrive At Loc	9/13/2015	11:30:00	USER					ARRIVED 2 HOURS EARLY DID NOT START CHARGING ADDITIONAL HOURS UNTIL REQUESTED ON LOCATION TIME
Event	4	Assessment Of Location Safety Meeting	9/13/2015	11:45:00	USER					ALL HES EMPLOYEES
Event	5	Pre-Rig Up Safety Meeting	9/13/2015	12:00:00	USER					ALL HES EMPLOYEES
Event	6	Rig-Up Equipment	9/13/2015	12:15:00	USER					1 HT-400 PUMP TRUCK ( ELITE # 4) 2 660 BULK TRUCKS 1 F-550 PICKUP 1 SILO
Event	7	Pre-Job Safety Meeting	9/13/2015	14:00:00	USER					ALL HES EMPLOYEES AND RIG CREW RIG CIRCULATED FOR 1 HOUR @ 10 BBL/MIN PRIOR TO JOB GAS AT 439 PRIOR TO JOB
Event	8	Start Job	9/13/2015	14:02:40	COM5					TD: 7908 TVD: 7894 TP: 7894 CSG: 4 1/2 11.6# L-80 SJ: 79.57 OH: 7 7/8 MW: 9.4 PPG SURFACE CSG: 8 5/8 24# SET @ 1571
Event	9	Drop Bottom Plug	9/13/2015	14:04:00	USER					PLUG AWAY NO PROBLEMS
Event	10	Prime Pumps	9/13/2015	14:05:19	COM5	8.33	2.0	159	2.0	FILL LINES FRESH WATER
Event	11	Test Lines	9/13/2015	14:06:51	COM5	8.33	0.00	5615	2.0	PRESSURE TEST OK
Event	12	Pump Spacer 1	9/13/2015	14:16:54	COM5	11.00	4.0	65	40	40 BBLS 11.0 PPG 4.55 YIELD 30.0 GAL/SK TUNED SPACER III WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES
Event	13	Pump Lead Cement	9/13/2015	14:28:14	COM5	12.8	8.0	435	280.5	900 SKS 12.8 PPG 1.75 YIELD 8.5 GAL/SK LEAD CEMENT WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES
Event	14	Pump Tail Cement	9/13/2015	15:08:33	COM5	13.30	8.0	456	139	413 SKS 13.3 PPG 1.89 YIELD 8.66 GAL/SK TAIL CEMENT

WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES

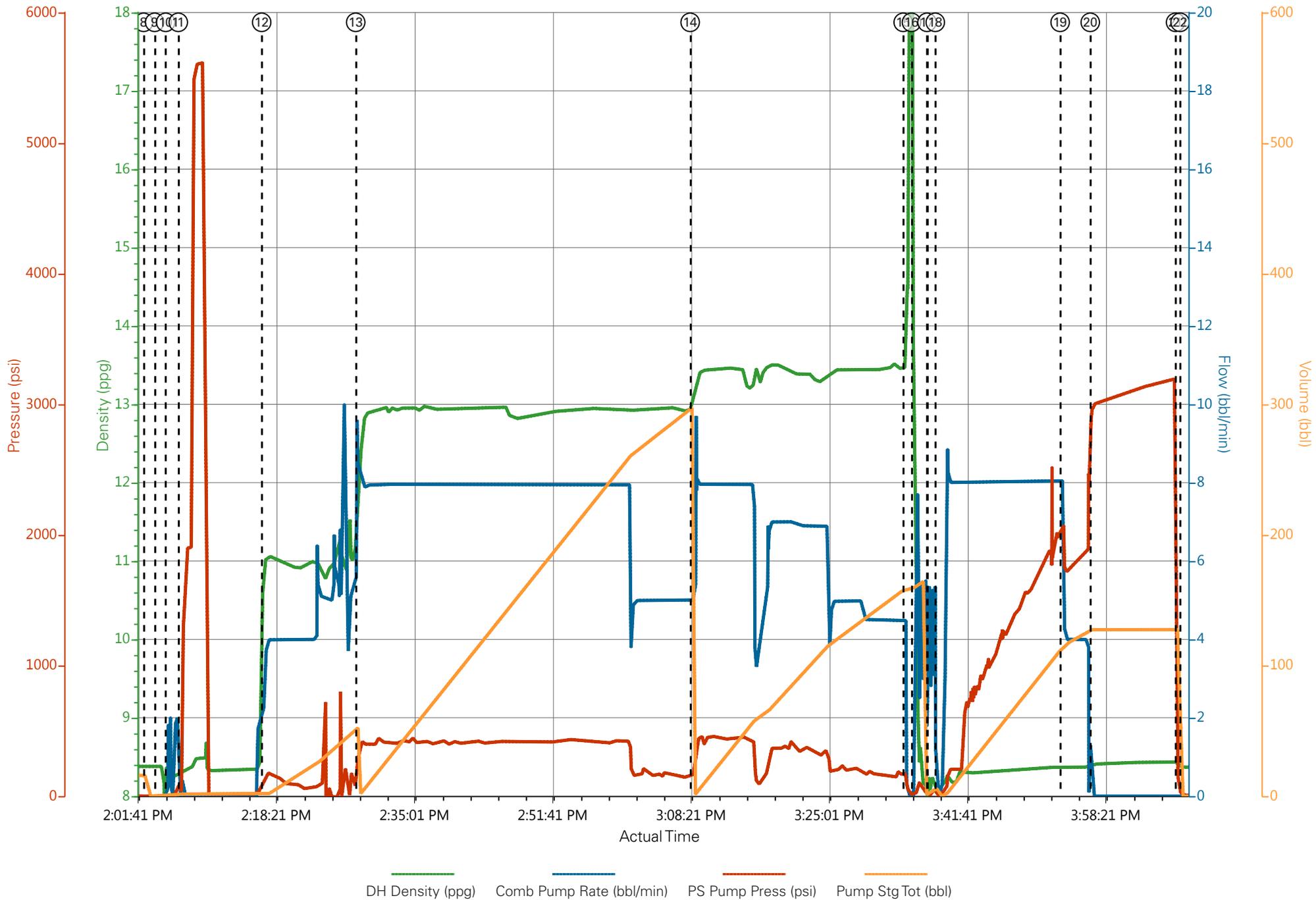
Event	15	Shutdown	9/13/2015	15:34:14	USER						
Event	16	Clean Lines	9/13/2015	15:35:14	USER						CLEAN LINES FRESH WATER
Event	17	Drop Top Plug	9/13/2015	15:37:06	USER						PLUG AWAY NO PROBLEMS
Event	18	Pump Displacement	9/13/2015	15:38:06	COM5	8.4	8.0	1850	121.2		FRESH WATER DISPLACEMENT 5 GAL CLA-WEB 1 GAL MMCR
Event	19	Slow Rate	9/13/2015	15:53:09	USER	8.4	4.0	1750	111.2		SLOW RATE TO BUMP PLUG
Event	20	Bump Plug	9/13/2015	15:56:47	COM5	8.4	4.0	2140	121.2		PRESSURE PRIOR TO BUMPING PLUG AT 2140 BUMPED PLUG UP TO 3186 PSI HELD FOR 10 MIN CASING TEST AS PER COMPANY REP.
Event	21	Other	9/13/2015	16:07:04	COM5	8.4	0.00	3186	121.2		FLOATS HELD 1 1/2 BBLs RETURNED TO TRUCKS TANK
Event	22	End Job	9/13/2015	16:07:37	COM5						GOOD RETURNS THROUGHOUT JOB PIPE WAS STATIC THROUGHOUT JOB CIRCUCLATED 40 BBLs TUNED SPACER III TO SURFACE
Event	23	Pre-Rig Down Safety Meeting	9/13/2015	16:30:00	USER						ALL HES EMPLOYEES
Event	24	Rig-Down Equipment	9/13/2015	16:45:00	USER						
Event	25	Pre-Convoy Safety Meeting	9/13/2015	17:15:00	USER						ALL HES EMPLOYEES
Event	26	Crew Leave Location	9/13/2015	17:30:00	USER						THANK YOU FOR USING HALLIBURTON CEMENT DAVID CAMPBELL AND CREW

# PICEANCE ENERGY - PICEANCE 28-6W - 4 1/2 PRODUCTION



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

# PICEANCE ENERGY - PICEANCE 28-6W - 4 1/2 PRODUCTION



# HALLIBURTON

## Water Analysis Report

Company: PICEANCE

Date: 9/13/2015

Submitted by: DAVID CAMPBELL

Date Rec.: 9/13/2015

Attention: \_\_\_\_\_

S.O.# 902740307

Lease PICEANCE

Job Type: PRODUCTION

Well # 28-6W

Specific Gravity	<i>MAX</i>	<b>1</b>
pH	<i>8</i>	<b>7</b>
Potassium (K)	<i>5000</i>	<b>400 Mg / L</b>
Calcium (Ca)	<i>500</i>	<b>120 Mg / L</b>
Iron (FE2)	<i>300</i>	<b>0 Mg / L</b>
Chlorides (Cl)	<i>3000</i>	<b>0 Mg / L</b>
Sulfates (SO <sub>4</sub> )	<i>1500</i>	<b>UNDER 200 Mg / L</b>
Chlorine (Cl <sub>2</sub> )		<b>0 Mg / L</b>
Temp	<i>40-90</i>	<b>64 Deg</b>
Total Dissolved Solids		<b>350 Mg / L</b>

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 its

<b>Sales Order #:</b> 0902740307	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 9/13/2015
<b>Customer:</b> PICEANCE ENERGY LLC - EBUS		<b>Job Type (BOM):</b> CMT PRODUCTION 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	9/13/2015
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	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>
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### KEY PERFORMANCE INDICATORS

General	
<b>Survey Conducted Date</b>	9/13/2015
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>	5
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>	3
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>	6
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?	Bottom
<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