

Piceance Energy LLC - EBUS

Piceance Federal 28-01M

**Patterson 306**

# **Post Job Summary**

## **Cement Surface Casing**

Date Prepared: 9/9/2015

Job Date: 9/2/2015

Submitted by: Patrick Ealey – Grand Junction Cement Engineer

The Road to Excellence Starts with Safety

Sold To #: 344919	Ship To #: 3672940	Quote #:	Sales Order #: 0902709239
Customer: PICEANCE ENERGY LLC - EBUS		Customer Rep: ROGER FOSTER	
Well Name: PICEANCE FED	Well #: 28-01M	API/UWI #: 05-077-10244-00	
Field: VEGA	City (SAP): COLBRAN	County/Parish: MESA	State: COLORADO
Legal Description: SW NW-28-9S-93W-1545FNL-1200FWL			
Contractor: PATTERSON-UTI ENERGY		Rig/Platform Name/Num: PATTERSON 306	
Job BOM: 7521			
Well Type: DIRECTIONAL GAS			
Sales Person: HALAMERICA\HX41066		Srvc Supervisor: Clifford Sparks	

**Job**

**HOT 962', TOT 653'. GREAT RETURNS THROUGHOUT JOB 25 BBLs OF LEAD CEMENT TO SURFACE**

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type			BHST
Job depth MD	1615ft		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	0	60
Casing		8.625	8.097	24	8 RD	J-55	0	1615	0	1615
Open Hole Section			11				60	1625	60	1625

**Tools and Accessories**

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	8.625	1		1615	Top Plug	8.625	1	HES
Float Shoe	8.625				Bottom Plug	8.625	1	HES
Float Collar	8.625	1		1568.4	SSR plug set	8.625		
Insert Float	8.625				Plug Container	8.625	1	HES
Stage Tool	8.625				Centralizers	8.625		

**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			4	

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
		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	120	sack	12.8	2.18	12.11	8	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			10	
<b>Cement Left In Pipe</b>	<b>Amount</b>	47 ft		<b>Reason</b>				Shoe Joint	

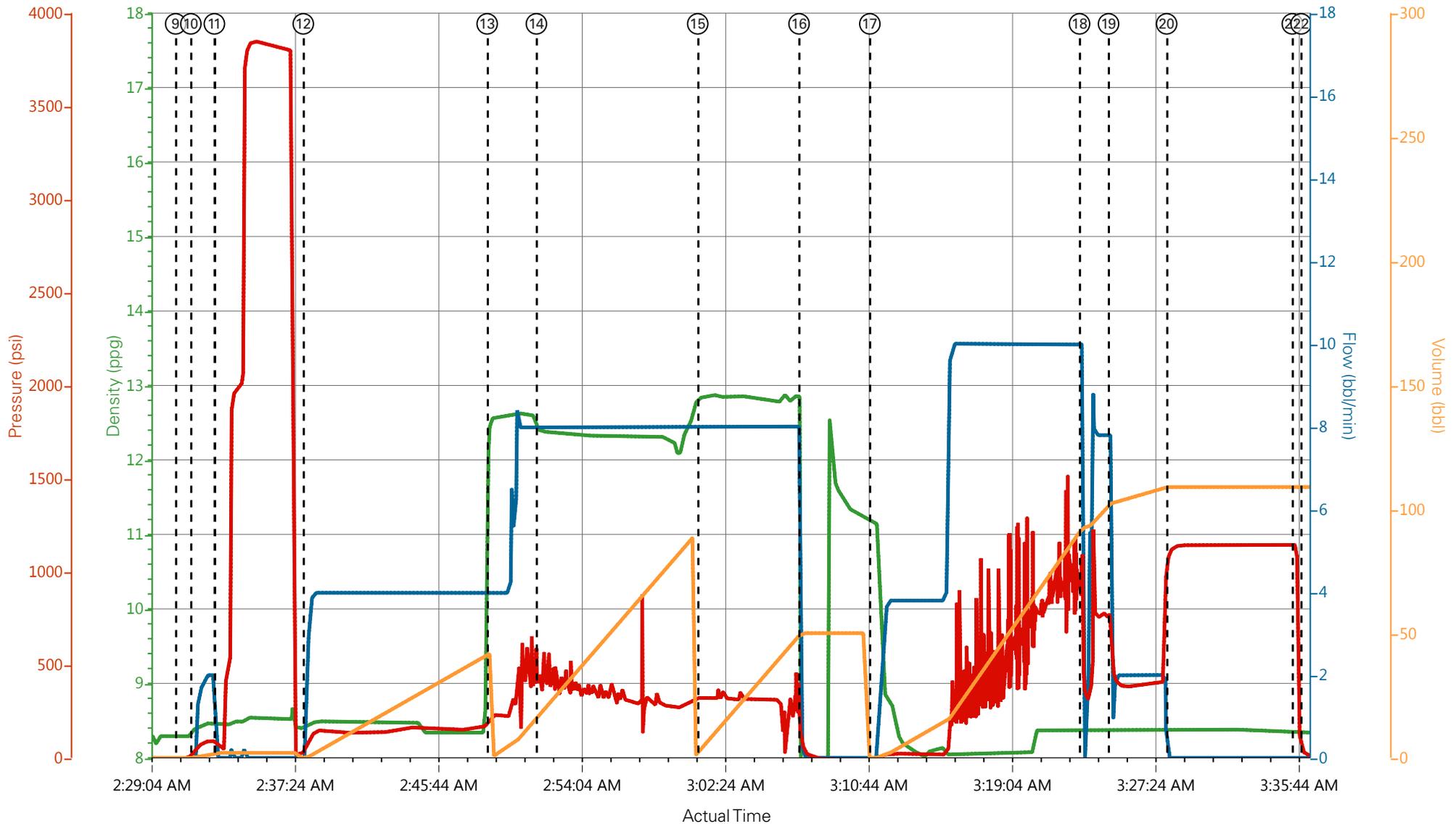
## 1.0 Real-Time Job Summary

### 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	9/1/2015	17:00:00	USER					REQUESTED ON LOCATION @ 0000 9/2/15
Event	2	Pre-Convoy Safety Meeting	9/1/2015	19:45:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	9/1/2015	20:00:00	USER					1 F550, 1 ELITE, 1 660 AND IRON TRUCK
Event	4	Arrive At Loc	9/1/2015	22:00:00	USER					ARRIVED 2 HOURS EARLY AND RIG WAS STILL PULLING PIPE
Event	5	Assessment Of Location Safety Meeting	9/1/2015	22:15:00	USER					MET WITH COMP REP, GREG VICK, AND WENT OVER NUMBERS AND JOB PROCEDURE. WALKED AROUND LOCATION AND COLLECTED WATER SAMPLE.
Event	6	Pre-Rig Up Safety Meeting	9/1/2015	22:45:00	USER					ALL HES PRESENT
Event	7	Rig-Up Equipment	9/1/2015	23:00:00	USER					QUICK RIG UP. COMPLETED BEFORE CASING CREW STARTED RIGGING UP
Event	8	Pre-Job Safety Meeting	9/2/2015	02:15:00	USER					ALL HES AND RIG CREW PRESENT
Event	9	Start Job	9/2/2015	02:30:38	COM5					TD 1625', TP 1615', OH 11", SJ 46.6', CS 8.625" 24# J-55, MW 9.1
Event	10	Prime Pumps	9/2/2015	02:31:31	USER	8.34	2	35.00	2	2 BBLS FRESH WATER
Event	11	Test Lines	9/2/2015	02:32:53	COM5					TESTED TO 3820 PSI, TESTED GOOD. KO'S OPERATIONAL

Event	12	Pump Spacer 1	9/2/2015	02:38:03	COM5	8.34	4	175	40	40 BBLS FRESH WATER
Event	13	Pump Lead Cement	9/2/2015	02:48:44	COM5	12.3	8	400	84.1	192 SKS (84.1 BBLS) 12.3 PPG, 2.46 FT3/SK, 14.17 GAL/SK
Event	14	Check Weight	9/2/2015	02:51:36	COM5	12.3	8	415	17	12.3 PPG ADJUSTED DOWNHOLE TO MATCH AFTER CHECKING WEIGHT WITH MUD SCALES
Event	15	Pump Tail Cement	9/2/2015	03:00:59	COM5	12.8	8	400	46.6	120 SKS (46.6 BBLS) 12.8 PPG, 2.18 FT3/SK, 12.11 GAL/SK
Event	16	Shutdown	9/2/2015	03:06:52	USER					END OF CEMENT
Event	17	Pump Displacement	9/2/2015	03:10:59	COM5	8.34	10	900	99.8	99.8 BBLS FRESH WATER
Event	18	Other	9/2/2015	03:23:10	USER	8.34	8	750	75	KICKED OUT (SET AT 1500PSI) BROUGHT IT BACK TO A SLOWER RATE
Event	19	Slow Rate	9/2/2015	03:24:51	USER	8.34	2	200	89	SLOWED TO 2 BBLS/MIN TO LAND PLUG
Event	20	Bump Plug	9/2/2015	03:28:13	COM5					LANDED AT 400 PSI, PRESSURED UP TO 1000 PSI
Event	21	Check Floats	9/2/2015	03:35:32	USER					FLOATS HELD. .5 BBLS BACK TO TRUCK
Event	22	End Job	9/2/2015	03:36:02	COM5					GREAT RETURNS THROUGHOUT JOB. 25 BBLS OF LEAD CEMENT TO SURFACE
Event	23	Pre-Rig Down Safety Meeting	9/2/2015	03:45:00	USER					ALL HES PRESENT
Event	24	Rig Down Lines	9/2/2015	04:00:00	USER					
Event	25	Pre-Convoy Safety Meeting	9/2/2015	04:15:00	USER					ALL HES PRESENT
Event	26	Crew Leave Location	9/2/2015	04:30:00	USER					THANK YOU FOR USING HALLIBURTON CEMENT. CLIFF SPARKS AND CREW

# PICEANCE FED 28-01M 8.625" SURFACE CASING



DH Density (ppg) 8.33    Comb Pump Rate (bbl/min) 0    PS Pump Press (psi) 0    Pump Stg Tot (bbl) 109.1

⑦ Rig-Up Equipment n/a;n/a;n/a;n/a	⑩ Prime Pumps 8.38;0;35;0	⑬ Pump Lead Cement 12.53;4;212;42.2	⑯ Shutdown 1.18;0.2;77;50.2	⑲ Slow Rate 8.38;3.9;659;102.9	22
⑧ Pre-Job Safety Meeting 8.3;0;3;0	⑪ Test Lines 8.45;0;69;2	⑭ Check weight 12.41;8;415;17.6	⑰ Pump Displacement 11.15;0;-9;0	20 Bump Plug 8.39;0;1105;109.1	
⑨ Start Job 8.28;0;-2;0	⑫ Pump Spacer 18.4;1.9;60;0.2	⑮ Pump Tail Cement 12.85;8;327;3.7	⑱ Kickouts 8.38;2.4;633;92.9	21 Check Floats 8.37;0;1145;109.1	

**HALLIBURTON** | iCem® Service

Created: 2015-09-02 00:03:03, Version: 4.2.384

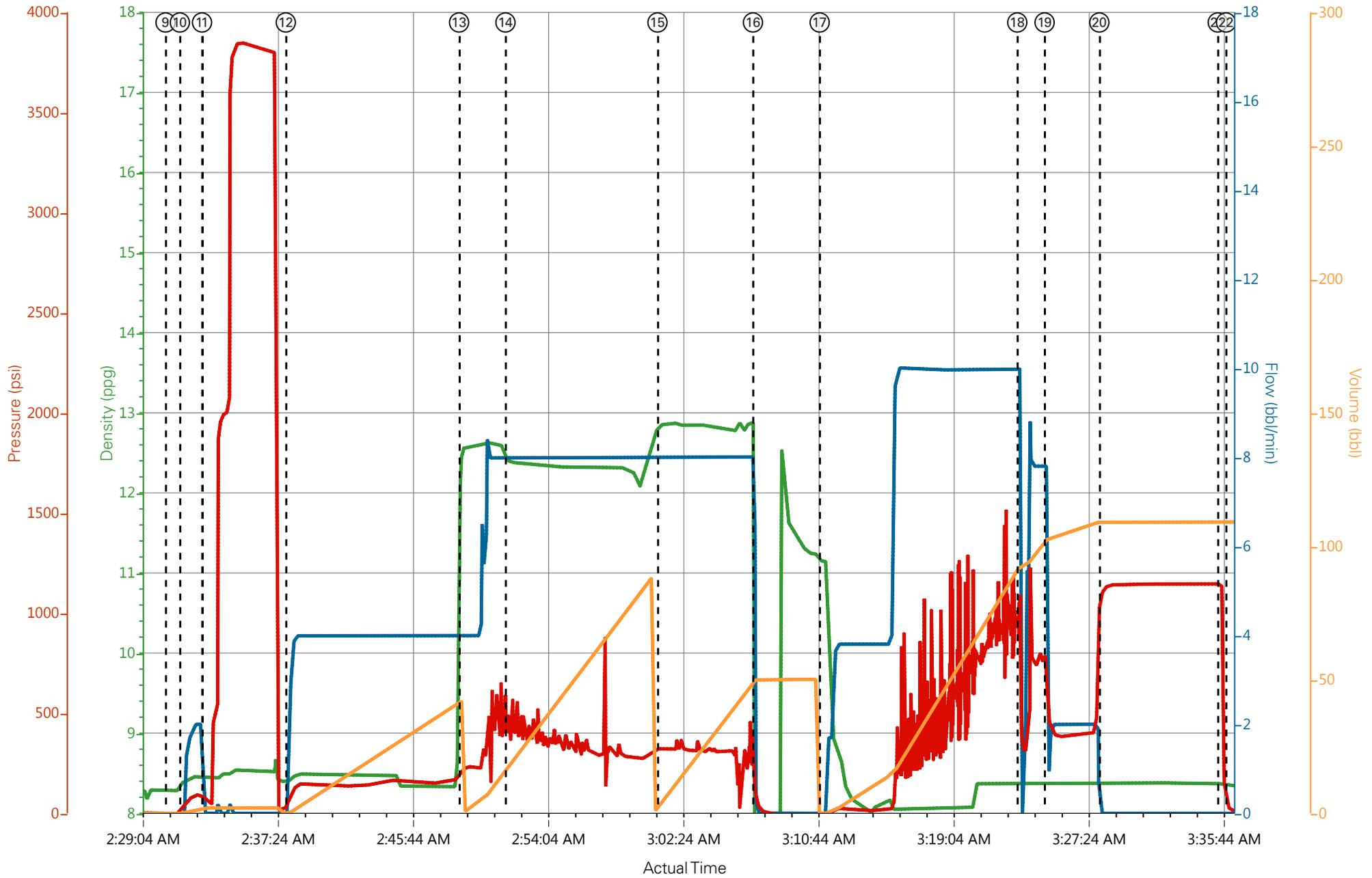
Edit

Customer: PICEANCE ENERGY LLC  
 Representative: ROGER FOSTER

Job Date: 9/2/2015 1:41:46 AM  
 Sales Order #: 902709239

Well: 28-01M  
 Supervisor/Operator: Cliff Sparks/Adam Angelo E8

# PICEANCE FED 28-01M 8.625" SURFACE CASING



DH Density (ppg) 8.33    Comb Pump Rate (bbl/min) 0    PS Pump Press (psi) 0    Pump Stg Tot (bbl) 109.1

# HALLIBURTON

---

## Water Analysis Report

Company: PICEANCE ENERGY

Date: 9/1/2015

Submitted by: Cliff Sparks

Date Rec.: 9/1/2015

Attention: Dallas Scott

S.O.# 902709239

Lease PATTERSON 306

Job Type: Surface

Well # PICEANCE FED 28-01M

Specific Gravity	<i>MAX</i>	<i>1</i>
pH	<i>8</i>	<i>7</i>
Potassium (K)	<i>5000</i>	<i>200</i> Mg / L
Hardness	<i>500</i>	<i>250</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>60</i> Deg
Total Dissolved Solids		<i>250</i> Mg / L

Respectfully: Cliff Sparks

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 u

<b>Sales Order #:</b> 0902709239	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 9/2/2015
<b>Customer:</b> PICEANCE ENERGY LLC - EBUS		<b>Job Type (BOM):</b> CMT SURFACE CASING BOM
<b>Customer Representative:</b> ROGER FOSTER		<b>API / UWI: (leave blank if unknown)</b> 05-077-10244-00
<b>Well Name:</b> PICEANCE FED		<b>Well Number:</b> 0080734019
<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	9/2/2015
Survey Interviewer	The survey interviewer is the person who initiated the survey.	HB74155
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	N/A

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

<b>Sales Order #:</b> 0902709239	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 9/2/2015
<b>Customer:</b> PICEANCE ENERGY LLC - EBUS		<b>Job Type (BOM):</b> CMT SURFACE CASING BOM
<b>Customer Representative:</b> ROGER FOSTER		<b>API / UWI: (leave blank if unknown)</b> 05-077-10244-00
<b>Well Name:</b> PICEANCE FED		<b>Well Number:</b> 0080734019
<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>	9/2/2015
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>	Deviated
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>	No
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

<b>Sales Order #:</b> 0902709239	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 9/2/2015
<b>Customer:</b> PICEANCE ENERGY LLC - EBUS		<b>Job Type (BOM):</b> CMT SURFACE CASING BOM
<b>Customer Representative:</b> ROGER FOSTER		<b>API / UWI: (leave blank if unknown)</b> 05-077-10244-00
<b>Well Name:</b> PICEANCE FED		<b>Well Number:</b> 0080734019
<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	98
<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	98
<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