

Piceance Energy LLC - EBUS

Piceance Federal 28-05M

**Patterson 306**

## **Post Job Summary**

# **Cement Production Casing**

Date Prepared: 8/27/2015

Job Date: 8/22/2015

Submitted by: Patrick Ealey – Grand Junction Cement Engineer

## The Road to Excellence Starts with Safety

Sold To #: 344919	Ship To #: 3673008	Quote #: 0022090115	Sales Order #: 0902680309
Customer: PICEANCE ENERGY LLC - EBUS		Customer Rep: Matt Settles	
Well Name: PICEANCE FED		Well #: 28-05M	API/UWI #: 05-077-10242-00
Field: VEGA	City (SAP): COLBRAN	County/Parish: MESA	State: COLORADO
Legal Description: SW NW-28-9S-93W-1574FNL-1211FWL			
Contractor: PATTERSON-UTI ENERGY		Rig/Platform Name/Num: PATTERSON 306	
Job BOM: 7523			
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	8125ft		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		8.625	7.921	32			0	1550		0
Casing		4.5	4	11.6			0	8115		0
Open Hole Section			8.875				1550	8125	0	0

Tools and Accessories									
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make
Guide Shoe	4.5			8115		Top Plug	4.5		HES
Float Shoe	4.5					Bottom Plug	4.5		HES
Float Collar	4.5					SSR plug set	4.5		HES
Insert Float	4.5					Plug Container	4.5		HES
Stage Tool	4.5					Centralizers	4.5		HES

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	6.0		
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	950	sack	12.8	1.75		4	8.5	

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	ExpandaCem	EXPANDACEM (TM) SYSTEM	413	sack	13.3	1.89		4	8.66
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
4	Displacement	Displacement	124.4	bbl	8.34				
0.05 gal/bbl		CLA-WEB - TOTE (101985045)							
0.01 gal/bbl		MICRO MATRIX CEMENT RETARDER, 1 GAL PAIL (100003780)							
Cement Left In Pipe		Amount	40 ft		Reason			Shoe Joint	
Mix Water:		pH 6.5	Mix Water Chloride:		0 ppm		Mix Water Temperature:		74 °F °C
Plug Bumped?		Yes	Bump Pressure:		2187 psi		Floats Held?		Yes
Cement Returns:		20 bbl							
Comment									

## 1.0 Real-Time Job Summary

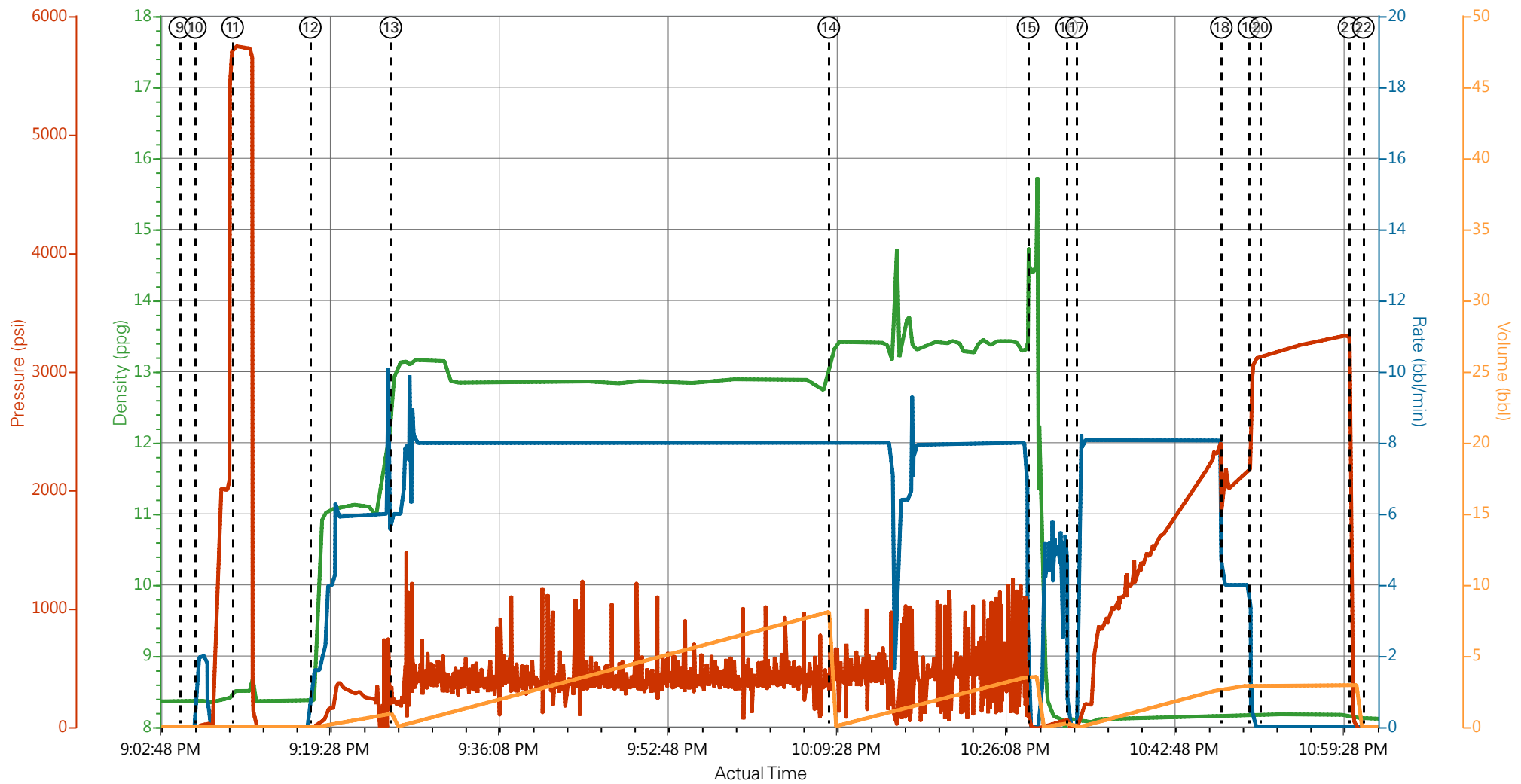
## 1.1 Job Event Log

Type	Seq. No.	Activity	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	8/22/2015	13:30:00	USER					
Event	2	Pre-Convoy Safety Meeting	8/22/2015	15:45:00	USER					
Event	3	Crew Leave Yard	8/22/2015	16:00:00	USER					1 Elite, 2 660s, 1 Pickup
Event	4	Arrive At Loc	8/22/2015	18:00:00	USER					O/L time 1930
Event	5	Assessment Of Location Safety Meeting	8/22/2015	18:15:00	USER					Rig still running casing
Event	6	Pre-Rig Up Safety Meeting	8/22/2015	18:30:00	USER					JSA completed
Event	7	Rig-Up Equipment	8/22/2015	18:45:00	USER					Hard line to standpipe, manifold on ground, wash up line to cellar, water hoses to upright and day tank, bulk hoses to sillo and 660s
Event	8	Pre-Job Safety Meeting	8/22/2015	19:30:00	USER					All HES personnel, rig crew, and company rep
Event	9	Start Job	8/22/2015	21:05:00	USER					TD 8125', TP 8114.35', SJ 89.21', Mud 9.5, 8 5/8" surf csg @ 1550', 7 7/8" OH, 4 1/2" 11.6# 180 csg
Event	10	Prime Pumps	8/22/2015	21:06:31	COM5	68		2.0	2.0	
Event	11	Test Lines	8/22/2015	21:10:12	USER	5766				Pressure held well
Event	12	Pump Spacer 1	8/22/2015	21:17:52	COM5	378	11.0	6.0	40.0	11.0 ppg, 4.55 yield, 30.0 gal/sk
Event	13	Pump Lead Cement	8/22/2015	21:25:48	COM5	474	12.80	8.00		950 sks, 12.8 ppg, 1.75 yield, 8.5 gal/sk

296.1

Event	14	Pump Tail Cement	8/22/2015	22:09:01	COM5	480	13.30	8.00	139.0	413 sks, 13.3 ppg, 1.89 yield, 8.66 gal/sk
Event	15	Shutdown	8/22/2015	22:28:40	USER					Wash up into cellar
Event	16	Drop Plug	8/22/2015	22:32:28	COM5					Verified by tattletale
Event	17	Pump Displacement	8/22/2015	22:33:27	COM5	2425	8.33	10.0	124.4	Fresh Water, 5 gal Cla-Web, 1 gal MMCR
Event	18	Slow Rate	8/22/2015	22:47:44	USER	1860	8.33	4.0	10.0	Good returns throughout job
Event	19	Bump Plug	8/22/2015	22:50:28	USER	2187				20 bbls cement to surface
Event	20	Pressure Up	8/22/2015	22:51:36	USER	3138				Pressure up to 3000 psi for 10 minutes
Event	21	Check Floats	8/22/2015	23:00:19	USER					Floats held - 1 bbl flowback
Event	22	End Job	8/22/2015	23:01:45	COM5					No derrick charge, no add hours
Event	23	Pre-Rig Down Safety Meeting	8/22/2015	23:10:00	USER					
Event	24	Rig-Down Equipment	8/22/2015	23:20:00	USER					
Event	25	Pre-Convoy Safety Meeting	8/22/2015	23:50:00	USER					
Event	26	Crew Leave Location	8/22/2015	23:55:00	USER					Thank you for using Halliburton - Ed Deussen and crew

# PICEANCE ENERGY - FED 28-05M - 4 1/2" PRODUCTION



DH Density (ppg) 8.12   Comb Pump Rate (bbl/min) 0.9   PS Pump Press (psi) -28.7   Pump Stg Tot (bbl) 0

- |   |   |  |  |
|---|---|--|--|
| ① Call Out n/a;n/a;n/a;n/a                              | ⑧ Pre-Job Safety Meeting 8.33;0;-22.7;0 | ⑮ Shutdown/Wash Up 14.35;0;-5.7;3.55       | 22 End Job 8.12;0;-26.7;0                    |
| ② Pre-Convoy Safety Meeting n/a;n/a;n/a;n/a             | ⑨ Start Job 8.35;0;-29.7;0              | ⑯ Drop Plug 8.11;0;-13.7;0.27              | 23 Pre-Rig Down Safety Meeting 8.1;0;-31.7;0 |
| ③ Crew Leave Yard n/a;n/a;n/a;n/a                       | ⑩ Prime Lines 8.37;1.9;18.3;0.01        | ⑰ Pump Displacement 8.11;5.3;48.3;0.01     | 24 Rig-Down Equipment n/a;n/a;n/a;n/a        |
| ④ Arrive At Loc n/a;n/a;n/a;n/a                         | ⑪ Test Lines 8.51;0;5749.3;0.05         | ⑱ Slow Rate 8.14;4;1974.3;2.71             | 25 Pre-Convoy Safety Meeting n/a;n/a;n/a;n/a |
| ⑤ Assessment Of Location Safety Meeting n/a;n/a;n/a;n/a | ⑫ Pump Tuned Spacer 8.37;1.6;8.3;0.01   | ⑲ Bump Plug 8.18;0;2986.3;2.95             | 26 Crew Leave Location n/a;n/a;n/a;n/a       |
| ⑥ Pre-Rig Up Safety Meeting n/a;n/a;n/a;n/a             | ⑬ Pump Lead Cement 12.93;6;220.3;0.99   | 20 Casing Pressure Test 8.18;0;3138.3;2.95 |  |
| ⑦ Rig-Up Equipment n/a;n/a;n/a;n/a                      | ⑭ Pump Tail Cement 13.22;8;425.3;0      | 21 Check Floats 8.2;0;231.3;2.95           |  |

▼ **HALLIBURTON** | iCem® Service

Created: 2015-08-22 19:03:48, Version: 4.1.107

Edit

Customer : LARAMIE ENERGY II LLC EBUSINESS

Job Date : 8/22/2015 8:50:08 PM

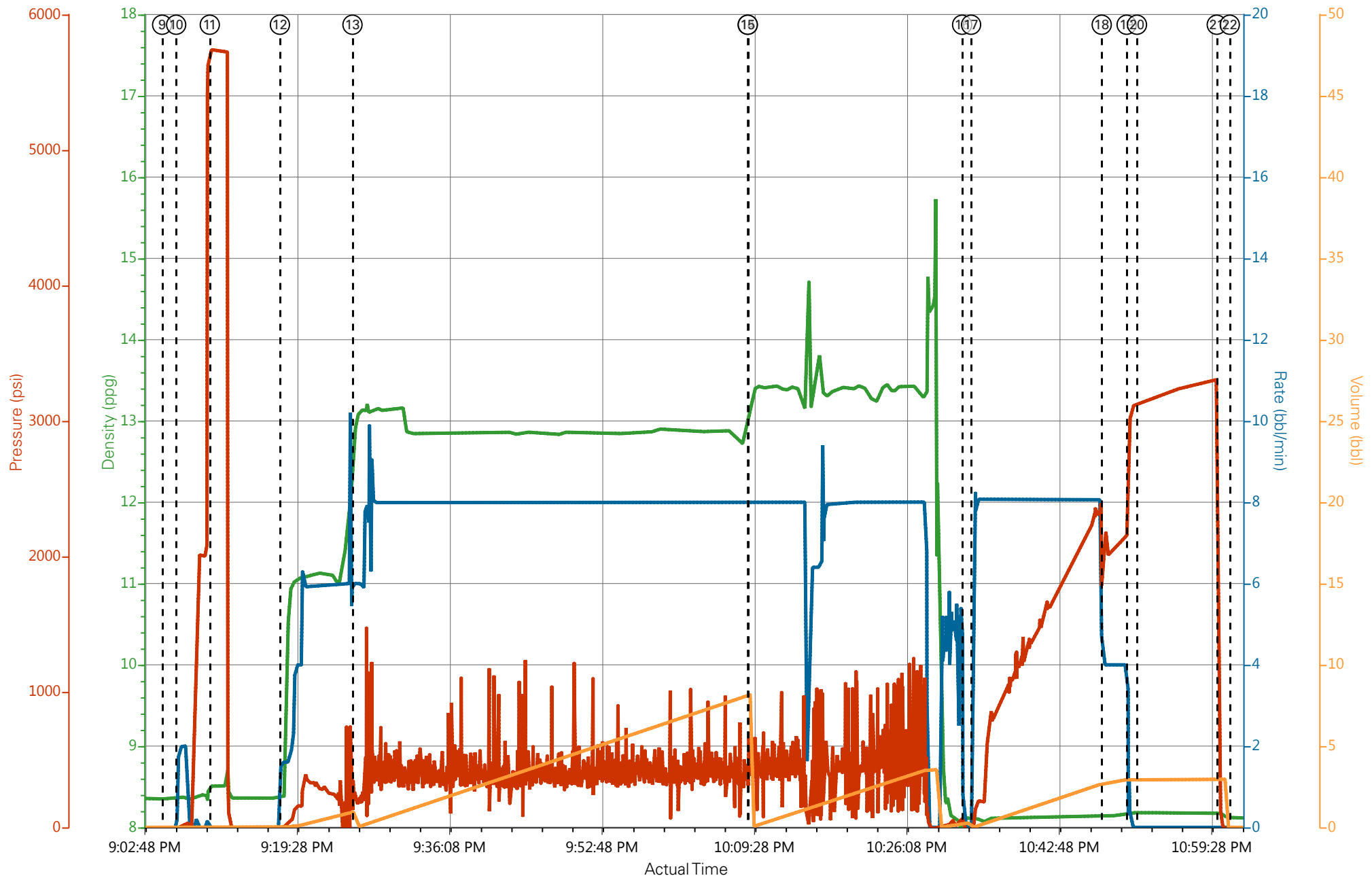
Well : PICEANCE 28-05M

Representative : MATT SETTLES

Sales Order # : 902680309

ELITE #6 : ED DEUSSEN / THOMAS PONDER

# PICEANCE ENERGY - FED 28-05M - 4 1/2" PRODUCTION



# HALLIBURTON

## Water Analysis Report

Company: PICEANCE ENERGY

Submitted by: ED DEUSSEN

Attention: J.TROUT

Lease FED

Well # 28-05M

Date: 8/22/2015

Date Rec.: 8/22/2015

S.O.# 902680309

Job Type: PRODUCTION

Specific Gravity	<i>MAX</i>	<b>1</b>
pH	<i>8</i>	<b>6.5</b>
Potassium (K)	<i>5000</i>	<b>0</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>&lt;200</b> Mg / L
Temp	<i>40-80</i>	<b>74</b> Deg
Total Dissolved Solids		<b>280</b> Mg / L

Respectfully: ED DEUSSEN

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 use



<b>Sales Order #:</b> 0902680309	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 8/23/2015
<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> 05-077-10242-00
<b>Well Name:</b> PICEANCE FED		<b>Well Number:</b> 0080734131
<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	8/23/2015
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>
---------------------------

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### KEY PERFORMANCE INDICATORS

General	
<b>Survey Conducted Date</b>	8/23/2015
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>	6
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>	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	99
<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	99
<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