

Piceance Energy LLC- EBUS

Piceance 28-12M

**Patterson 306**

## **Post Job Summary**

# **Cement Production Casing**

Date Prepared: 03/19/2015

Job Date: 03/16/2015

Submitted by: Evan Russell – Grand Junction Cement Engineer

## The Road to Excellence Starts with Safety

Sold To #: 344919	Ship To #: 3590367	Quote #:	Sales Order #: 0902224109
Customer: PICEANCE ENERGY LLC - EBUS	Customer Rep: MATT SETTLES		
Well Name: PICEANCE	Well #: 28-12M	API/UWI #: 05-077-10223-00	
Field: VEGA	City (SAP): COLLBRAN	County/Parish: MESA	State: COLORADO
Legal Description: NE SW-28-9S-93W-2505FSL-1616FWL			
Contractor: PATTERSON-UTI ENERGY	Rig/Platform Name/Num: PATTERSON 306		
Job BOM: 7523			
Well Type: DIRECTIONAL GAS			
Sales Person: HALAMERICA\HX41066	Srvc Supervisor: Dustin Hyde		

### Job

Formation Name	
Formation Depth (MD)	Top
Form Type	BHST
Job depth MD	8030ft
Water Depth	
Perforation Depth (MD)	From

### 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	1561		0
Casing		4.5	4	11.6		I-80	0	8030		0
Open Hole Section			8.875			J-55	1561	8040	0	0

### Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	4.5	1		8030	Top Plug	4.5	1	HES
Float Shoe	4.5	1			Bottom Plug	4.5	1	HES
Float Collar	4.5	1		7940	SSR plug set			
Insert Float	4.5	1			Plug Container	4.5	1	HES
Stage Tool	4.5	1			Centralizers	4.5	121	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	Tuned Spacer III	Tuned Spacer III	40	bbl	11	4.55		6		
36.83 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	920	sack	12.8	1.75		8	8.5
0.25 lbm		POLY-E-FLAKE (101216940)							
6 lbm		KOL-SEAL, BULK (100064233)							
8.53 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	EXPANDACEM (TM) SYSTEM	413	sack	13.3	1.89		8	8.66
20 %		SAND-SSA-1 - SILICA FLOUR - 200 MESH, BULK (100003691)							
0.25 lbm		POLY-E-FLAKE (101216940)							
8.68 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	123	bbl	8.34			10	
Cement Left In Pipe		Amount	90 ft		Reason		Shoe Joint		
Comment									

## 1.0 Real-Time Job Summary

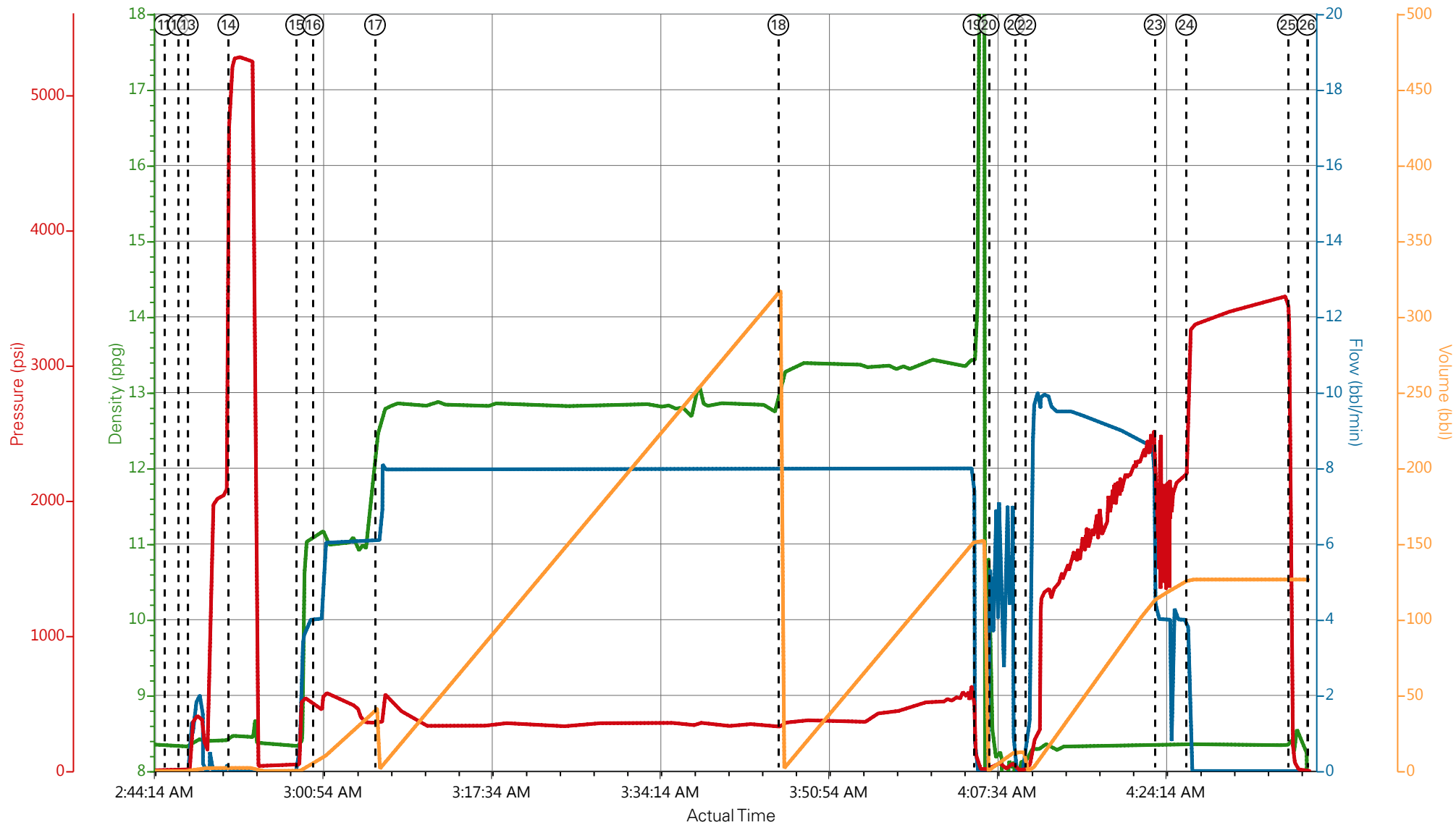
## 1.1 Job Event Log

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	3/15/2015	19:30:00	USER					ON LOCATION TO BE 0100
Event	2	Pre-Convoy Safety Meeting	3/15/2015	22:00:00	USER					ALL HES EMPLOYEES PRESENT
Event	3	Crew Leave Yard	3/15/2015	22:30:00	USER					1 HT 400 PUMP TRUCK E# 3, 2 660 BULK TRUCKS, 1 BODY LOAD, 1 550 SERVICE PICKUP
Event	4	Arrive At Loc	3/16/2015	01:10:00	USER					RIG CIRCULATING ON WELL SINCE 0030
Event	5	Assessment Of Location Safety Meeting	3/16/2015	01:15:00	USER					PERFORMED JSA AND WATER TEST
Event	6	Other	3/16/2015	01:30:00	USER					1 HT 400 PUMP TRUCK E# 1, 2 660 BULK TRUCKS, 1 BODY LOAD, 1 550 SERVICE PICKUP
Event	7	Pre-Rig Up Safety Meeting	3/16/2015	01:45:00	USER					ALL HES EMPLOYEES PRESENT
Event	8	Rig-Up Equipment	3/16/2015	01:55:00	USER					1 HT 400 PUMP TRUCK E# 1, 2 660 BULK TRUCKS, 1 BODY LOAD, 1 550 SERVICE PICKUP
Event	9	Rig-Up Completed	3/16/2015	02:20:00	USER					ALL HES EMPLOYEES PRESENT
Event	10	Pre-Job Safety Meeting	3/16/2015	02:30:00	USER					ALL HES EMPLOYEES AND RIG CREW ATTENDED
Event	11	Start Job	3/16/2015	02:45:30	COM8					TD 8,040' TP 8,030, SJ

89.69', OH 7 7/8", CSG  
1,561' OF 8 5/8" SURFACE  
CSG 24# J-55, 4 1/2"  
PRODUCTION CSG 11.6# I-  
80, WF/WT 9.6 PPG

Event	12	Drop Bottom Plug	3/16/2015	02:46:53	USER					VERIFIED BY TATTLE TAIL
Event	13	Prime Pumps	3/16/2015	02:47:50	USER	8.33	2.0	420	2	FRESH WATER
Event	14	Test Lines	3/16/2015	02:51:50	COM8			5263		PRESSURE HELD @ 5263 PSI
Event	15	Pump Spacer 1	3/16/2015	02:58:33	COM8	11.0	6.0	580	40	40 BBLS 11 PPG, 4.55 YIELD, 30 GAL / SK
Event	16	Check Weight	3/16/2015	03:00:13	COM8	11.0				BALANCED MUD CUP MATCHED RECIRC DENSITY
Event	17	Pump Lead Cement	3/16/2015	03:06:20	COM8	12.8	8.0	420	287	920 SKS, 12.8 PPG, 1.75 YIELD, 8.5 GAL / SK
Event	18	Pump Tail Cement	3/16/2015	03:46:13	COM8	13.3	8.0	510	139	314 SKS, 13.3 PPG, 1.89 YIELD, 8.66 GAL / SK
Event	19	Shutdown	3/16/2015	04:05:30	USER					END OF CMT
Event	20	Clean Lines	3/16/2015	04:07:01	COM8					WASHED UP INTO CELLUR USED ABOUT 13 BBLS
Event	21	Drop Top Plug	3/16/2015	04:09:35	COM8					VERIFIED BY TATTLE TAIL
Event	22	Pump Displacement	3/16/2015	04:10:38	COM8	8.33	10.0	1800	113	1 GAL MMCR IN FIRST 10 BBLS
Event	23	Slow Rate	3/16/2015	04:23:25	USER	8.33	4.0	2300	10	40 BBLS TUNED SPACER AND 20 BBL OF CMT TO SURFACE
Event	24	Bump Plug	3/16/2015	04:26:31	COM8	8.33	4.0	2400	123	PLUG BUMPED
Event	25	Check Floats	3/16/2015	04:36:34	USER	8.41	0.00	1626.00	126.5	10 MIN PRESSURE TEST, FLOATS HELD, 1.5 BBL FLOW BACK
Event	26	End Job	3/16/2015	04:38:30	COM8					THANK YOU FOR USING HALLIBURTON CMT

# PICEANCE ENERGY PICEANCE 28-12M 4 1/2" PRODUCTION



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

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

▼ **HALLIBURTON** | iCem® Service

Created: 2015-03-15 23:30:05, Version: 4.1.107

Edit

Customer : PICEANCE ENERGY LLC

Job Date : 3/16/2015

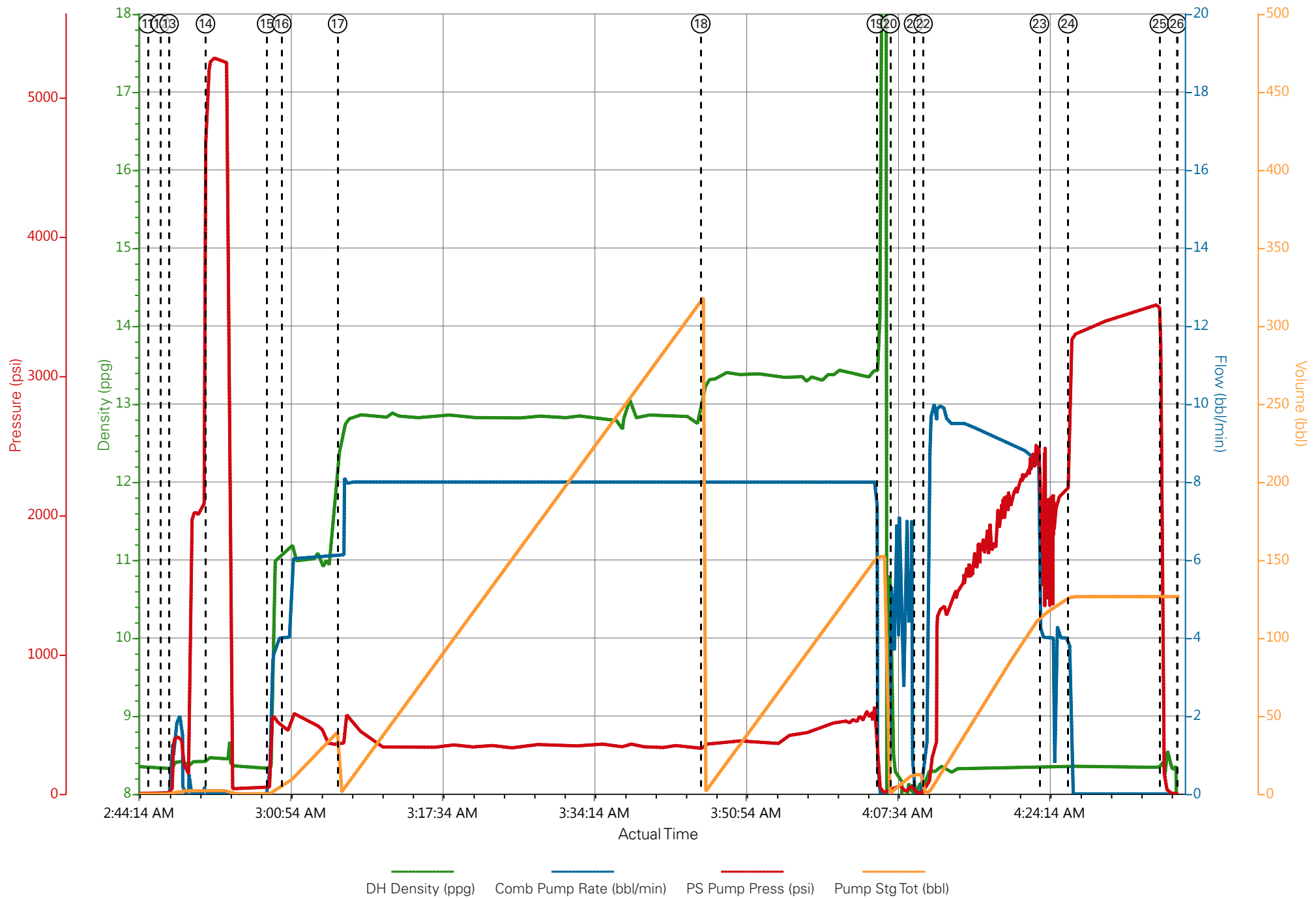
Well : PICEANCE 28-12M

Representative : MATT SETTLES

Sales Order # : 902224109

ELITE #1 : DUSTIN HYDE / ROGER LAULAINEN

# PICEANCE ENERGY PICEANCE 28-12M 4 1/2" PRODUCTION



# HALLIBURTON

## Water Analysis Report

Company: PICEANCE

Submitted by: Dustin Hyde

Attention: J.TROUT

Lease: PICEANCE

Well #: 28-12M

Date: 3/16/2015

Date Rec.: 3/16/2015

S.O.#: 902224109

Job Type: PRODUCTION

Specific Gravity	<i>MAX</i>	<b>1</b>
pH	<i>8</i>	<b>8</b>
Potassium (K)	<i>5000</i>	<b>200</b> Mg / L
Calcium (Ca)	<i>500</i>	<b>120</b> Mg / L
Iron (FE2)	<i>300</i>	<b>3</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>56</b> Deg
Total Dissolved Solids		<b>370</b> Mg / L

Respectfully: Dustin Hyde

Title: Cement 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.



<b>Sales Order #:</b> 0902224109	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 3/16/2015
<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> 05-077-10223-00
<b>Well Name:</b> PICEANCE		<b>Well Number:</b> 0080678943
<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	3/16/2015
Survey Interviewer	The survey interviewer is the person who initiated the survey.	HB43597
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	

CUSTOMER SIGNATURE

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### KEY PERFORMANCE INDICATORS

General	
<b>Survey Conducted Date</b> The date the survey was conducted	3/16/2015

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.	Deviated
<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	5
<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

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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)	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	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	97
<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