

Piceance Energy LLC - EBUS

Piceance 28-12M

**Patterson 306**

## **Post Job Summary**

# **Cement Surface**

Date Prepared: 3/17/2015  
Job Date: 3/11/2015

Submitted by: Keven Nye – Grand Junction Cement Engineer

## The Road to Excellence Starts with Safety

Sold To #: 344919	Ship To #: 3590367	Quote #:	Sales Order #: 0902215776
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: 7521			
Well Type: DIRECTIONAL GAS			
Sales Person: HALAMERICA\HB60191	Srvs Supervisor: Dustin Smith		

### Job

Formation Name	
Formation Depth (MD)	Top
Form Type	BHST
Job depth MD	1560ft
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		16	15.25	65			0	60	0	60
Casing		8.625	8.097	24	8 RD (LT&C)	J-55	0	1560	0	1560
Open Hole Section			11				60	1571	0	1571

### Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	8.625			1560	Top Plug	8.625	1	HES
Float Shoe	8.625				Bottom Plug	8.625	1	HES
Float Collar	8.625			1516.18				
Insert Float	8.625				Plug Container	8.625	1	HES
Stage Tool	8.625				Centralizers	8.625	24	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	Fresh Water	Fresh Water	40	bbl	8.33			4.0		
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	VariCem GJ5	VARICEM (TM) CEMENT	192	sack	12.3	2.45		8.0	14.17	
14.12 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	VariCem GJ5	VARICEM (TM) CEMENT	114	sack	12.8	2.18		7.0	12.11	
12.05 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	
4	Fresh Water Displacement	Fresh Water Displacement	96.4	bbl	8.3			8,2		
Cement Left In Pipe		Amount	43.92 ft			Reason		Shoe Joint		
Mix Water:		pH 7	Mix Water Chloride:			0 ppm		Mix Water Temperature:		50 °F
Cement Temperature:			Plug Displaced by:			8.33 lb/gal		Disp. Temperature:		
Plug Bumped?		Yes	Bump Pressure:			370 psi		Floats Held?		Yes
Cement Returns:		10 bbl	Returns Density:					Returns Temperature:		
Comment										

## 1.0 Real-Time Job Summary

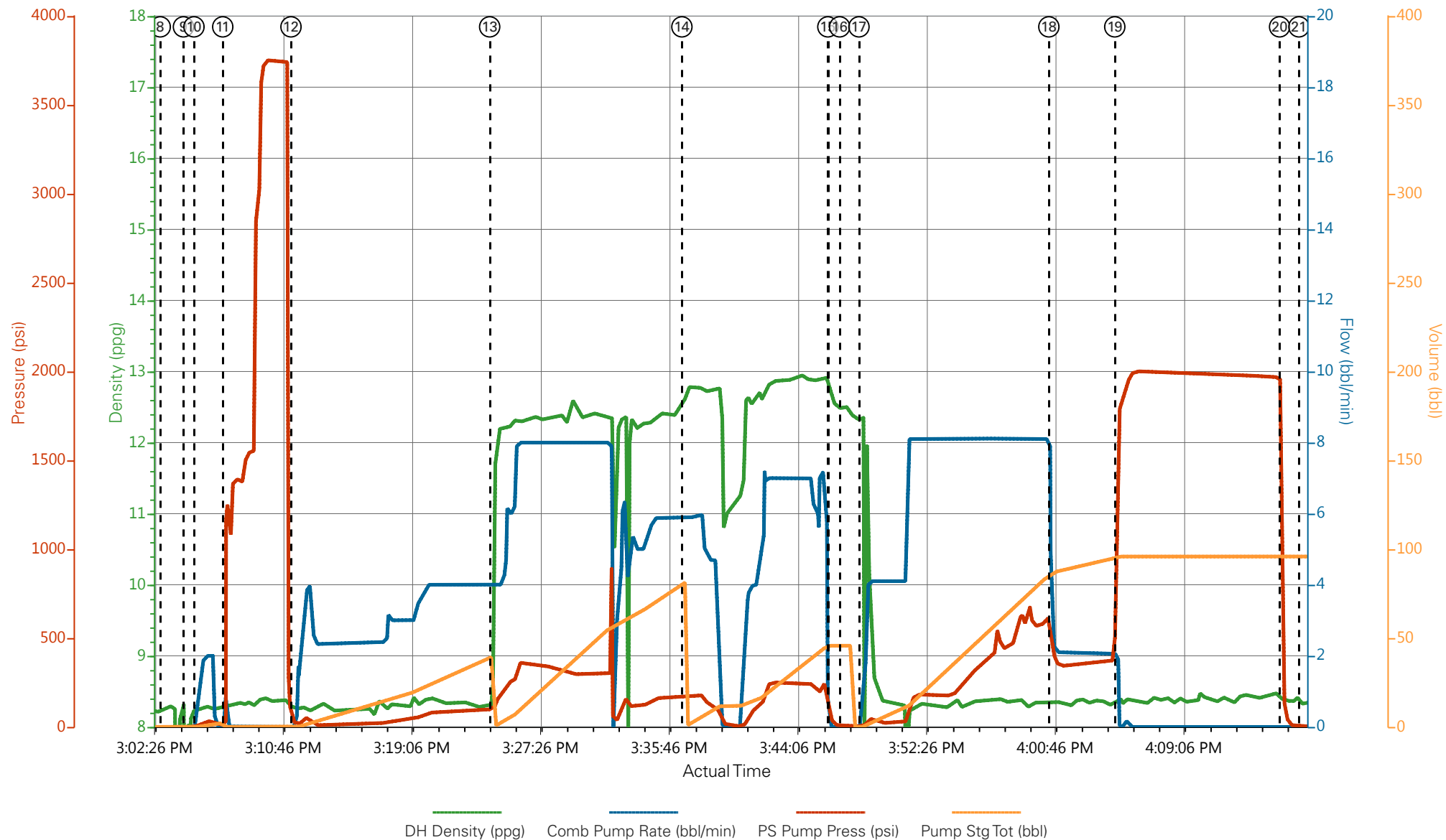
## 1.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	Call Out	3/11/2015	07:00:00	USER					ELITE # 2
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	3/11/2015	08:30:00	USER					ALL HES EMPLOYEES
Event	3	Arrive At Loc	Arrive At Loc	3/11/2015	10:00:00	USER					ARRIVED ON LOCATION 1 1/2 HOURS EARLY DIDNT START CHARGING TIME UNTIL REQUESTED ON LOCATION TIME RIG RUNNING CASING UPON HES ARRIVAL
Event	4	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	3/11/2015	10:15:00	USER					AL HES EMPLOYEES
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	3/11/2015	10:20:00	USER					ALL HES EMPLOYEES
Event	6	Rig-Up Equipment	Rig-Up Equipment	3/11/2015	10:30:00	USER					1 HT-400 PUMP TRUCK ( ELITE #2) 1 660 BULK TRUCK 1 BODY LOAD BULK TRUCK 1 F-550 PICKUP
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	3/11/2015	14:50:00	USER					ALL HES EMPLOYEES AND RIG CREW RIG CIRCULATED @ 10 BPM PRIOR TO THE JOB
Event	8	Start Job	Start Job	3/11/2015	15:03:00	USER					TD: 1571 TP: 1560.1 SJ: 43.92 CSG: 8 5/8 24# J-55 OH: 11 MUD WT: 9.4 PPG
Event	9	Drop Bottom Plug	Drop Bottom Plug	3/11/2015	15:04:30	USER					PLUG AWAY NO PROBLEMS
Event	10	Prime Pumps	Prime Lines	3/11/2015	15:05:11	COM5	8.33	2.0	32	2.00	PRIME LINES WITH 2 BBLs FRESH WATER

Event	11	Test Lines	Test Lines	3/11/2015	15:07:02	COM5	8.33	0.0	3754	2.0	PRESSURE TEST OK
Event	12	Pump Spacer 1	Pump Fresh Water Spacer	3/11/2015	15:11:28	COM5	8.33	4.0	100.0	40.0	PUMP 40 BBL FRESH WATER SPACER
Event	13	Pump Lead Cement	Pump Lead Cement	3/11/2015	15:24:20	COM5	12.3	8.0	345.0	83.7	192 SKS 12.3 PPG 2.45 YIELD 14.17 GAL/SK LEAD CEMENT WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES PUMP HIT THE KICKOUTS WHEN THE BOTTOM PLUG LANDED ON THE FLOATS COLLAR, RESET KICKOUTS AND RESUMED PUMPING
Event	14	Pump Tail Cement	Pump Tail Cement	3/11/2015	15:36:47	COM5	12.8	7.0	270.0	44.2	114 SKS 12.8 PPG 2.18 YIELD 12.11 GAL/SK TAIL CEMENT WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES HAD TO SHUTDOWN ON TAIL CEMENT DUE TO INSUFFICIENT CEMENT DELIVERY, RESOLVED THE ISSUE AND RETURNED TO PUMPING
Event	15	Shutdown	Shutdown	3/11/2015	15:46:14	USER					
Event	16	Drop Top Plug	Drop Top Plug	3/11/2015	15:47:00	USER					PLUG AWAY NO PROBLEMS WASHED UP ON TOP OF THE PLUG AS PER COMPANY REP
Event	17	Pump Displacement	Pump Displacement	3/11/2015	15:48:15	COM5	8.33	8.0	590.0	96.4	FRESH WATER DISPLACEMENT
Event	18	Slow Rate	Slow Rate	3/11/2015	16:00:32	USER	8.33	2.0	370.0	86.4	SLOW RATE TO BUMP PLUG
Event	19	Bump Plug	Bump Plug	3/11/2015	16:04:49	COM5	8.33	2.0	2000.0	96.4	PSI BEFORE BUMPING PLUG AT 370 BUMPED UP TO 2000 PSI AS PER COMPANY REP AND HELD FOR 10 MIN
Event	20	Other	Check Floats	3/11/2015	16:15:29	COM5					FLOATS HELD 1 BBL BACK

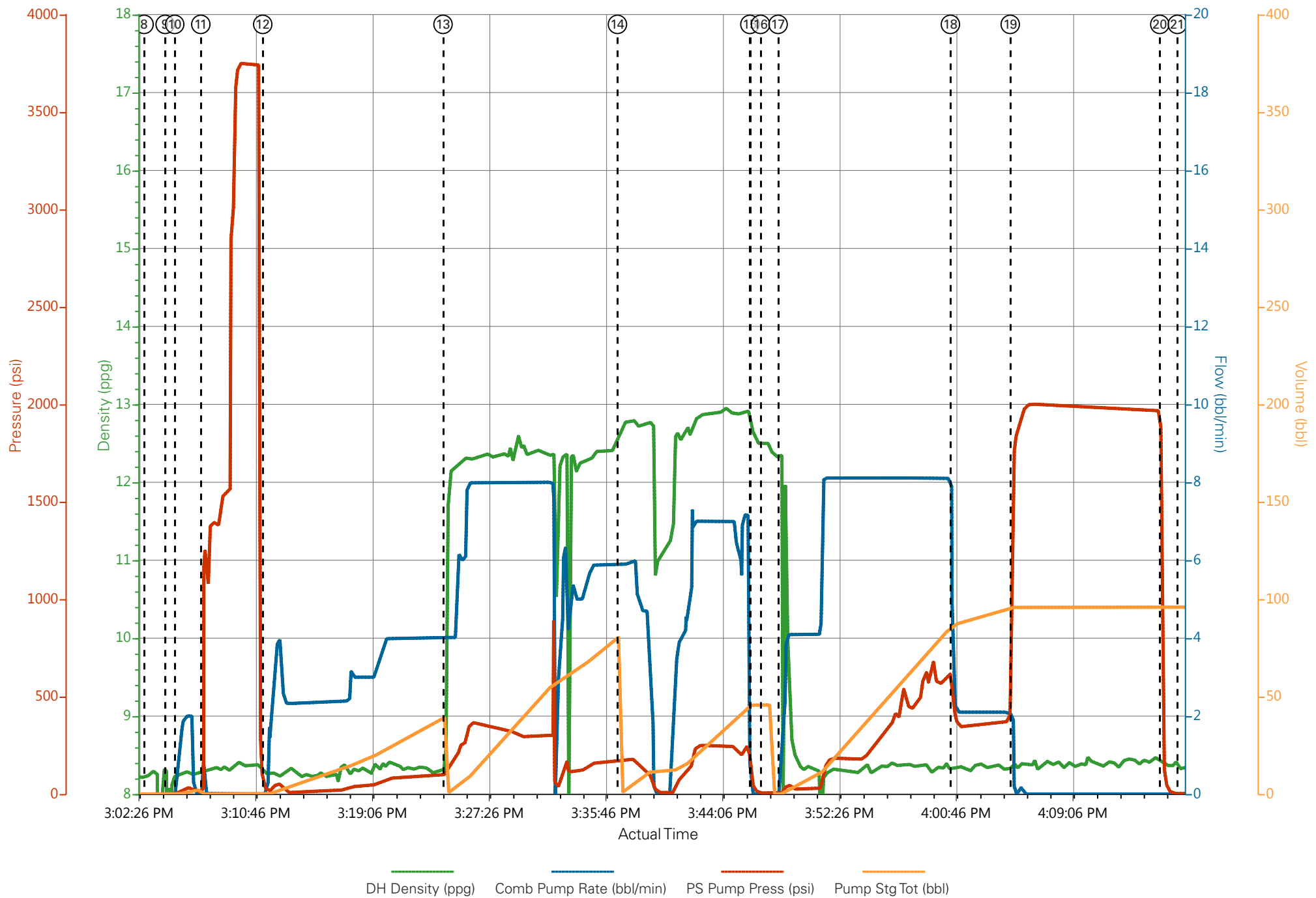
							TO DISPLACEMENT TANKS
Event	21	End Job	End Job	3/11/2015	16:16:44	COM5	GOOD RETURNS THROUGH OUT JOB PIPE STATIC THROUGH OUT JOB RETURNED 10 BBLS CEMENT TO SURFACE
Event	22	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	3/11/2015	16:20:00	USER	ALL HES EMPLOYEES
Event	23	Rig-Down Equipment	Rig-Down Equipment	3/11/2015	16:30:00	USER	
Event	24	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	3/11/2015	17:25:00	USER	ALL HES EMPLOYEES
Event	25	Crew Leave Location	Crew Leave Location	3/11/2015	17:30:00	USER	THANK YOU FOR USING HALLIBURTON CEMENT DUSTIN SMITH AND CREW

# PICEANCE ENERGY - PICEANCE 28-12M - 8 5/8 SURFACE



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

# PICEANCE ENERGY - PICEANCE 28-12M - 8 5/8 SURFACE





# HALLIBURTON

## Water Analysis Report

Company: PICEANCE ENERGY

Submitted by: DUSTIN SMITH

Attention:

Lease PICEANCE

Well # 28-12M

Date: 3/11/2015

Date Rec.:

S.O.# 902215776

Job Type: SURFACE

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>50</b> Deg
Total Dissolved Solids		<b>370</b> Mg / L

Respectfully: DUSTIN SMITH

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

<b>Sales Order #:</b> 0902215776	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 3/11/2015
<b>Customer:</b> PICEANCE ENERGY LLC - EBUS		<b>Job Type (BOM):</b> CMT SURFACE CASING BOM
<b>Customer Representative:</b>		<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	3/11/2015
Survey Interviewer	The survey interviewer is the person who initiated the survey.	HX37079
Customer Participation	Did the customer participate in this survey? (Y/N)	No
Customer Representative	Enter the Customer representative name	
HSE	Was our HSE performance satisfactory? Circle Y or N	
Equipment	Were you satisfied with our Equipment? Circle Y or N	
Personnel	Were you satisfied with our people? Circle Y or N	
Customer Comment	Customer's Comment	

<b>CUSTOMER SIGNATURE</b>
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### KEY PERFORMANCE INDICATORS

General	
<b>Survey Conducted Date</b>	3/11/2015
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>	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>	Yes
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>	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?	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