

Piceance Energy LLC - EBUS

Piceance Federal 28-05M

**Patterson 306**

## **Post Job Summary**

# **Cement Surface Casing**

Date Prepared: 8/24/2015

Job Date: 8/19/2015

Submitted by: Patrick Ealey – Grand Junction Cement Engineer

*The Road to Excellence Starts with Safety*

Sold To #: 344919	Ship To #: 3673008	Quote #:	Sales Order #: 0902672080
Customer: PICEANCE ENERGY LLC - EBUS	Customer Rep: MATT		
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: 7521			
Well Type: DIRECTIONAL GAS			
Sales Person: HALAMERICA\HX41066	Srv Supervisor: Craig Kukus		
Job			

Formation Name	
Formation Depth (MD)	Top
Form Type	BHST
Job depth MD	1563ft
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		
Casing		8.625	8.097	24			0	1563		0
Open Hole Section			11				60	1573		0

Tools and Accessories									
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make
Guide Shoe	8.625	1		1563		Top Plug	8.625	1	HES
Float Shoe	8.625					Bottom Plug	8.625	1	HES
Float Collar	8.625	1		1516		SSR plug set	8.625		HES
Insert Float	8.625					Plug Container	8.625	1	HES
Stage Tool	8.625					Centralizers	8.625		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	Fresh Water	Fresh Water	40	bbl	8.33			6		
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		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/min	Total Mix Fluid Gal	
3	VariCem GJ5	VARICEM (TM) CEMENT	120	sack	12.8	2.18		8	12.11	
12.05 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/min	Total Mix Fluid Gal	
4	Fresh Water Displacement	Fresh Water Displacement	96.4	bbl	8.3			8		
Cement Left In Pipe		Amount	47 ft		Reason			Shoe Joint		
Mix Water:		pH ##	Mix Water Chloride: ## ppm			Mix Water Temperature: ## °F °C				
Cement Temperature:		## °F °C		Plug Displaced by:		8.33 lb/gal		Disp. Temperature: ## °F °C		
Plug Bumped?		Yes		Bump Pressure:		1070 psi MPa		Floats Held? Yes		
Cement Returns:		23 bbl		Returns Density:		## lb/gal kg/m <sup>3</sup>		Returns Temperature: ## °F °C		
Comment										

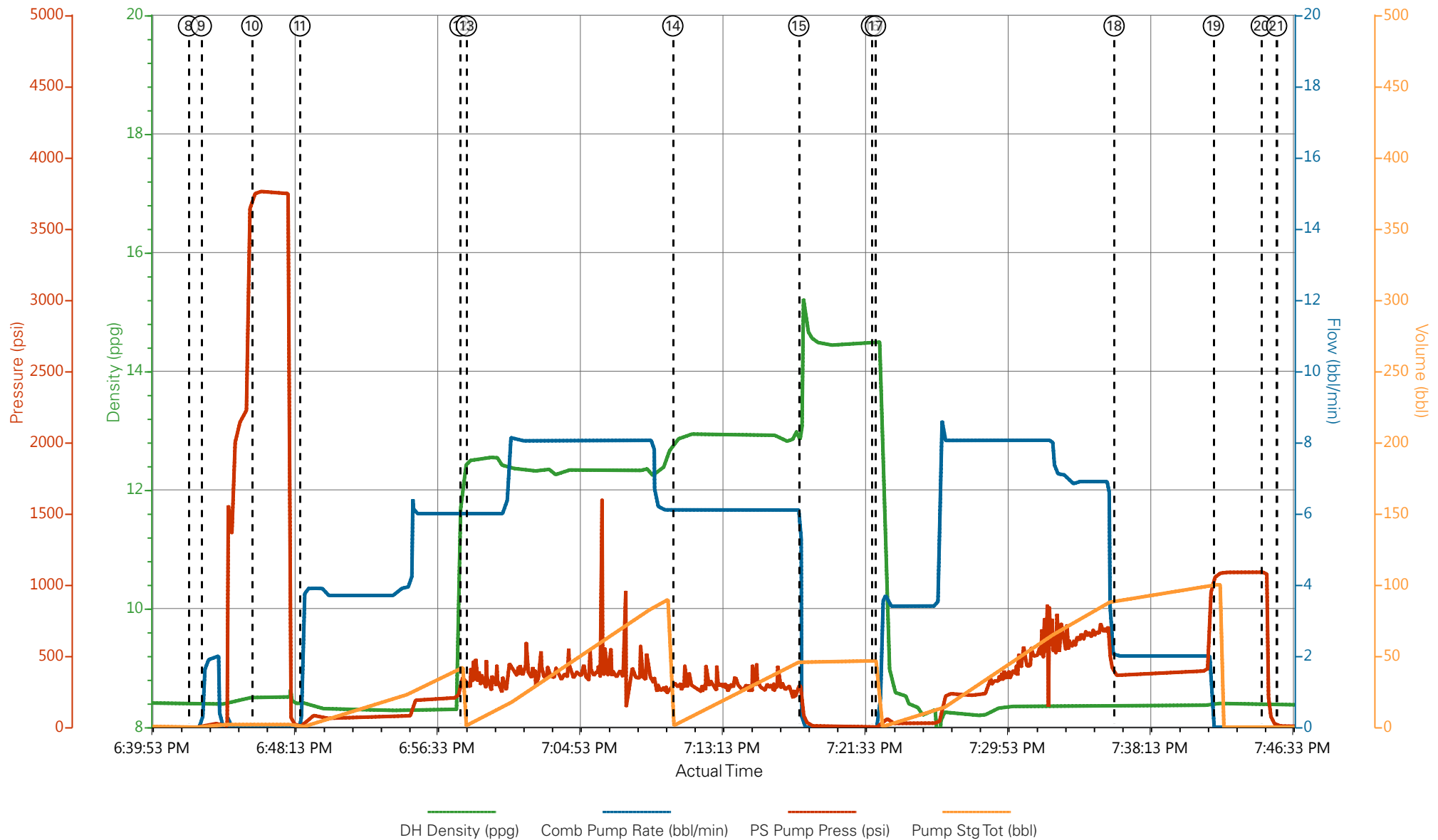
## 1.0 Real-Time Job Summary

## 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	8/19/2015	11:00:00	USER					CREW CALL OUT
Event	2	Depart from Service Center or Other Site	8/19/2015	13:20:00	USER					DEPART SERVICE CENTER SAFETY MEETING ALL HES CREW PRESENT
Event	3	Arrive At Loc	8/19/2015	15:45:00	USER					ARRIVE AT LOC / RIG RUNNING CSG / HES EQUIP ON LOC: 1 EA CMT PUMP UNIT 1 EA 660 BULK UNIT 1 EA BODY LOAD BULK UNIT 1 EA SERVICE PICK UP UNIT
Event	4	Assessment Of Location Safety Meeting	8/19/2015	15:50:00	USER					ASSESMENT WALK THRU OF LOC ALL HES CREW PRESENT
Event	5	Pre-Rig Up Safety Meeting	8/19/2015	15:55:00	USER					PRE-RIG UP SAFETY MEETING ALL HES CREW PRESENT
Event	6	Rig-Up Equipment	8/19/2015	16:10:00	USER					RIG UP IRON TO STAND PIPE / RIG UP SUCTION HOSES TO FRESH WATER UP RIGHT / RIG UP BULK EQUIP.
Event	7	Pre-Job Safety Meeting	8/19/2015	18:30:00	USER	8.34	0.00	-3.00	0.0	PRE-JOB SAFETY MEETING ALL RIG PERSONEL AND HES CREW PRESENT
Event	8	Start Job	8/19/2015	18:42:12	COM6	8.34	0.00	0.00	0.0	START JOB: TD 1573 FT TP 1563 FT SJT 46.61 FT OH 11.0 IN CSG 8 5/8 IN 24# J-55 MUD 9.2#
Event	9	Prime Pumps	8/19/2015	18:42:57	COM6	8.34	2.0	37.0	2.0	PRIME LINES WITH H2O 2 BBLS
Event	10	Test Lines	8/19/2015	18:45:54	COM6	8.34	0.00	3751.00	0.1	PRESSURE TEST LINES 5 TH GEAR STALL OUT AT 2100 PSI TEST 3761 PSI TEST GOOD

Event	11	Pump Spacer 1	8/19/2015	18:48:43	COM6	8.34	6.0	209	40.0	PUMP 40 BBLS H2O AHEAD
Event	12	Pump Lead Cement	8/19/2015	18:58:04	COM6	12.33	8.0	405.0	84.0	PUMP LEAD CMT 192 SKS AT 12.3 PPG 2.46 Y 14.17 GAL/SKS AND HAVE GOOD RETURNS
Event	13	Check Weight	8/19/2015	18:58:27	COM6	12.3	6.00	322.00	2.4	CHECK CMT WT
Event	14	Pump Tail Cement	8/19/2015	19:10:30	COM6	12.81	6.10	286.00	46.4	PUMP TAIL CMT 120 SKS AT 12.8 PPG 2.18 Y 12.11 GAL/SKS RETURNS GOOD
Event	15	Shutdown	8/19/2015	19:17:52	USER	12.81	0.00	270.0	46.4	SHUT DOWN END CEMENT / READY TUB TO WASH UP ON TOP OF PLUG
Event	16	Drop Top Plug	8/19/2015	19:22:07	COM6	8.34	0.00	0.0	0.0	DROP TOP PLUG / PLUG AWAY
Event	17	Pump Displacement	8/19/2015	19:22:21	COM6	8.34	8.0	700.0	86.0	PUMP H2O DISPLACEMENT
Event	18	Slow Rate	8/19/2015	19:36:17	USER	8.36	2.00	371.00	89.0	SLOW RATE 10 BBLS TO 2 BLM
Event	19	Bump Plug	8/19/2015	19:42:05	COM6	8.36	0.00	1070.00	96.4	PLUG LANDED AT 400 PSI BUMP TO 1070 PSI
Event	20	Check Floats	8/19/2015	19:44:53	USER	8.36	0.00	1088.00	0.0	CHECK FLOATS / FLOATS HELD GOT BACK 1/2 BBL TO TANKS
Event	21	End Job	8/19/2015	19:45:47	COM6					END JOB / RETURNS THRU OUT THE JOB / CMT TO SURFACE TOTAL 23 BBLS TO SURFACE
Event	22	Pre-Rig Down Safety Meeting	8/19/2015	19:50:00	USER					PRE-RIG DOWN SAFETY MEETING ALL HES CREW PRESENT
Event	23	Rig-Down Equipment	8/19/2015	19:55:00	USER					RIG DOWN FLOOR AND WASH UP AND RIG DOWN GROUND IRON
Event	24	Depart Location Safety Meeting	8/19/2015	21:45:00	USER					SAFETY MEETING DEPARTING LOC ALL HES CREW PRESENT
Event	25	Comment	8/19/2015	21:50:00	USER					THANK YOU FOR USING HALLIBURTON CEMENTING SERVICES AND THE CREW OF CRAIG KUKUS

# PICEANCE ENERGY SURFACE CMT JOB PICEANCE FED 28-05M PATT 306



- |  |                          |                    |                     |                                   |
|--|--------------------------|--------------------|---------------------|-----------------------------------|
| ① Call Out                                 | ⑥ Rig-Up Equipment       | ⑪ Pump Spacer 1    | ⑯ Drop Top Plug     | 21 End Job                        |
| ② Depart from Service Center or Other Site | ⑦ Pre-Job Safety Meeting | ⑫ Pump Lead Cement | ⑰ Pump Displacement | 22 Pre-Rig Down Safety Meeting    |
| ③ Arrive At Loc                            | ⑧ Start Job              | ⑬ Check weight     | ⑱ Slow Rate         | 23 Rig-Down Equipment             |
| ④ Assessment Of Location Safety Meeting    | ⑨ Prime Pumps            | ⑭ Pump Tail Cement | ⑲ Bump Plug         | 24 Depart Location Safety Meeting |
| ⑤ Pre-Rig Up Safety Meeting                | ⑩ Test Lines             | ⑮ Shutdown         | 20 Check Floats     | 25 Comment                        |

▼ **HALLIBURTON** | iCem® Service

Created: 2015-08-19 16:27:54, Version: 4.1.107

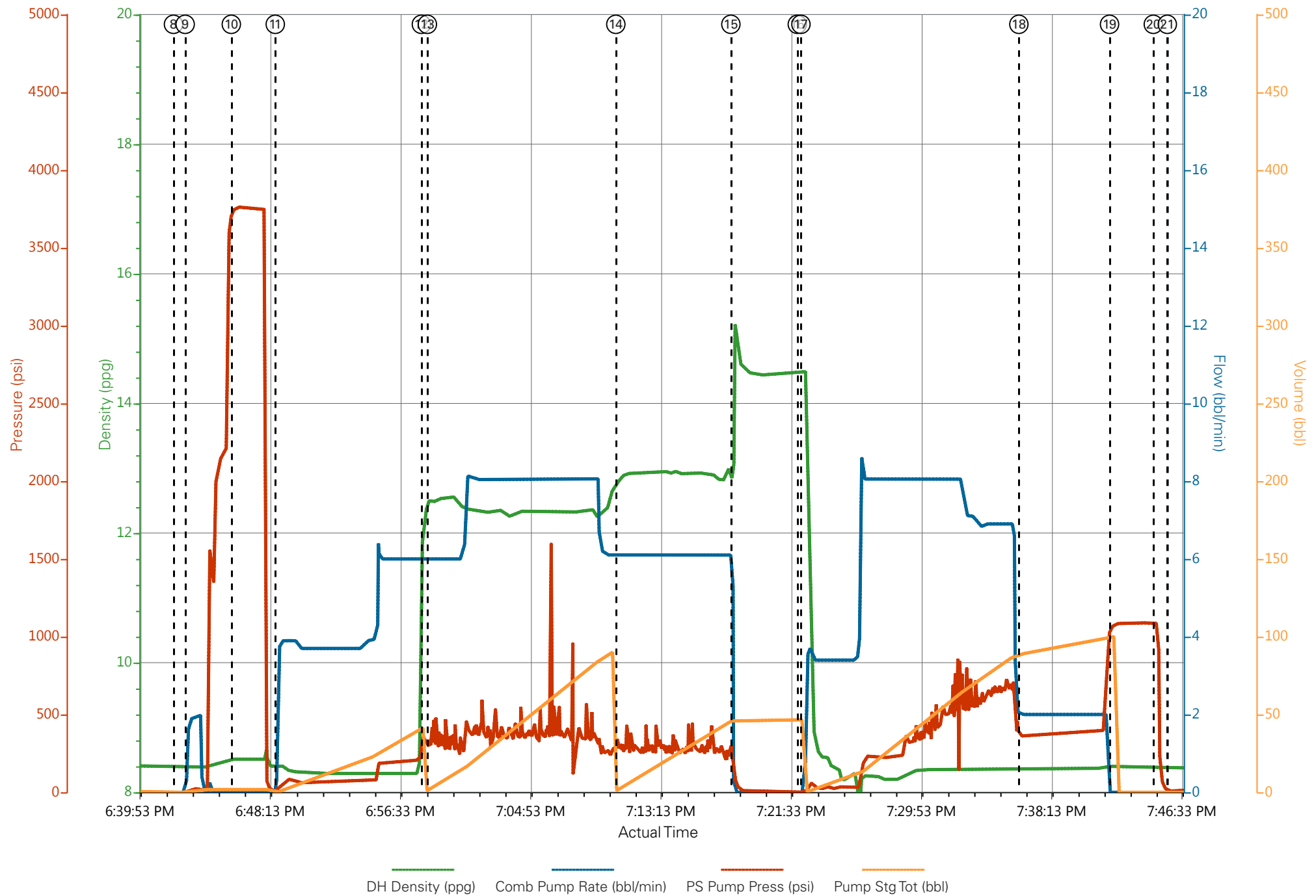
Edit

Customer : PICEANCE ENERGY LLC  
Representative : CRAIG KUKUS

Job Date : 8/19/2015 4:31:17 PM  
Sales Order # : 902672080

Well : 28-05M  
ELITE 8 / OPERATOR : CLIFF SPARKS

# PICEANCE ENERGY SURFACE CMT JOB PICEANCE FED 28-05M PATT 306



# HALLIBURTON

## Water Analysis Report

Company: PICEANCE  
Submitted by: CRAIG KUKUS  
Attention: \_\_\_\_\_  
Lease: PICEANCE  
Well #: 28-05M

Date: 8/19/2015  
Date Rec.: 8/19/2015  
S.O.#: 902672080  
Job Type: SURFACE

Specific Gravity	MAX	0
pH	8	7
Potassium (K)	5000	0 Mg / L
HARDNESS	500	425 Mg / L
Iron (FE2)	300	0 Mg / L
Chlorides (Cl)	3000	0 Mg / L
Sulfates (SO <sub>4</sub> )	1500	<200 Mg / L
Chlorine (Cl <sub>2</sub> )		0 Mg / L
Temp	40-80	70 Deg
Total Dissolved Solids		520 Mg / L

Respectfully: CRAIG KUKUS

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> 0902672080	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 8/19/2015
<b>Customer:</b> PICEANCE ENERGY LLC - EBUS		<b>Job Type (BOM):</b> CMT SURFACE CASING BOM
<b>Customer Representative:</b> MATT		<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	8/19/2015
Survey Interviewer	The survey interviewer is the person who initiated the survey.	HX19742
Customer Participation	Did the customer participate in this survey? (Y/N)	Yes
Customer Representative	Enter the Customer representative name	MATT
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> The date the survey was conducted	8/19/2015

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.	Vertical
<b>Total Operating Time (hours)</b> Total Operating Hours Including Rig-up, Pumping, Rig-down. Enter in decimal format.	4
<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.	2
<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	6
<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	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