

Piceance Energy LLC - EBUS

Piceance 28-09W

**Patterson 306**

## **Post Job Summary**

# **Cement Surface Casing**

Date Prepared: 8/12/2015

Job Date: 8/02/2015

Submitted by: Patrick Ealey – Grand Junction Cement Engineer

*The Road to Excellence Starts with Safety*

Sold To #: 344919	Ship To #: 3123921	Quote #:	Sales Order #: 0902633836
Customer: PICEANCE ENERGY LLC - EBUS		Customer Rep: ROGER	
Well Name: PICEANCE	Well #: 28-09W	API/UWI #: 05-077-09777-00	
Field: VEGA	City (SAP): COLBRAN	County/Parish: MESA	State: COLORADO
Legal Description: SW NW-28-9S-93W-1597FNL-1230FWL			
Contractor: PATTERSON-UTI ENERGY		Rig/Platform Name/Num: PATTERSON 306	
Job BOM: 7521			
Well Type: DIRECTIONAL GAS			
Sales Person: HALAMERICA\HX41066		Srcv Supervisor: Craig Kukus	
<b>Job</b>			

Formation Name	
Formation Depth (MD)	Top Bottom
Form Type	BHST
Job depth MD	1570ft Job Depth TVD 1570 FT
Water Depth	Wk Ht Above Floor 4 FT
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		
Casing		8.625	8.097	24			0	1570		0
Open Hole Section			11				60	1590		0

Tools and Accessories									
Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make	
Guide Shoe	8.625	1	HES	1570	Top Plug	8.625	1	HES	
Float Shoe	8.625				Bottom Plug	8.625	1	HES	
Float Collar	8.625	1	HES	1523	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			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		7	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		7	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/mi n	Total Mix Fluid Gal
4	Fresh Water Displacement	Fresh Water Displacement	96.8	bbl	8.3			8	
<b>Cement Left In Pipe</b>	<b>Amount</b>	46 ft			<b>Reason</b>			Shoe Joint	
<b>Mix Water:</b>	pH ##	<b>Mix Water Chloride:</b> ## ppm			<b>Mix Water Temperature:</b> ## °F °C				
<b>Cement Temperature:</b>	## °F °C	<b>Plug Displaced by:</b> 8.33 lb/gal			<b>Disp. Temperature:</b> ## °F °C				
<b>Plug Bumped?</b>	Yes	<b>Bump Pressure:</b> 2277 psi			<b>Floats Held?</b> Yes				
<b>Cement Returns:</b>	21 bbl	<b>Returns Density:</b> ## lb/gal			<b>Returns Temperature:</b> ## °F °C				
<b>Comment</b>									

## 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)	Recirc Density (ppg)	Comments
Event	1	Call Out	8/1/2015	20:30:00	USER						CREW CALL OUT
Event	2	Depart from Service Center or Other Site	8/1/2015	23:25:00	USER						DEPART SERVICE CENTER SAFETY MEETING ALL HES CREW PRESENT
Event	3	Arrive At Loc	8/2/2015	01:00:00	USER						ARRIVE EARLY AT LOC / RIG RUNNING CSG / HES EQUIP ON LOC: 1 EA CMT PUMP UNIT 1 EA 660 BLUK UNIT 1 EA IRON TRUCK UNIT WITH HOSES 1 EA SERVICE PICK UP UNIT
Event	4	Assessment Of Location Safety Meeting	8/2/2015	01:15:00	USER						ASSESMENT OF LOC WALK THRU ALL HES CREW PRESENT
Event	5	Pre-Rig Up Safety Meeting	8/2/2015	01:20:00	USER						PRE-RIG UPSAFETY MEETING ALL HES CREW PRESENT
Event	6	Rig-Up Equipment	8/2/2015	01:25:00	USER						RIG UP IRON TO STAND PIPE AND CLEAN UP LINE TO CELLAR / RIG UP SUCTION HOSES TO FRESH WATER AND RIG UP BLUK EQUIP.
Event	7	Pre-Job Safety Meeting	8/2/2015	02:07:10	USER	0.00	0.00	0.0	0.0	8.28	PRE-JOB SAFET MEETING ALL RIG PERSONEL AND HES CREW PRESENT.
Event	8	Start Job	8/2/2015	04:33:26	COM6	0.00	0.00	0.0	0.0	8.28	START JOB: TD 1590 FT TP 1570 FT SJT 46.62 FT OH 11.0 IN CSG 8 5/8 IN 24# J-55
Event	9	Prime Pumps	8/2/2015	04:42:01	USER	8.34	2.0	69.0	3.0	8.28	DROP BOTTOM PLUG / PRIME LINES
Event	10	Test Lines	8/2/2015	04:46:26	COM6	8.34	0.00	3482.00	0.1	8.34	PRESSURE TEST LINES STALL OUT AT 1750 PSI TEST TO 3500 PSI
Event	11	Pump Spacer 1	8/2/2015	04:49:24	COM6	8.34	4.0	230.0	40.0	8.20	PUMP H2O SPACER 40 BBLS

Event	12	Check Weight	8/2/2015	04:56:49	COM6	0.00	0.0	230.0	15.1	12.36	CHECK CMT WT ON RE-CIR
Event	13	Start Job	8/2/2015	05:02:53	COM6	8.34	4.0	258.0	21.0	8.34	HAD TO RESTART PUMP COMPUTOR SYSTEM DOWN HOLE NOT READING HAD TO RUN ON RE- CIR DENSITY THRU OUT THE JOB
Event	14	Check Weight	8/2/2015	05:03:53	COM6	0.00	0.0	258.00	40.0	12.37	CHECK CMT WT
Event	15	Pump Lead Cement	8/2/2015	05:10:44	COM6	12.37	7.0	520.0	84.0	12.37	PUMP 192 SKS LEAD CEMENT AT 12.3 PPG 2.46Y 14.17 GAL/SKS
Event	16	Check Weight	8/2/2015	05:16:43	COM6	12.37	7.10	406.00	32.3	12.36	CHECK CMT WT
Event	17	Pump Tail Cement	8/2/2015	05:25:15	COM6	12.86	7.00	398.0	46.4	12.86	PUMP 120 SKS TAIL CMT AT 12.8 PPG 2.18 Y 12.11 GAL/SKS
Event	18	Check Weight	8/2/2015	05:25:43	COM6	12.86	7.00	409.00	3.3	12.82	CHECK CMT WT
Event	19	Check Weight	8/2/2015	05:29:33	COM6	12.86	7.0	343.0	38.0	12.86	CHECK CMT WT
Event	20	Shutdown	8/2/2015	05:31:58	USER	0.00	0.0	0.0	46.4	0.0	SHUT DOWN END CEMENT / READY TUB TO WASH UP ON TOP OF PLUG
Event	21	Drop Top Plug	8/2/2015	05:33:47	USER	0.00	0.00	0.0	0.0	0.0	DROP TOP PLUG / PLUG AWAY
Event	22	Pump Displacement	8/2/2015	05:34:23	COM6	8.34	8.0	950.0	86.0	0.0	PUMP H2O DISPLACEMENT DOWN HOLE ON ADC NOT READING WATER WEIGHT
Event	23	Slow Rate	8/2/2015	05:48:24	USER	8.34	2.0	540.0	87.3	0.0	SLOW RATE TO 2 BLM LAST 10 BBLs
Event	24	Bump Plug	8/2/2015	05:53:09	COM6	8.34	0.00	2248.00	95.6	0.0	PLUG LANDED AT 580 PSI BUMP TO 2200 PSI AND HOLD 10 MINS FOR CSG TEST
Event	25	Check Floats	8/2/2015	06:02:25	USER	8.34	0.00	2284.00	95.6	0.0	CHECK FLOATS / GOT BACK 3/4 BBL BACK TO TANKS
Event	26	End Job	8/2/2015	06:03:32	COM6						END JOB /HAD FULL RETURNS THRU OUT THE JOB / 21BBLs CMT TO SURFACE
Event	27	Pre-Rig Down Safety Meeting	8/2/2015	06:10:00	USER	0.00	0.00	0.0	0.0	0.00	PRE-RIG DOWN SAFETY MEETING ALL HES CREW PRESENT
Event	28	Rig-Down Equipment	8/2/2015	06:18:06	USER						RIG DOWN FLOOR AND WASH UP TO CELLAR / RIG

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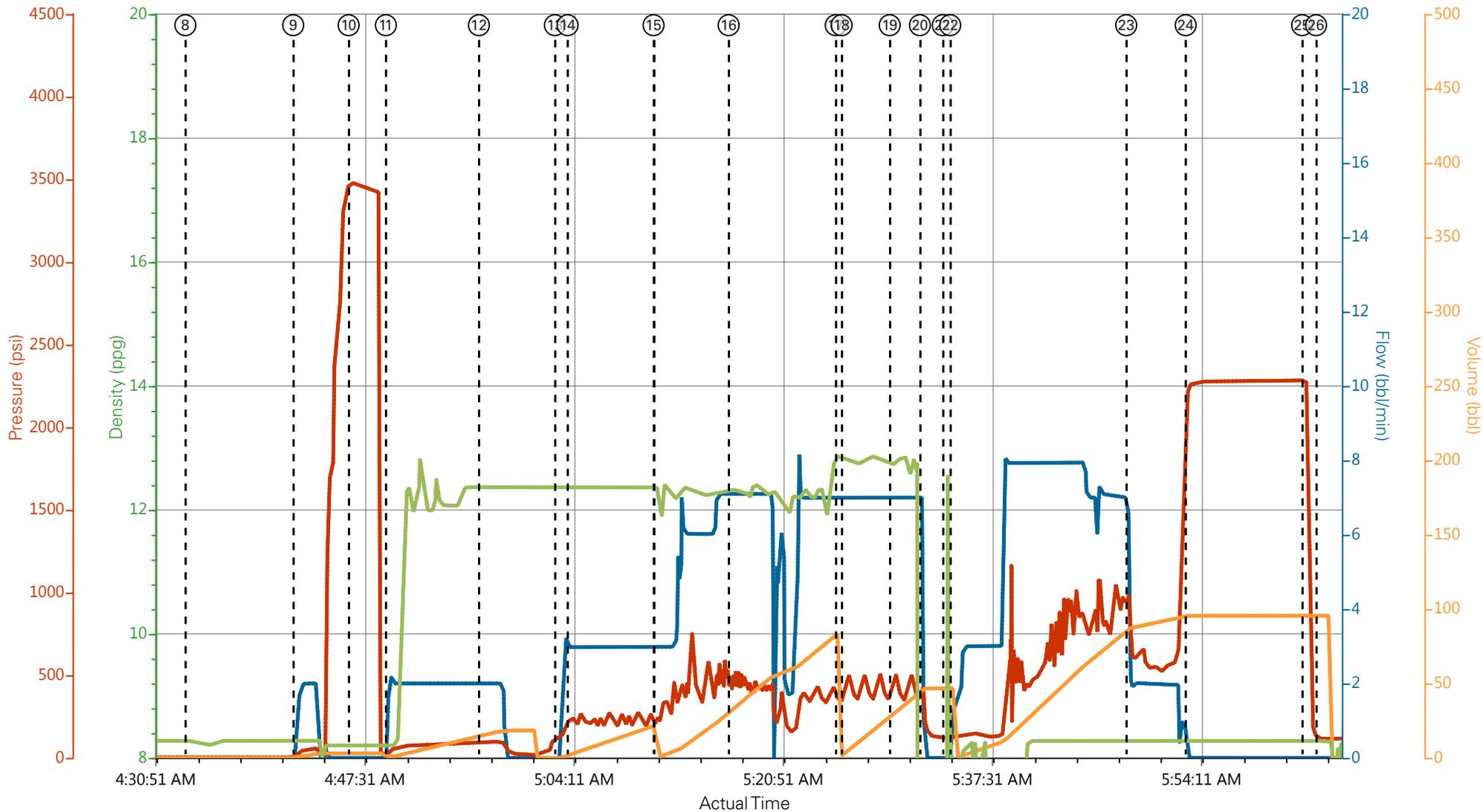
DOWN EQUIP

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Event	29	Depart Location Safety Meeting	8/2/2015	06:55:00	USER	SAFETY MEETING DEPARTING LOC ALL HES CREW PRESENT
Event	30	Comment	8/2/2015	07:00:00	USER	THANK YOU FOR USING HALLIBURTON CEMENTING SERVICES AND THE CREW OF CRAIG KUKUS

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PICEANCE ENERGY PICEANCE 28-09W SURFACE 8 5/8 PATT 306



DH Density (ppg) 0    Comb Pump Rate (bbl/min) 0    PS Pump Press (psi) 131    Pump Stg Tot (bbl) 18.6    Recirc Density (ppg) 0

- |  |                          |                    |                    |                      |                                   |
|--|--------------------------|--------------------|--------------------|----------------------|-----------------------------------|
| ① Call Out                                 | ⑥ Rig-Up Equipment       | ⑪ Pump Spacer 1    | ⑯ Check weight     | 21 Drop Top Plug     | 26 End Job                        |
| ② Depart from Service Center or Other Site | ⑦ Pre-Job Safety Meeting | ⑫ Check weight     | ⑰ Pump Tail Cement | 22 Pump Displacement | 27 Pre-Rig Down Safety Meeting    |
| ③ Arrive At Loc                            | ⑧ Start Job              | ⑬ Start Job        | ⑱ Check weight     | 23 Slow Rate         | 28 Rig-Down Equipment             |
| ④ Assessment Of Location Safety Meeting    | ⑨ Prime Lines            | ⑭ Check weight     | ⑲ Check weight     | 24 Bump Plug         | 29 Depart Location Safety Meeting |
| ⑤ Pre-Rig Up Safety Meeting                | ⑩ Test Lines             | ⑮ Pump Lead Cement | 20 Shutdown        | 25 Check Floats      | 30 Comment                        |

▼ HALLIBURTON | iCem® Service

Created: 2015-08-02 01:59:53, Version: 4.1.107

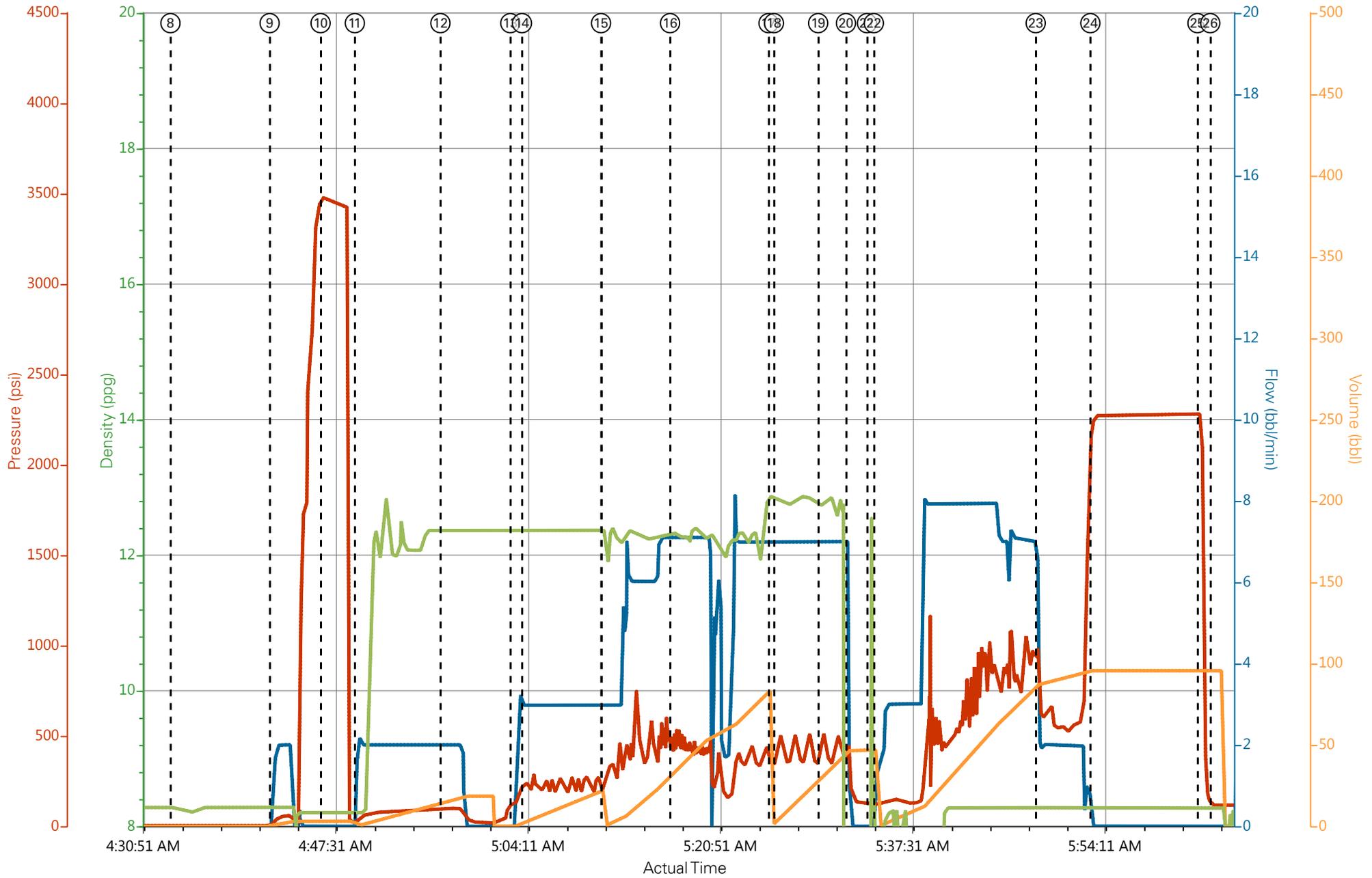
Edit

Customer : PICEANCE ENERGY LLC  
 Representative : CRAIG KUKUS

Job Date : 8/2/2015 2:03:15 AM  
 Sales Order # : 0902633836

Well : 28-09w  
 ELITE 7 / OPERATOR : ADAM ANGELO

PICEANCE ENERGY PICEANCE 28-09W SURFACE 8 5/8 PATT 306



# HALLIBURTON

## Water Analysis Report

Company: PICEANCE  
Submitted by: CRAIG KUKUS  
Attention: \_\_\_\_\_  
Lease: PICEANCE  
Well #: 28-09W

Date: 8/2/2015  
Date Rec.: 8/2/2015  
S.O.#: 902233836  
Job Type: SURFACE

Specific Gravity	<i>MAX</i>	<b>0</b>
pH	<i>8</i>	<b>7</b>
Potassium (K)	<i>5000</i>	<b>0 Mg / L</b>
HARDNESS	<i>500</i>	<b>425 Mg / L</b>
Iron (FE2)	<i>300</i>	<b>0 Mg / L</b>
Chlorides (Cl)	<i>3000</i>	<b>0 Mg / L</b>
Sulfates (SO <sub>4</sub> )	<i>1500</i>	<b>&lt;200 Mg / L</b>
Chlorine (Cl <sub>2</sub> )		<b>0 Mg / L</b>
Temp	<i>40-80</i>	<b>70 Deg</b>
Total Dissolved Solids		<b>510 Mg / L</b>

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> 0902633836	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 8/2/2015
<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> 05-077-09777-00
<b>Well Name:</b> PICEANCE		<b>Well Number:</b> 0080127657
<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	8/2/2015
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	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	

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

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### KEY PERFORMANCE INDICATORS

General	
<b>Survey Conducted Date</b>	8/2/2015
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>	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>	4
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>	2
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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<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)	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