

Piceance Energy LLC - EBUS

Gunderson 29-08E

**Patterson 306**

## **Post Job Summary**

# **Cement Surface Casing**

Date Prepared: 4/30/2015

Job Date: 4/22/2015

Submitted by: Patrick Ealey – Grand Junction Cement Engineer

*The Road to Excellence Starts with Safety*

Sold To #: 344919	Ship To #: 3123905	Quote #:	Sales Order #: 0902343413
Customer: PICEANCE ENERGY LLC - EBUS		Customer Rep: MATT EVANS	
Well Name: GUNDERSON	Well #: 29-08E	API/UWI #: 05-077-09760-00	
Field: VEGA	City (SAP): COLBRAN	County/Parish: MESA	State: COLORADO
Legal Description: SE NE-29-9S-93W-2394FNL-1150FEL			
Contractor: PATTERSON-UTI ENERGY		Rig/Platform Name/Num: PATTERSON 306	
Job BOM: 7521			
Well Type: DIRECTIONAL GAS			
Sales Person: HALAMERICA\HX41066		Srvc Supervisor: DAVID CAMPBELL	
Job			

Formation Name	
Formation Depth (MD)	Top Bottom
Form Type	BHST
Job depth MD	1550ft
Water Depth	Job Depth TVD
Perforation Depth (MD)	Wk Ht Above Floor 5 FT
	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	1540		0
Open Hole Section			11				60	1550		0

Tools and Accessories									
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make
Guide Shoe	8.625	1		1540		Top Plug	8.625	1	HES
Float Shoe	8.625					Bottom Plug	8.625	1	HES
Float Collar	8.625	1		1493.58		SSR plug set	8.625		
Insert Float	8.625					Plug Container	8.625		
Stage Tool	8.625					Centralizers	8.625		

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		
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 ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	VariCem GJ5	VARICEM (TM) CEMENT	114	sack	12.8	2.18		8	12.11
12.11 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
4	Fresh Water Displacement	Fresh Water Displacement	95	bbl	8.4			8	
Cement Left In Pipe		Amount	46.42 ft		Reason			Shoe Joint	
Mix Water:	7.5 pH	Mix Water Chloride:	0 ppm		Mix Water Temperature:		52°F		
Cement Temperature:		Plug Displaced by:	8.4 PPG		Disp. Temperature:		52°F		
Plug Bumped?	Yes	Bump Pressure:	440 PSI		Floats Held?		Yes		
Cement Returns:		Returns Density:			Returns Temperature:				

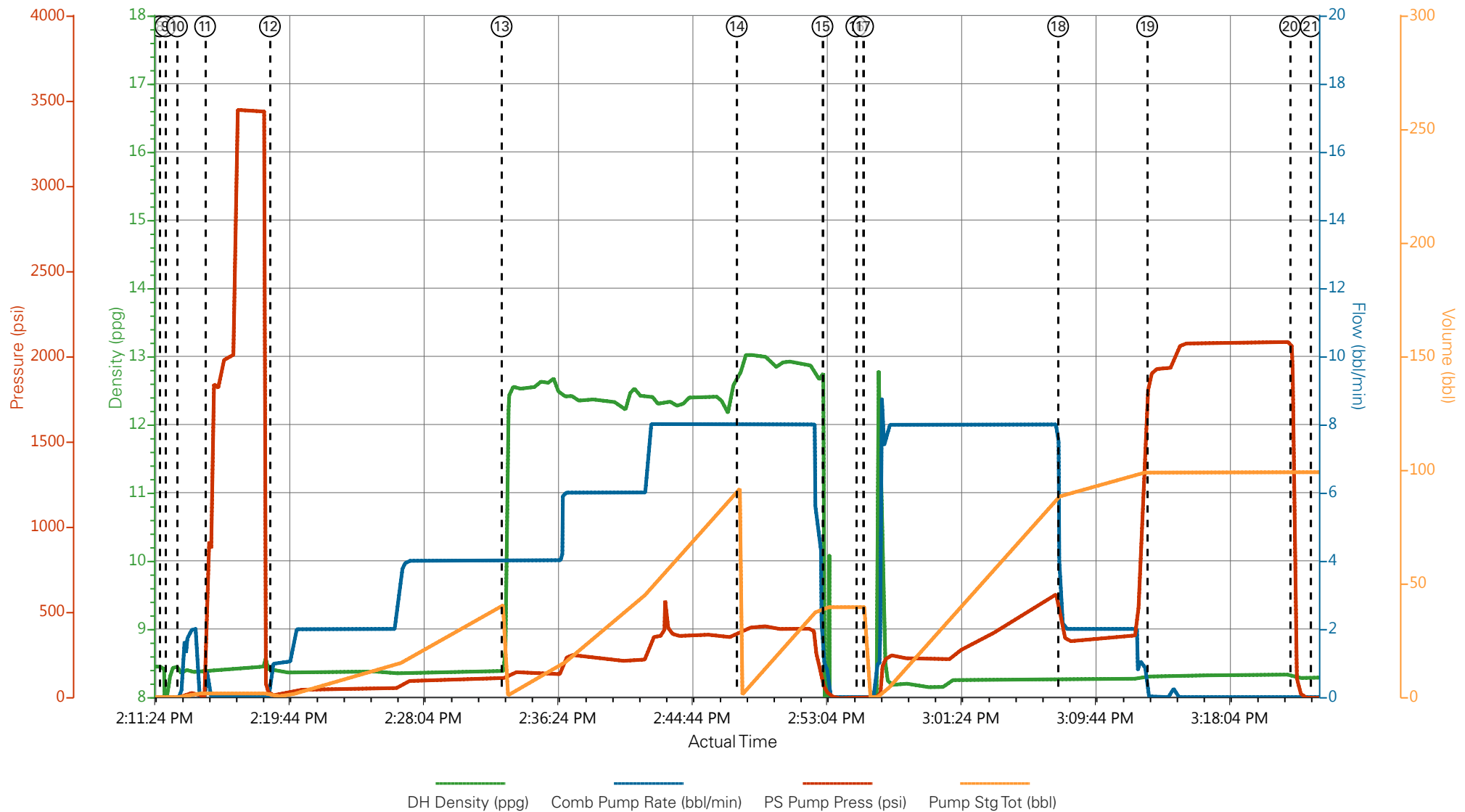
## 1.0 Real-Time Job Summary

## 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	4/22/2015	05:30:00	USER					ELITE #4
Event	2	Pre-Convoy Safety Meeting	4/22/2015	09:00:00	USER					ALL HES EMPLOYEES
Event	3	Arrive At Loc	4/22/2015	10:30:00	USER					ARRIVED ON LOCATION 1 1/2 HOURS EARLY DIDNT START CHARGING TIME UNTIL REQUESTED ON LOCATION TIME
Event	4	Assessment Of Location Safety Meeting	4/22/2015	10:45:00	USER					ALL HES EMPLOYEES
Event	5	Pre-Rig Up Safety Meeting	4/22/2015	11:00:00	USER					ALL HES EMPLOYEES
Event	6	Rig-Up Equipment	4/22/2015	11:15:00	USER					1 HT-400 PUMP TRUCK 2 660 BULK TRUCKS 1 F-550 PICKUP
Event	7	Pre-Job Safety Meeting	4/22/2015	14:00:00	USER					ALL HES EMPLOYEES AND RIG CREW RIG CIRCULATED 1 HOUR AT 10 BBL/MIN PRIOR TO THE JOB
Event	8	Start Job	4/22/2015	14:11:54	COM5					TD:1550 TP: 1540 SJ: 46.42 CSG: 8 5/8 24# J-55 OH: 11 MUD WEIGHT 9.5 PPG
Event	9	Drop Bottom Plug	4/22/2015	14:12:15	USER					PLUG AWAY NO PROBLEMS
Event	10	Prime Pumps	4/22/2015	14:12:58	COM5	8.33	2.0	27.0	2.0	PRIME LINES WITH 2 BBLs FRESH WATER
Event	11	Test Lines	4/22/2015	14:14:42	COM5	8.33	0.00	3448.0	2.0	PRESSURE TEST OK
Event	12	Pump Spacer 1	4/22/2015	14:18:44	COM5	8.33	4.0	112.0	40.0	PUMP 40 BBL FRESH WATER SPACER
Event	13	Pump Lead Cement	4/22/2015	14:33:06	COM5	12.3	8.0	380.0	84.1	192 SKS 12.3 PPG 2.46 YIELD 14.17 GAL/SK LEAD CEMENT WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES
Event	14	Pump Tail Cement	4/22/2015	14:47:41	COM5	12.8	8.0	397.0	44.2	114 SKS 12.8 PPG 2.18 YIELD 12.11 GAL/SK TAIL CEMENT WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES
Event	15	Shutdown	4/22/2015	14:53:00	USER					

Event	16	Drop Top Plug	4/22/2015	14:55:06	COM5					PLUG AWAY NO PROBLEMS
Event	17	Pump Displacement	4/22/2015	14:55:31	COM5	8.4	8.0	575.0	95.0	FRESH WATER DISPLACEMENT
Event	18	Slow Rate	4/22/2015	15:07:36	USER	8.4	2.0	343.0	85.0	SLOW RATE TO BUMP PLUG
Event	19	Bump Plug	4/22/2015	15:13:08	COM5	8.4	2.0	2084.0	95.0	PSI BEFORE BUMPING PLUG 440 BUMPED PLUG TO 2084 PSI HELD FOR 10 MIN CASING TEST AS PER COMPANY REP
Event	20	Check Floats	4/22/2015	15:22:00	USER					FLOATS HELD 1 BBL BACK TO DISPLACEMENT TANKS
Event	21	End Job	4/22/2015	15:23:16	COM5					GOOD RETURNS THROUGHOUT THE JOB PIPE WAS STATIC THROUGHOUT JOB RETURNED 15 BBLs OF CEMENT TO SURFACE
Event	22	Pre-Rig Down Safety Meeting	4/22/2015	15:40:00	USER					ALL HES EMPLOYEES
Event	23	Rig-Down Equipment	4/22/2015	16:00:00	USER					
Event	24	Pre-Convoy Safety Meeting	4/22/2015	17:00:00	USER					ALL HES EMPLOYEES
Event	25	Crew Leave Location	4/22/2015	17:30:00	USER					THANKS YOU FOR USING HALLIBURTON CEMENT DAVID CAMPBELL AND CREW

# PICEANCE ENERGY- GUNDERSON 29-08E - 8 5/8 SURFACE



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

▼ **HALLIBURTON** | iCem® Service

Created: 2015-04-22 07:20:11, Version: 4.1.107

Edit

Customer: PICEANCE ENERGY LLC - EBUS

Job Date: 4/22/2015 12:18:20 PM

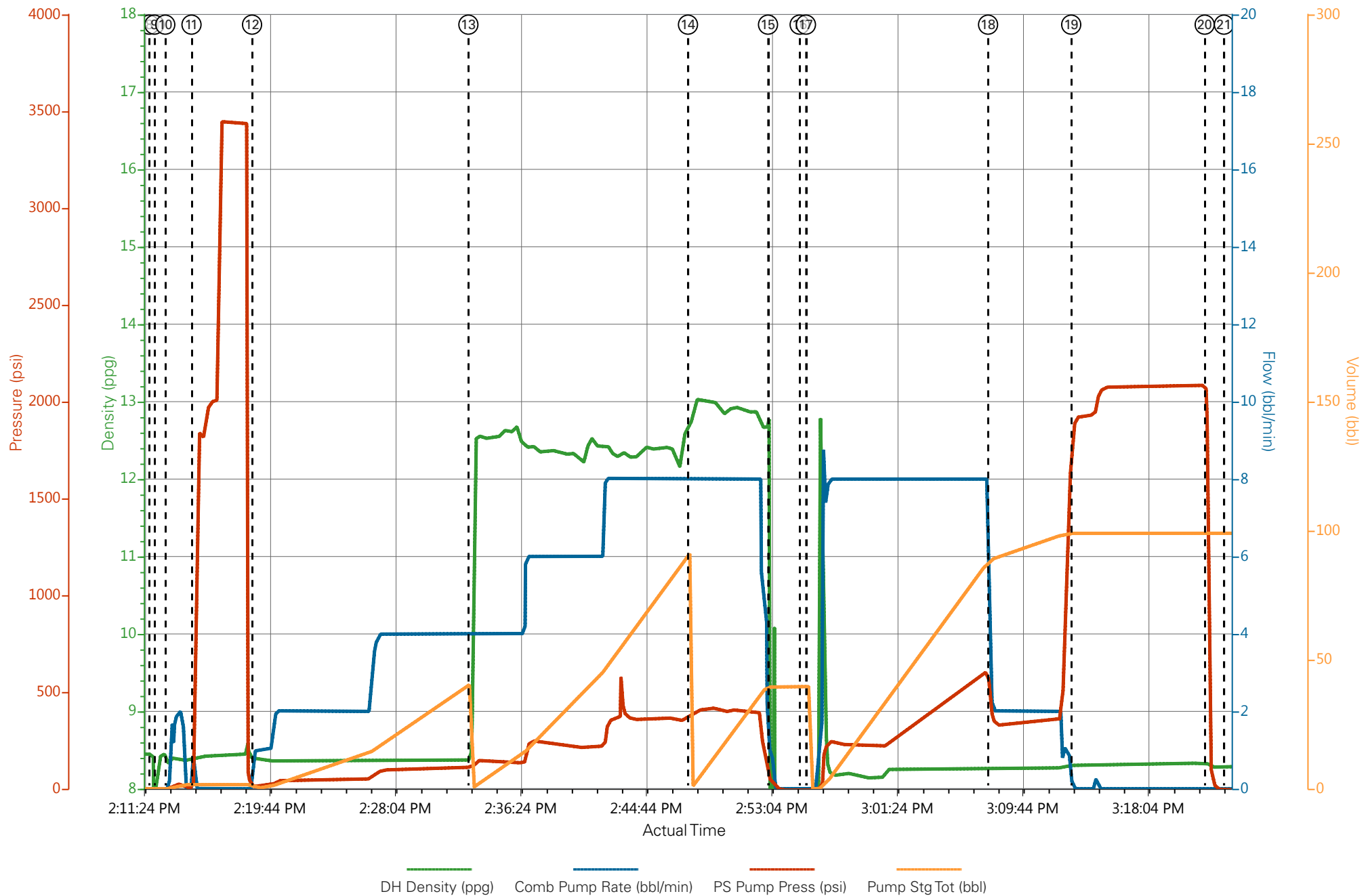
Well: GUNDERSON 29-08E

Representative: MATT EVANS

Sales Order #: 0902343413

ELITE # 4: DAVID CAMPBELL/ ANDREW  
BRENNECKE

# PICEANCE ENERGY- GUNDERSON 29-08E - 8 5/8 SURFACE



# HALLIBURTON

## Water Analysis Report

Company: PICEANCE

Submitted by: DAVID CAMPBELL

Attention: J. TROUT/C.MARTINEZ

Lease GUNDERSON

Well # 29-08E

Date: 4/22/2015

Date Rec.: 4/22/2015

S.O.# 902343413

Job Type: SURFACE

Specific Gravity	<i>MAX</i>	<b>1</b>
pH	<i>8</i>	<b>7.5</b>
Potassium (K)	<i>5000</i>	<b>300</b> Mg / L
Calcium (Ca)	<i>500</i>	<b>100</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>52</b> Deg
Total Dissolved Solids		<b>150</b> Mg / L

Respectfully: DAVID CAMPBELL

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> 0902343413	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 4/22/2015
<b>Customer:</b> PICEANCE ENERGY LLC - EBUS		<b>Job Type (BOM):</b> CMT SURFACE CASING BOM
<b>Customer Representative:</b> MATT EVANS		<b>API / UWI: (leave blank if unknown)</b> 05-077-09760-00
<b>Well Name:</b> GUNDERSON		<b>Well Number:</b> 0080127640
<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	4/22/2015
Survey Interviewer	The survey interviewer is the person who initiated the survey.	HX37079
Customer Participation	Did the customer participate in this survey? (Y/N)	Yes
Customer Representative	Enter the Customer representative name	MATT EVANS
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	4/22/2015

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?	Bottom
<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	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