

Piceance Energy LLC- EBUS

Gunderson 29-09M

**Patterson 306**

## **Post Job Summary**

# **Cement Production Casing**

Date Prepared: 06/24/2015  
Job Date: 06/21/2015

Submitted by: Evan Russell – Grand Junction Cement Engineer

The Road to Excellence Starts with Safety

Sold To #: 344919	Ship To #: 3123908	Quote #:	Sales Order #: 0902505204							
Customer: PICEANCE ENERGY LLC - EBUS		Customer Rep:								
Well Name: GUNDERSON	Well #: 29-09M	API/UWI #: 05-077-09763-00								
Field: VEGA	City (SAP): COLLBRAN	County/Parish: MESA	State: COLORADO							
Legal Description: SE NE-29-9S-93W-2406FNL-1239FEL										
Contractor: PATTERSON-UTI ENERGY		Rig/Platform Name/Num: PATTERSON 306								
Job BOM: 7523										
Well Type: DIRECTIONAL GAS										
Sales Person: HALAMERICA\HX41066		Srvc Supervisor: Cliff Sparks								
Job										
HOT 3424', TOT 4510', LEAD TO SURFACE. GREAT RETURNS THROUGHOUT JOB. GOT 40 BBLs TUNED SPACER AND 25 BBLs LEAD CEMENT TO SURFACE										
Formation Name										
Formation Depth (MD)	Top	Bottom								
Form Type	BHST									
Job depth MD	7934ft	Job Depth TVD	7934ft							
Water Depth		Wk Ht Above Floor	3ft							
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		8.625	7.921	32			0	1567	0	1567
Casing		4.5	4	11.6	LTC	L-80	0	7934	0	7934
Open Hole Section			8.875				1567	7944	1567	7944
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make		
Guide Shoe	4.5	1		7934	Top Plug	4.5	1	HES		
Float Shoe	4.5				Bottom Plug	4.5	1	HES		
Float Collar	4.5	1		7843.8	SSR plug set	4.5				
Insert Float	4.5				Plug Container	4.5				
Stage Tool	4.5				Centralizers	4.5				
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	30	4		
37 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/mi n	Total Mix Fluid Gal
2	VersaCem	VERSACEM (TM) SYSTEM	916	sack	12.8	1.75	8.5	4	
0.25 lbm		POLY-E-FLAKE (101216940)							
6 lbm		KOL-SEAL, BULK (100064233)							
8.50 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	ExpandaCem GJ4	EXPANDACEM (TM) SYSTEM	413	sack	13.3	1.89	8.66	4	
20 %		SS-200 - BULK (102240841)							
0.25 lbm		POLY-E-FLAKE (101216940)							
8.66 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/mi n	Total Mix Fluid Gal
4	Displacement	Displacement	121.6	bbl	8.33			8	
0.01 gal/bbl		MICRO MATRIX CEMENT RETARDER, 1 GAL PAIL (100003780)							
0.05 gal/bbl		CLA-WEB - TOTE (101985045)							
Cement Left In Pipe		Amount	90 ft		Reason			Shoe Joint	



## 1.0 Real-Time Job Summary

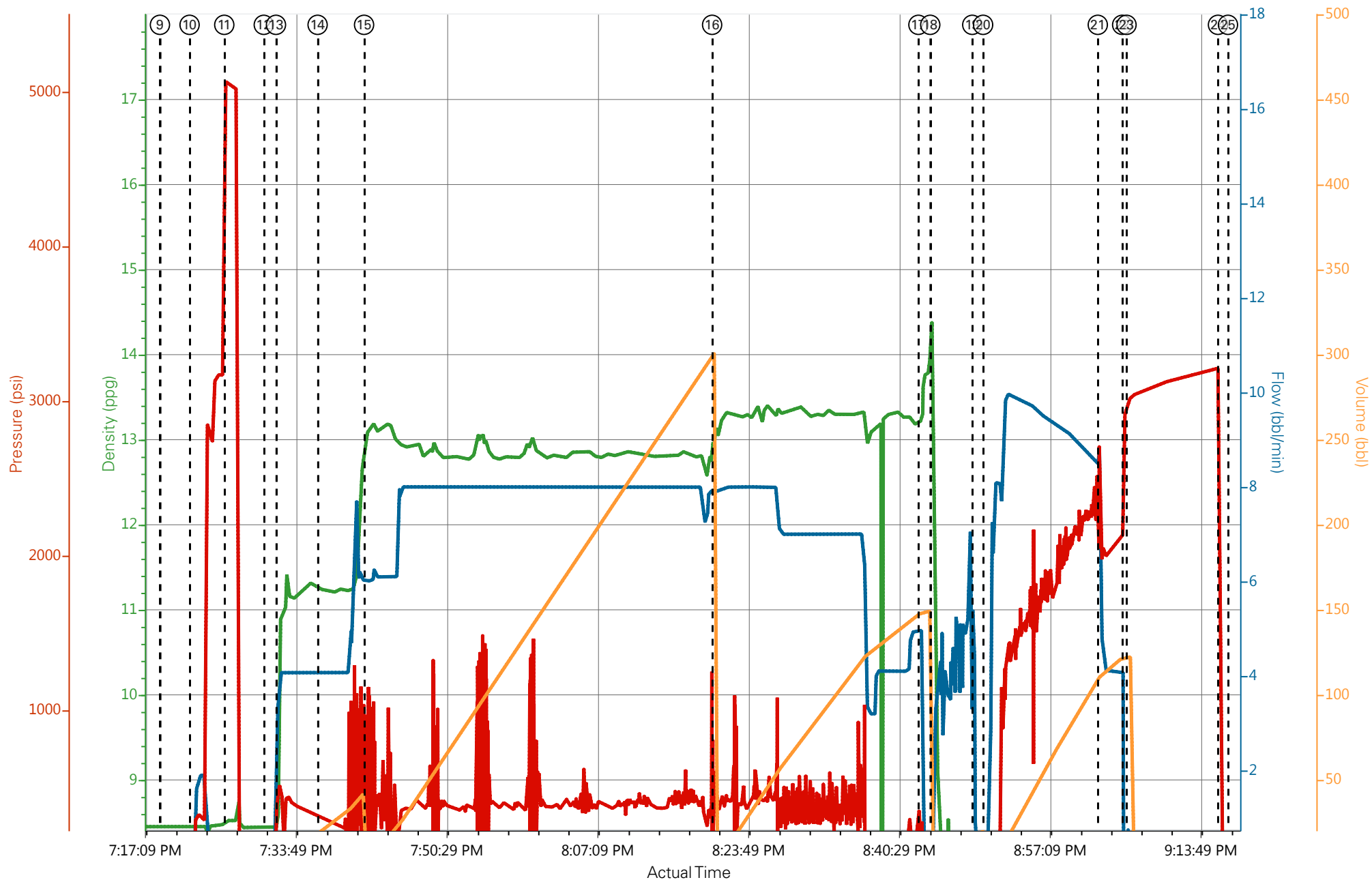
## 1.1 Job Event Log

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	6/20/2015	11:00:00	USER					ON LOCATION TIME 1730
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	6/20/2015	12:45:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	Crew Leave Yard	6/20/2015	13:00:00	USER					1-550, 2-660'S AND 1 ELITE PUMP. ALL TRUCKS LEFT THE YARD TOGETHER
Event	4	Arrive At Loc	Arrive At Loc	6/20/2015	15:00:00	USER					ARRIVED 2 HOURS EARLY CREW STILL RUNNING CASING.
Event	5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	6/20/2015	15:15:00	USER					TALKED WITH CO REP AND DID A WALKAROUND OF LOCATION. TOOK WATER SAMPLE
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	6/20/2015	18:00:00	USER					CASING CREW IN THE WAY WHERE WE NEED TO RIG UP SO WE HAD TO WAIT UNTIL THEY WERE RIGGED DOWN AND MOVED OUT OF THE WAY
Event	7	Rig-up Lines	Rig-up Lines	6/20/2015	18:15:00	USER					
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	6/20/2015	19:00:00	USER					ALL HES AND RIG CREW PRESENT
Event	9	Start Job	Start Job	6/20/2015	19:19:03	COM5					TD 7944', TP 7934, SC 8.625" @ 1567', 4.5" 11.6# L-80, SJ 90.22', HOLE 7.875", MW 9.3#
Event	10	Prime Pumps	Prime Pumps	6/20/2015	19:22:20	COM5	8.4	2	350	2	2 BBLs FRESH WATER

Event	11	Test Lines	Test Lines	6/20/2015	19:26:10	COM5			5080	2	TESTED TO 5080. TESTED GOOD, KO'S FUNCTIONING
Event	12	Drop Bottom Plug	Drop Bottom Plug	6/20/2015	19:30:32	USER					PLUG WENT
Event	13	Pump Spacer 1	Pump Spacer 1	6/20/2015	19:31:53	COM5	11	4	350	40	40 BBLS TUNED SPACER 11PPG, 4.55 FT3/SK, 30 GAL/SK
Event	14	Check Weight	Check weight	6/20/2015	19:36:29	COM5	11	4	317	20	11 PPG VERIFIED WITH MUD SCALES. ADJUSTED DOWNHOLE
Event	15	Pump Lead Cement	Pump Lead Cement	6/20/2015	19:41:37	COM5	12.8	8	400	285.5	916 SKS (285.5 BBLS) 12.8 PPG, 1.75 FT3/SK, 8.5 GAL/SK
Event	16	Pump Tail Cement	Pump Tail Cement	6/20/2015	20:20:05	COM5	13.3	8	455	139	413 SKS (139 BBLS) 13.3 PPG, 1.89 FT3/SK, 8.66 GAL/SK
Event	17	Shutdown	Shutdown	6/20/2015	20:42:53	USER					END OF CEMENT
Event	18	Clean Lines	Clean Lines	6/20/2015	20:44:11	USER	8.4	4	48.00	10	10 BBLS FRESH WATER
Event	19	Drop Top Plug	Drop Top Plug	6/20/2015	20:48:50	COM5					PLUG WENT
Event	20	Pump Displacement	Pump Displacement	6/20/2015	20:50:02	COM5	8.4	9	2200	121.6	121.6 BBLS FRESH WATER.
Event	21	Slow Rate	Slow Rate	6/20/2015	21:02:42	USER	8.4	4	2100	111	4 BBLS MIN 10 BBLS OUT
Event	22	Bump Plug	Bump Plug	6/20/2015	21:05:24	COM5					LANDED AT 2100 AND PRESSURED UP TO 3000 PSI FOR 10 MIN. CASING TEST
Event	23	Other	Casing Test	6/20/2015	21:05:53	USER			3022.00		TESTED GOOD 3022-3210 PSI
Event	24	Check Floats	Check Floats	6/20/2015	21:16:00	USER					FLOATS HELD 1.5 BBLS BACK TO TRUCK
Event	25	End Job	End Job	6/20/2015	21:17:06	COM5					GREAT RETURNS THROUGHOUT 40 BBLS TUNED SPACER AND 25 BBLS CEMENT TO SURFACE

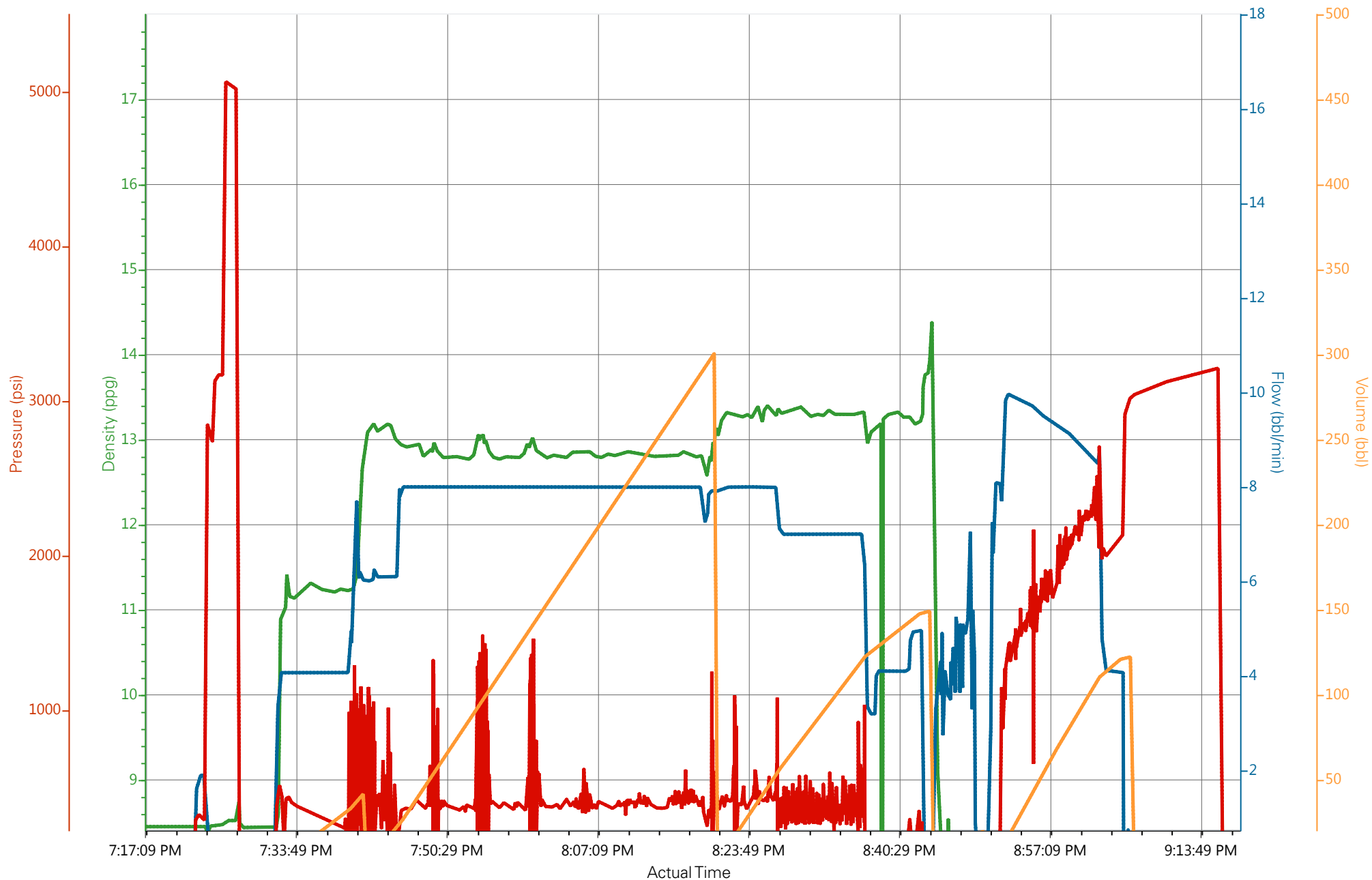
Event	26	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	6/20/2015	21:20:00	USER	ALL HES PRESENT
Event	27	Rig Down Lines	Rig Down Lines	6/20/2015	21:30:00	USER	
Event	28	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	6/20/2015	22:15:00	USER	ALL HES PRESENT
Event	29	Crew Leave Location	Crew Leave Location	6/20/2015	22:30:00	USER	THANK YOU FOR USING HALLIBURTON CEMENT. CLIFF SPARKS AND CREW

# PICEANCE GUNDERSON 29-09M 4.5" PRODUCTION



DH Density (ppg) 8.19    Comb Pump Rate (bbl/min) 9.6    PS Pump Press (psi) 293    Pump Stg Tot (bbl) 18.7

# PICEANCE GUNDERSON 29-09M 4.5" PRODUCTION



DH Density (ppg) 8.19 Comb Pump Rate (bbl/min) 9.6 PS Pump Press (psi) 293 Pump Stg Tot (bbl) 18.7



# HALLIBURTON

## Water Analysis Report

Company: PICEANCE  
Submitted by: CLIFF SPARKS  
Attention: DALLAS SCOTT  
Lease: GUNDERSON  
Well #: 29-09M

Date: 6/20/2015  
Date Rec.: 6/20/2015  
S.O.#: 902505204  
Job Type: PRODUCTION

Specific Gravity	<i>MAX</i>	<i>1</i>
pH	<i>8</i>	<i>7</i>
Potassium (K)	<i>5000</i>	<i>200</i> Mg / L
Hardness	<i>500</i>	<i>250</i> Mg / L
Iron (FE2)	<i>300</i>	<i>0</i> Mg / L
Chlorides (Cl)	<i>3000</i>	<i>0</i> Mg / L
Sulfates (SO <sub>4</sub> )	<i>1500</i>	<i>&lt;200</i> Mg / L
Temp	<i>40-80</i>	<i>65</i> Deg
Total Dissolved Solids		<i>250</i> Mg / L

Respectfully: CLIFF SPARKS  
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 i

<b>Sales Order #:</b> 0902505204	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 6/21/2015
<b>Customer:</b> PICEANCE ENERGY LLC - EBUS		<b>Job Type (BOM):</b> CMT PRODUCTION CASING BOM
<b>Customer Representative:</b> ROGER FOSTER		<b>API / UWI: (leave blank if unknown)</b> 05-077-09763-00
<b>Well Name:</b> GUNDERSON		<b>Well Number:</b> 0080127643
<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	6/21/2015
Survey Interviewer	The survey interviewer is the person who initiated the survey.	HB74155
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	N/A

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

General	
<b>Survey Conducted Date</b>	6/21/2015
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>	Deviated
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>	No
Was the job delivered correctly as per customer agreed design?	
<b>Pumping Hours</b>	1.5
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>	5
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)	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	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	98
<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