

PICEANCE ENERGY LLC - EBUS

Gunderson 29-07E

**Patterson 306**

# **Post Job Summary**

## **Cement Production Casing**

Date Prepared: 05/14/2015

Job Date: 04/30/2015

Submitted by: Aaron Katz – Grand Junction Cement Engineer

The Road to Excellence Starts with Safety

Sold To #: 344919	Ship To #: 3123904	Quote #:	Sales Order #: 0902363008
Customer: PICEANCE ENERGY LLC - EBUS		Customer Rep: ROGER FOSTER	
Well Name: GUNDERSON	Well #: 29-07E	API/UWI #: 05-077-09759-00	
Field: VEGA	City (SAP): COLLBRAN	County/Parish: MESA	State: COLORADO
Legal Description: ME SE-29-9S-93W-2587FSL-1253FEL			
Contractor: PATTERSON-UTI ENERGY		Rig/Platform Name/Num: PATTERSON 306	
Job BOM: 7523			
Well Type: DIRECTIONAL GAS			
Sales Person: HALAMERICA\HX41066		Srvc Supervisor: Eric Carter	

**Job**

Formation Name			
Formation Depth (MD)	Top	1531 FT.	Bottom 7811 FT.
Form Type	BHST		
Job depth MD	7801ft	Job Depth TVD	
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		8.625	8.097	24			0	1531		0
Casing		4.5	4	11.6	8 RD	I-80	0	7801		0
Open Hole Section			7.875				1531	7811	0	0

**Tools and Accessories**

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe					Top Plug	4.5	1	HES
Float Shoe					Bottom Plug	4.5	1	HES
Float Collar					SSR plug set			
Insert Float					Plug Container	4.5	1	HES
Stage Tool					Centralizers	4.5	124	

**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 ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Tuned Spacer III	Tuned Spacer III	40	bbl	11	4.55		6	
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 ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
2	VersaCem	VERSACEM (TM) SYSTEM	902	sack	12.8	1.75	8.5	8	
	0.25 lbm	POLY-E-FLAKE (101216940)							
	6 lbm	KOL-SEAL, BULK (100064233)							
	8.50 Gal	FRESH WATER							
3	ExpandaCem	EXPANDACEM (TM) SYSTEM	413	sack	13.3	1.89	8.66	6	
	0.25 lbm	POLY-E-FLAKE (101216940)							
	8.66 Gal	FRESH WATER							
	6 lbm	KOL-SEAL, BULK (100064233)							
	20 %	SS-200 - BULK (102240841)							
4	Displacement	Displacement	119.9	bbl	8.34			8	
	0.05 gal/bbl	CLA-WEB - TOTE (101985045)							
	0.01 gal/bbl	MICRO MATRIX CEMENT RETARDER, 1 GAL PAIL (100003780)							
<b>Cement Left In Pipe</b>		<b>Amount</b>	90 ft		<b>Reason</b>		Shoe Joint		
<b>Comment</b>									

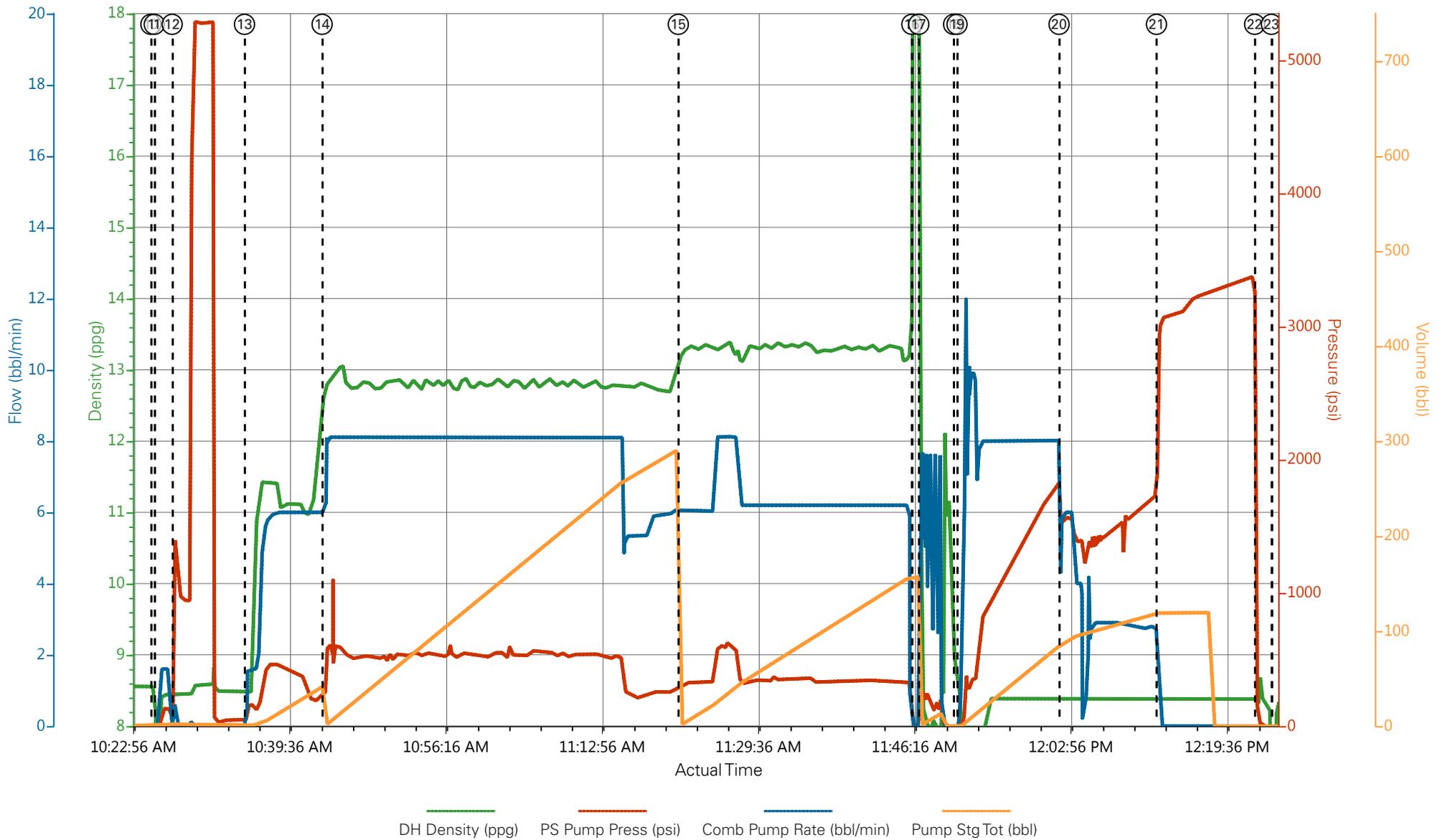
## 1.0 Real-Time Job Summary

### 1.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	PS Pump Press <i>(psi)</i>	Comb Pump Rate <i>(bbl/min)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	Call Out	4/30/2015	03:00:00	USER					
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	4/30/2015	05:50:00	USER					ATTENDED BY ALL HES CREW
Event	3	Crew Leave Yard	Crew Leave Yard	4/30/2015	06:00:00	USER					
Event	4	Arrive At Loc	Arrive At Loc	4/30/2015	08:00:00	USER					RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	4/30/2015	08:20	USER					ATTENDED BY ALL HES CREW
Event	6	Other	Other	4/30/2015	08:40	USER					SPOT EQUIPMENT
Event	7	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	4/30/2015	08:50	USER					ATTENDED BY ALL HES CREW
Event	8	Rig-Up Equipment	Rig-Up Equipment	4/30/2015	09:00	USER					
Event	9	Pre-Job Safety Meeting	Pre-Job Safety Meeting	4/30/2015	10:00	USER					ATTENDED BY ALL HES CREW, RIG CREW AND COMPANY REP
Event	10	Other	Start Job	4/30/2015	10:25:05	USER					TP 7801', TD 7811', MW 9.6 PPG, CASING 4.5", 11.6#, I-80, SJ 89.69', SURFACE CASING 8.625", 24# SET AT 1531', HOLE 7.875", RIG CIRCULATED FOR 2 HR'S PRIOR TO JOB
Event	11	Other	Fill Lines	4/30/2015	10:25:27	USER	8.34	150	2	2	FRESH WATER
Event	12	Test Lines	Test Lines	4/30/2015	10:27:22	USER					PRESSURED UP TO 5300 PSI, PRESSURE HELD
Event	13	Pump Spacer	Pump Spacer	4/30/2015	10:35:04	USER	11	470	6	40	TUNED SPACER III MIXED AT

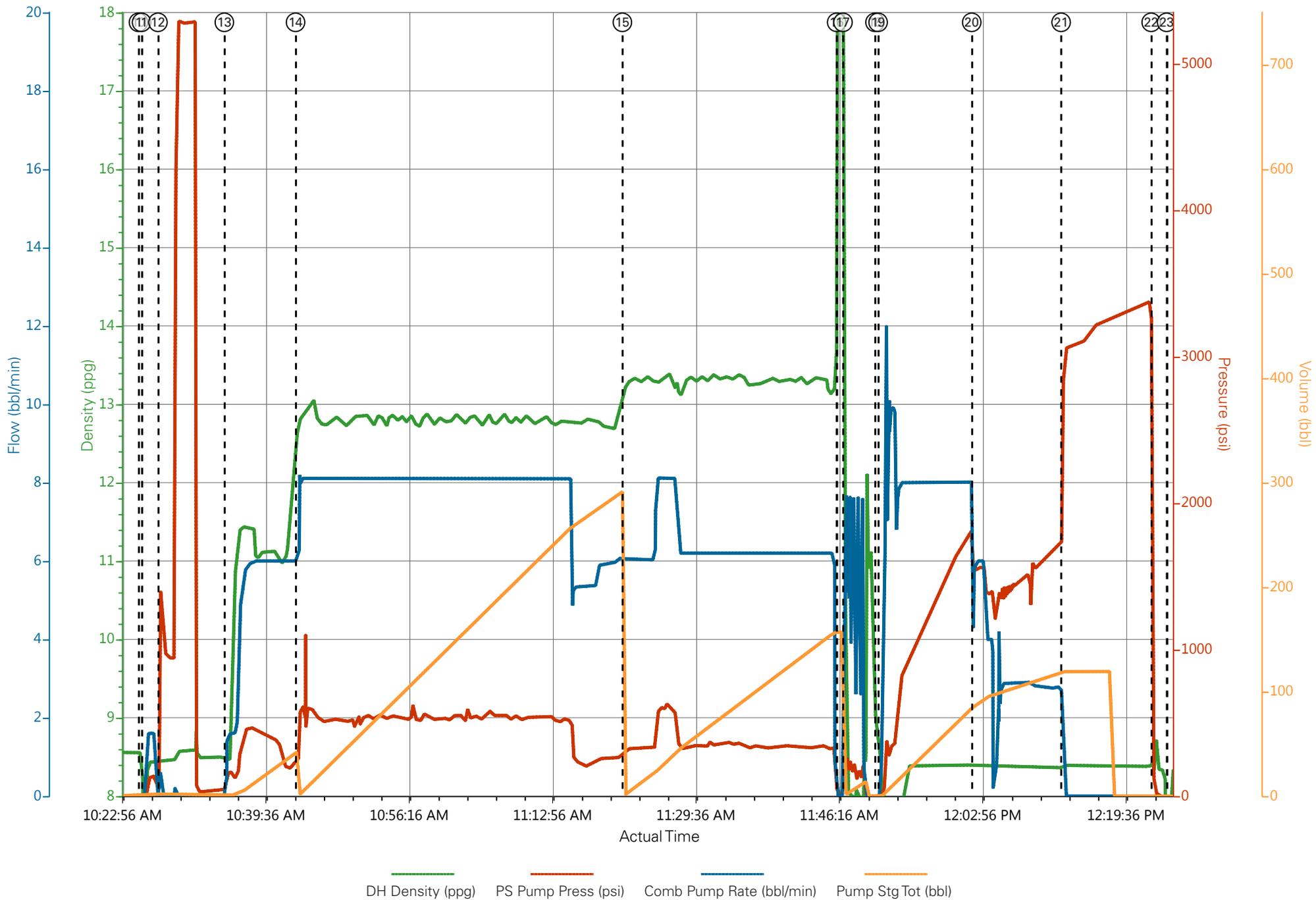
											11 PPG, BOTTOM PLUG LAUNCHED
Event	14	Pump Lead Cement	Pump Lead Cement	4/30/2015	10:43:21	USER	12.8	540	8	281.1	902 SKS VERSACEM MIXED AT 12.8 PPG, 1.75 YIELD, 8.5 GL/SK
Event	15	Pump Tail Cement	Pump Tail Cement	4/30/2015	11:21:21	USER	13.3	570	6	139	413 SKS EXPANDACEM MIXED AT 13.3 PPG, 1.89 YIELD, 8.66 GL/SK
Event	16	Shutdown	Shutdown	4/30/2015	11:46:16	USER					
Event	17	Clean Lines	Clean Lines	4/30/2015	11:47:00	USER					CLEANED LINES TO CELLAR
Event	18	Drop Top Plug	Drop Top Plug	4/30/2015	11:50:43	USER					PLUG LAUNCHED
Event	19	Pump Displacement	Pump Displacement	4/30/2015	11:51:05	USER	8.34	1810	8	80	FRESH WATER WITH CLAY-WEB AND MMCR
Event	20	Slow Rate	Slow Rate	4/30/2015	12:01:58	USER	8.34	1720	3	39.9	REP REQUESTED TO SLOW RATE EARLY DUE TO LOSS OF RETURNS
Event	21	Bump Plug	Bump Plug	4/30/2015	12:12:21	USER		3100			PLUG LANDED
Event	22	Check Floats	Check Floats	4/30/2015	12:22:49	USER		3380			FLOATS HELD
Event	23	Other	End Job	4/30/2015	12:24:37	USER					LOST CIRCULATION AT 90 BBLS DISPLACEMENT PUMPED, PIPE NOT MOVED DURING JOB, 0 BBLS CEMENT TO SURFACE
Event	24	Post-Job Safety Meeting (Pre Rig-Down)	Post-Job Safety Meeting (Pre Rig-Down)	4/30/2015	12:25	USER					ATTENDED BY ALL HES CREW
Event	25	Rig-Down Equipment	Rig-Down Equipment	4/30/2015	12:30	USER					
Event	26	Depart Location Safety Meeting	Depart Location Safety Meeting	4/30/2015	13:20	USER					ATTENDED BY ALL HES CREW
Event	27	Crew Leave Location	Crew Leave Location	4/30/2015	13:30	USER					THANK YOU FOR USING HALLIBURTON CEMENT, ERIC CARTER AND CREW.

# PICEANCE ENERGY - GUNDERSON 29-07E - PRODUCTION



- ① Call Out n/a;n/a;n/a;n/a
- ② Depart Yard Safety Meeting n/a;n/a;n/a;n/a
- ③ Crew Leave Yard n/a;n/a;n/a;n/a
- ④ Arrive At Loc n/a;n/a;n/a;n/a
- ⑤ Assessment Of Location Safety Meeting n/a;n/a;n/a;n/a
- ⑥ Other n/a;n/a;n/a;n/a
- ⑦ Pre-Rig Up Safety Meeting n/a;n/a;n/a;n/a
- ⑧ Rig-Up Equipment n/a;n/a;n/a;n/a
- ⑨ Pre-Job Safety Meeting n/a;n/a;n/a;n/a
- ⑩ Start Job 8.56;-4;0;0
- ⑪ Fill Lines 5.18;-4;0;0
- ⑫ Test Lines 8.45;1297;0;2
- ⑬ Pump Spacer 8.5;131;1.5;0
- ⑭ Pump Lead Cement 12.73;253;6;0.7
- ⑮ Pump Tail Cement 13.22;286;6;1.7
- ⑯ Shutdown 38.52;1;0;157
- ⑰ Clean Lines 10
- ⑱ Drop Top Plug
- ⑲ Pump Displace
- ⑳ Slow Rate 8.35

# PICEANCE ENERGY - GUNDERSON 29-07E - PRODUCTION



— DH Density (ppg)    
 — PS Pump Press (psi)    
 — Comb Pump Rate (bbl/min)    
 — Pump Stg Tot (bbl)

# HALLIBURTON

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## Water Analysis Report

Company:	<u>PICEANCE</u>	Date:	<u>5/14/2015</u>
Submitted by:	<u>ERIC CARTER</u>	Date Rec.:	<u>5/14/2015</u>
Attention:	<u>J.Trout</u>	S.O.#	<u>902307166</u>
Lease	<u>PATTERSON 306</u>	Job Type:	<u>PRODUCTION</u>
Well #	<u>GUNDERSON 29-07E</u>		

Specific Gravity	<i>MAX</i>	<b>1</b>
pH	<i>8</i>	<b>7</b>
Potassium (K)	<i>5000</i>	<b>0 Mg / L</b>
Hardness	<i>500</i>	<b>250 Mg / L</b>
Iron (FE2)	<i>300</i>	<b>0 Mg / L</b>
Chlorides (Cl)	<i>3000</i>	<b>250 Mg / L</b>
Sulfates (SO <sub>4</sub> )	<i>1500</i>	<b>&lt;200 Mg / L</b>
Temp	<i>40-80</i>	<b>40 Deg</b>
Total Dissolved Solids		<b>450 Mg / L</b>

Respectfully: ERIC CARTER

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 it

<b>Sales Order #:</b> 0902363008	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 4/30/2015
<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> 05-077-09759-00
<b>Well Name:</b> GUNDERSON		<b>Well Number:</b> 0080127639
<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	4/30/2015
Survey Interviewer	The survey interviewer is the person who initiated the survey.	HX15491
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>	4/30/2015
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>	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>	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	94
<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)	No
<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