

PICEANCE ENERGY LLC - EBUS

Gunderson 29-08M

**Patterson 306**

## **Post Job Summary**

# **Cement Surface Casing**

Date Prepared: 06/08/2015

Job Date: 06/03/2015

Submitted by: Aaron Katz – Grand Junction Cement Engineer

## The Road to Excellence Starts with Safety

Sold To #: 344919	Ship To #: 3123906	Quote #:	Sales Order #: 0902466249
Customer: PICEANCE ENERGY LLC - EBUS	Customer Rep: MATT		
Well Name: GUNDERSON	Well #: 29-08M	API/UWI #: 05-077-09761-00	
Field: VEGA	City (SAP): COLLBRAN	County/Parish: MESA	State: COLORADO
Legal Description: SE NE-29-9S-93W-2405FNL-1229FEL			
Contractor: PATTERSON-UTI ENERGY	Rig/Platform Name/Num: PATTERSON 306		
Job BOM: 7521			
Well Type: DIRECTIONAL GAS			
Sales Person: HALAMERICA\HX41066	Srvs Supervisor: Craig Kukus		

### Job

Formation Name	
Formation Depth (MD)	Top
Form Type	BHST
Job depth MD	1555ft
Water Depth	Wk Ht Above Floor
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	1555		0
Open Hole Section			11				60	1565		0

### Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	8.625	1	HES	1555	Top Plug	8.625	1	HES
Float Shoe	8.625				Bottom Plug	8.625	1	HES
Float Collar	8.625	1	HES	1508	SSR plug set	8.625		HES
Insert Float	8.625				Plug Container	8.625	1	HES
Stage Tool	8.625				Centralizers	8.625		HES

### 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			5		
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/mi n	Total Mix Fluid Gal
3	VariCem GJ5	VARICEM (TM) CEMENT	114	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 ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
4	Fresh Water Displacement	Fresh Water Displacement	96.7	bbl	8.3			9 / 2	
Cement Left In Pipe		Amount	46 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:2084 psi CSG TEST			Floats Held?Yes			
Cement Returns:		26 bbl m3	Returns Density:## lb/gal kg/m3			Returns Temperature:## °F °C			
Comment									

## 1.0 Real-Time Job Summary

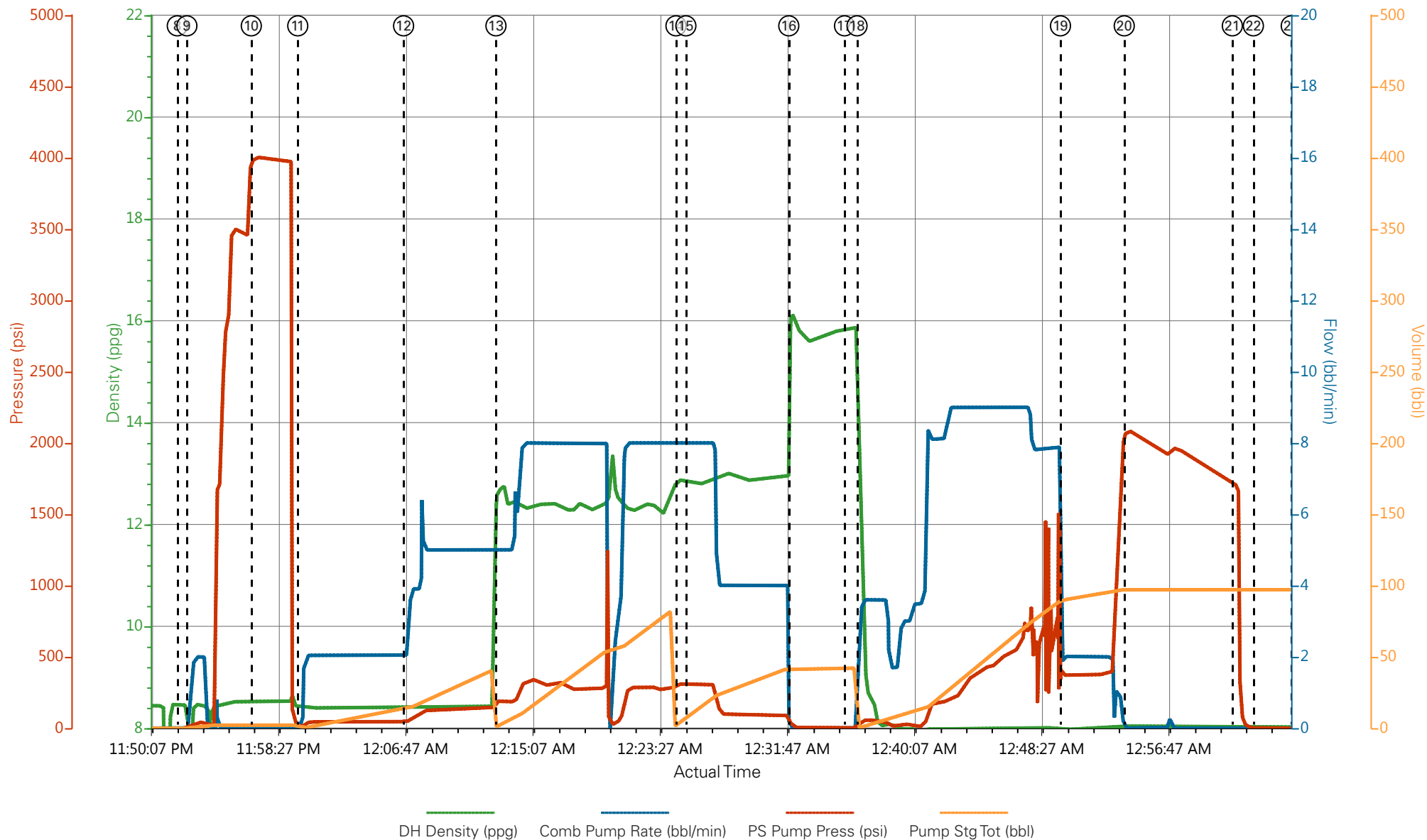
## 1.1 Job Event Log

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	6/2/2015	16:30:00	USER					CREW CALL OUT
Event	2	Depart from Service Center or Other Site	Depart from Service Center or Other Site	6/2/2015	20:00:00	USER					SAFETY MEETING DEPARTING SERVICES CENTER ALL HES CREW PRESENT
Event	3	Arrive At Loc	Arrive At Loc	6/2/2015	21:30:00	USER					ARRIVE EARLY ON LOC / RIG RUNNING CSG / HES EQUIP ON LOC: 1EA CMT PUMP UNIT 1 EA 660 BULK UNIT 1 EA SEVICE PICK UP UNIT
Event	4	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	6/2/2015	21:40:00	USER					ASSESMENT OF LOC WALK THRU CHECKING WATER SUPPLY AND STAGEING AREA
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	6/2/2015	21:45:00	USER					PRE-RIG UP SAFETY MEETING ALL HES CREW PRESENT
Event	6	Rig-Up Equipment	Rig-Up Equipment	6/2/2015	21:50:00	USER					STAGE IN EQUIP AND RIG UP TO RED ZONE AND WATER SUPPLY AND BULK EQUIP
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	6/2/2015	22:13:19	USER	8.34	0.00	-1.00	0.0	PRE-JOB SAFETY MEETING ALL RIG PERSONEL AND HES CREW PRESENT
Event	8	Start Job	Start Job	6/2/2015	23:52:00	COM6	8.34	0.00	-7.00	0.0	START JOB: TD 1565 FT TP 1555 FT SJT 46.18 FT OH 11.0 IN WF/WT 9.4# CSG 8 5/8 IN 24# J-55 USE TOP AND BOTTOM PLUGS

Event	9	Prime Pumps	Prime Pumps	6/2/2015	23:52:38	USER	8.34	2.0	40.0	2.0	DROP BOTTOM PLUG / PRIME LINES WITH FRESH WATER 2 BBLS
Event	10	Test Lines	Test Lines	6/2/2015	23:56:51	COM6	8.34	0.00	3998.00	0.1	PRESSURE TEST LINES 5 TH GEAR STALL OUT AT 2830 PSI TEST TO 4000 PSI TEST GOOD
Event	11	Pump Spacer 1	Pump Spacer 1	6/2/2015	23:59:54	COM6	8.34	5.0	140.0	40.0	PUMP H2O SPACER AHEAD 40 BBLS
Event	12	Check Weight	Check weight	6/3/2015	00:06:50	COM6	8.39	4.0	46.00	13.9	CHECK WATER WT
Event	13	Pump Lead Cement	Pump Lead Cement	6/3/2015	00:12:53	COM6	12.35	8.0	320.0	84.0	PUMP 192 SKS LEAD CEMENT AT 12.3 PPG 2.46 Y 14.17 GAL/SKS AND HAVE RETURNS
Event	14	Pump Tail Cement	Pump Tail Cement	6/3/2015	00:24:41	COM6	12.87	8.00	303.00	44.0	PUMP 114 SKS TAIL CEMENT AT 12.8 PPG 2.18Y 12.11 GAL/SKS AND HAVE RETURNS
Event	15	Check Weight	Check weight	6/3/2015	00:25:20	COM6	12.87	8.00	294.00	8.9	CHECK CMT WT
Event	16	Shutdown	Shutdown	6/3/2015	00:32:04	USER	12.87	0.00	20.00	44.0	SHUT DOWN END CEMENT / READY TUB TO WASH UP ON TOP OF PLUG
Event	17	Drop Top Plug	Drop Top Plug	6/3/2015	00:35:43	USER	8,34	0.00	0.0	0.0	DROP TOP PLUG / PLUG AWAY
Event	18	Pump Displacement	Pump Displacement	6/3/2015	00:36:32	COM6	8,34	9.0	529.0	86.0	PUMP H2O DISPLACEMENT
Event	19	Slow Rate	Slow Rate	6/3/2015	00:49:52	USER	8.34	2.10	408.00	90.0	SLOW RATE LAST 10 BBLS TO 2 BBL MIN
Event	20	Bump Plug	Bump Plug	6/3/2015	00:54:03	COM6	8.34	0.00	2084.00	96.8	PLUG LANDED AT 380 PSI BUMP TO 2084 PSI FOR CSG TEST AND HOLD FOR 10MINS
Event	21	Check Floats	Check Floats	6/3/2015	01:01:08	USER	8.34	0.00	1707.00	97.8	END CSG TEST CHECK FLOATS/ GOT BACK 1 BBL AND FLOATS HELD

Event	22	End Job	End Job	6/3/2015	01:02:31	COM6	0.0	0.00	-1.00	0.0	END JOB / HAD RETURNS THRU OUT THE JOB AND 26 BBLS CMT TO SURFACE
Event	23	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	6/3/2015	01:05:00	USER	0.0	0.00	-1.00	0.0	PRE-RIG DOWN SAFETY MEETING ALL HES CREW PRESENT
Event	24	Rig-Down Equipment	Rig-Down Equipment	6/3/2015	01:17:43	USER					RIG DOWN FLOOR AND WASH UP PUMP AND RIG DOWN EQUIP
Event	25	Depart Location	Depart Location	6/3/2015	01:55:00	USER					DEPART LOC SAFETY MEETING ALL HES CREW PRESENT
Event	26	Comment	Comment	6/3/2015	02:00:00	USER					THANK YOU FOR USING HALLIBURTON CEMENTING SERVICES AND THE CREW OF CRAIG KUKUS

# PICEANCE ENERGY GUNDERSON 29-08M PATT 306 CEMENT SURFACE CSG JOB



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

▼ **HALLIBURTON** | iCem® Service

Created: 2015-06-02 22:03:58, Version: 4.1.107

Edit

Customer : PICEANCE ENERGY LLC

Job Date : 6/2/2015 10:08:19 PM

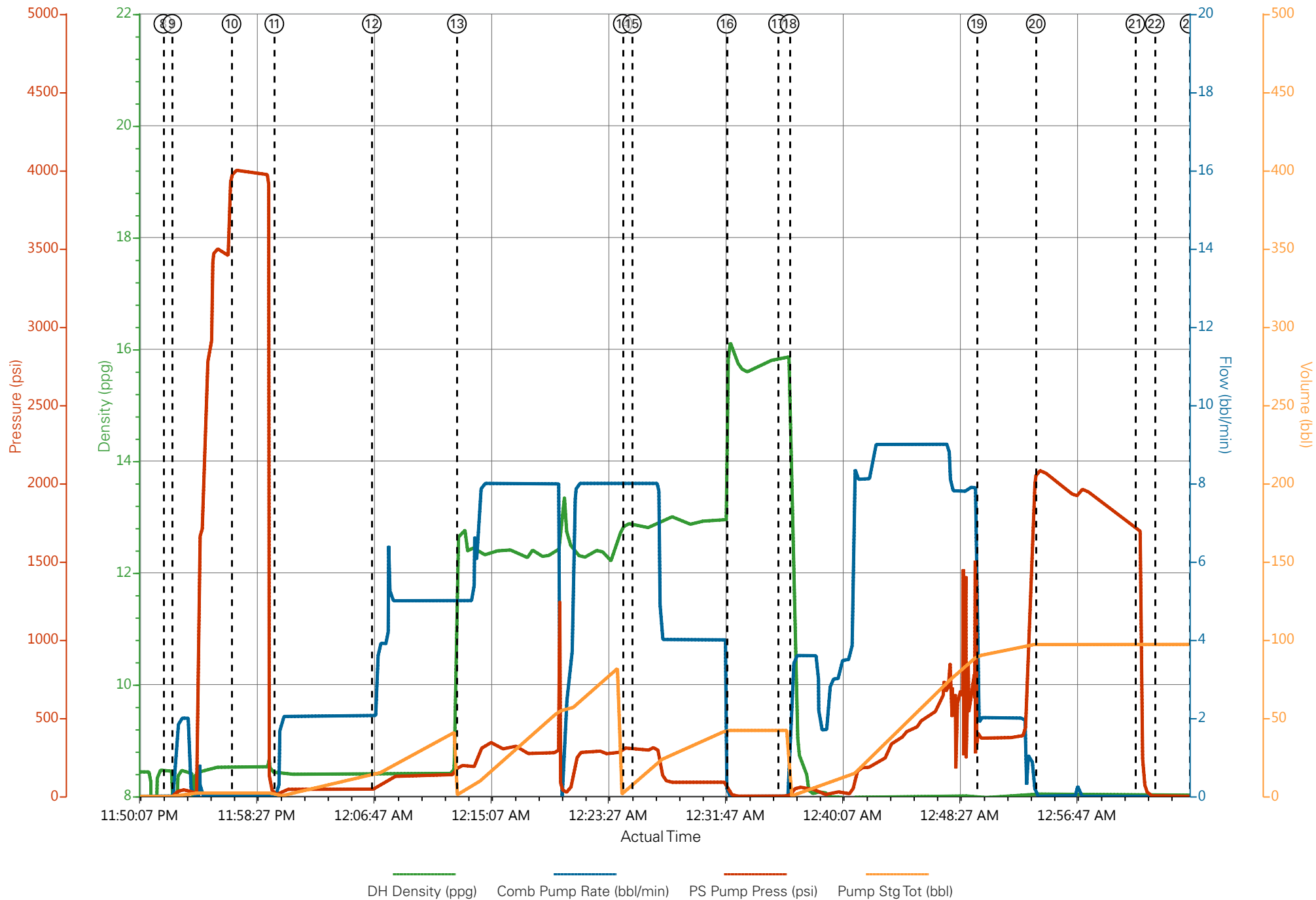
Well : 29-08M

Representative : CRAIG KUKUS

Sales Order # :

ELITE 7 / OPERATOR : ADAM ANGELO / JOHN KENDALL

# PICEANCE ENERGY GUNDERSON 29-08M PATT 306 CEMENT SURFACE CSG JOB





# HALLIBURTON

## Water Analysis Report

Company: PICEANCE ENERGY

Submitted by: CRAIG KUKUS

Attention:

Lease GUNDERSON

Well # 29-08M

Date: 6/2/2015

Date Rec.: 6/2/2015

S.O.# 902466249

Job Type: SURFACE

Specific Gravity	MAX	0
pH	8	7
Potassium (K)	5000	200 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	60 Deg
Total Dissolved Solids		415 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> 0902466249	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 6/3/2015
<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> 05-077-09761-00
<b>Well Name:</b> GUNDERSON		<b>Well Number:</b> 0080127641
<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	6/3/2015
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	

CUSTOMER SIGNATURE

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*KEY PERFORMANCE INDICATORS*

General	
<b>Survey Conducted Date</b> The date the survey was conducted	6/3/2015

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.	3
<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.	1.5
<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