

Piceance Energy LLC- EBUS

Gunderson 29-13E

**Patterson 306**

## **Post Job Summary**

# **Cement Production Casing**

Date Prepared: 04/30/2015

Job Date: 04/21/2015

Submitted by: Evan Russell – Grand Junction Cement Engineer

## The Road to Excellence Starts with Safety

Sold To #: 344919	Ship To #: 3624341	Quote #:	Sales Order #: 0902336007
Customer: PICEANCE ENERGY LLC - EBUS		Customer Rep: MATT SETTLES	
Well Name: GUNDERSON		Well #: 29-13E	API/UWI #: 05-077-10231-00
Field: BUZZARD CREEK	City (SAP): COLLBRAN	County/Parish: MESA	State: COLORADO
Legal Description: SE NE-29-9S-93W-2405FNL-1149FEL			
Contractor: PATTERSON-UTI ENERGY		Rig/Platform Name/Num: PATTERSON 306	
Job BOM: 7523			
Well Type: DIRECTIONAL GAS			
Sales Person: HALAMERICA\HX41066		Srvc Supervisor: Jesse Slaughter	

### Job

Formation Name	
Formation Depth (MD)	Top Bottom
Form Type	BHST
Job depth MD	7780ft Job Depth TVD
Water Depth	Wk Ht Above Floor 4ft
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	1555		0
Casing		4.5	4	11.6			0	7780		0
Open Hole Section			8.875				1500	7790	0	0

### Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	4.5	1		7780	Top Plug	4.5	1	HES
Float Shoe	4.5	1			Bottom Plug	4.5	1	HES
Float Collar	4.5	1			SSR plug set	4.5		HES
Insert Float	4.5	1			Plug Container	4.5	1	HES
Stage Tool	4.5	1			Centralizers	4.5		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	Tuned Spacer III	Tuned Spacer III	40	bbl	11	4.55		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/min	Total Mix Fluid Gal
2	VersaCem GJ4	VERSACEM (TM) SYSTEM	892	sack	12.8	1.75		8	8.5
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/min	Total Mix Fluid Gal
3	ExpandaCem GJ4	EXPANDACEM (TM) SYSTEM	413	sack	13.3	1.89		8	8.66
0.25 lbm		POLY-E-FLAKE (101216940)							
8.66 Gal		FRESH WATER							
6 lbm		KOL-SEAL, BULK (100064233)							
20 %		SAND-SSA-1 - SILICA FLOUR - 200 MESH, BULK (100003691)							
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	Displacement	Displacement	119.2	bbl	8.33			8	
0.05 gal/bbl		CLA-WEB - TOTE (101985045)							
0.01 gal/bbl		MICRO MATRIX CEMENT RETARDER, 1 GAL PAIL (100003780)							
Cement Left In Pipe		Amount	89 ft		Reason		Shoe Joint		
Comment									

## 1.0 Real-Time Job Summary

## 1.1 Job Event Log

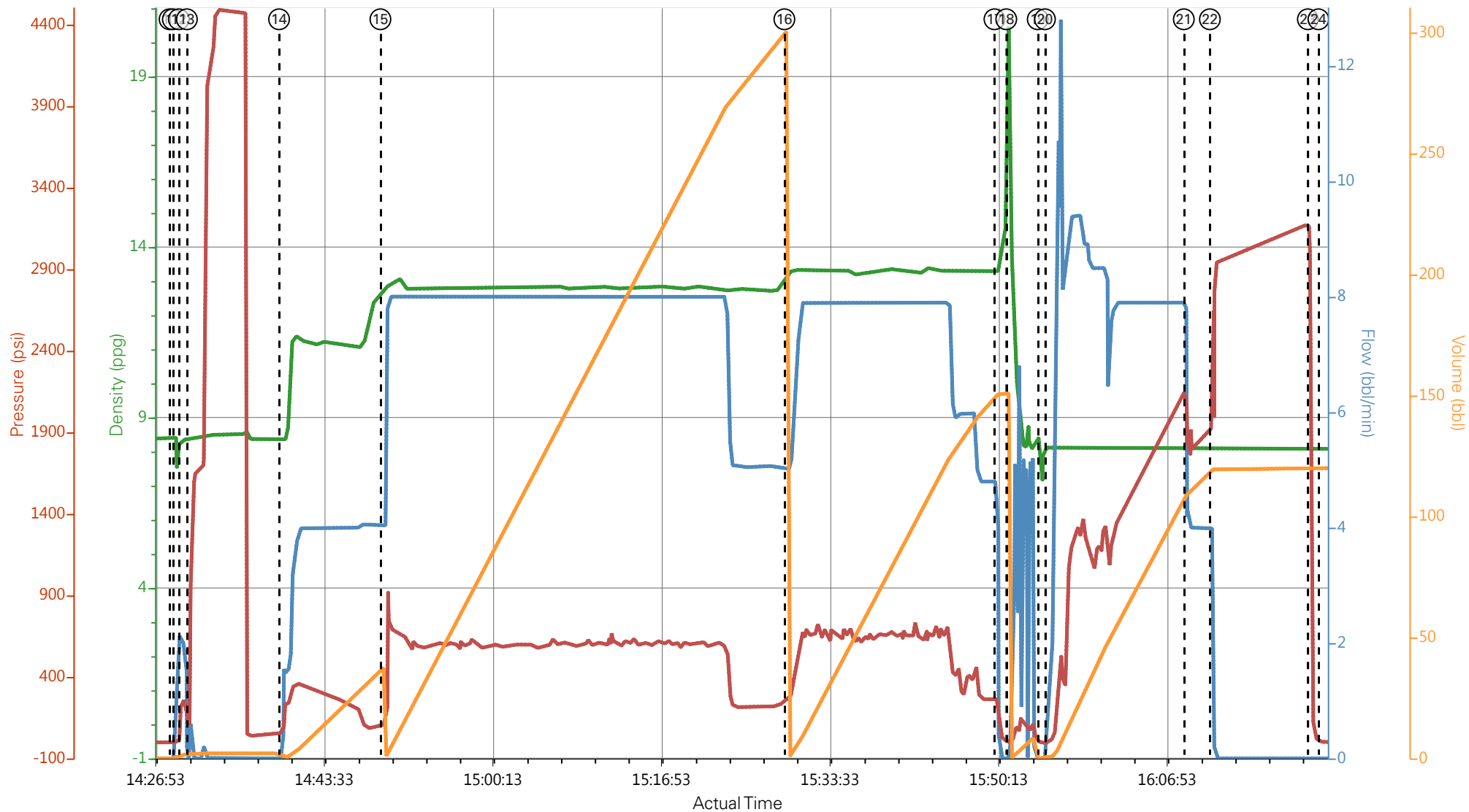
Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	Call Out	4/21/2015	07:00:00	USER					
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	4/21/2015	11:20:00	USER					WITH ALL HES PERSONNEL
Event	3	Crew Leave Yard	Crew Leave Yard	4/21/2015	11:30:00	USER					
Event	4	Arrive At Loc	Arrive At Loc	4/21/2015	13:00:00	USER					RIG WAS CIRCULATING ON BOTTOM UPON HES ARRIVAL
Event	5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	4/21/2015	13:05:00	USER					WITH ALL HES PERSONNEL
Event	6	Other	Spot Equipment	4/21/2015	13:10:00	USER					
Event	7	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	4/21/2015	13:20:00	USER					WITH ALL HES PERSONNEL
Event	8	Rig-Up Equipment	Rig-Up Equipment	4/21/2015	13:30:00	USER					1 PUMP 2 BULK TRUCKS 1 SILO
Event	9	Pre-Job Safety Meeting	Pre-Job Safety Meeting	4/21/2015	14:20:00	USER					WITH ALL PERSONNEL
Event	10	Start Job	Start Job	4/21/2015	14:28:32	COM7					TD 7790 FT, TP 7780 FT, SHOE 89.63 FT, CSG 4 1/2 IN 11.6 LB/FT, HOLE 7 7/8 IN, MUD WT 9.5 PPG
Event	11	Prime Pumps	Prime Pumps	4/21/2015	14:28:52	COM7	8.29	2.0	280.0	2.0	FRESH WATER
Event	12	Drop Bottom Plug	Drop Bottom Plug	4/21/2015	14:29:27	USER					PLUG LAUNCHED
Event	13	Test Lines	Test Lines	4/21/2015	14:30:15	COM7					TESTED LINES TO 4495 PSI PRESSURE HOLDING
Event	14	Pump Spacer 1	Pump Tuned Spacer	4/21/2015	14:39:22	COM7	11.0	4.0	107.0	40.0	TUNED SPACER

Event	15	Pump Lead Cement	Pump Lead Cement	4/21/2015	14:49:23	COM7	12.8	8.0	270.0	278.0	892 SKS AT 12.8 PPG, 1.75 FT3/SK, 8.5 GAL/SK
Event	16	Pump Tail Cement	Pump Tail Cement	4/21/2015	15:29:19	COM7	13.3	8.0	260.0	139.0	413 SKS AT 13.3 PPG, 1.89 FT3/SK, 8.66 GAL/SK
Event	17	Shutdown	Shutdown	4/21/2015	15:50:05	USER					
Event	18	Clean Lines	Clean Lines	4/21/2015	15:51:15	USER					CLEANED PUMPS AND LINES IN CELLAR
Event	19	Drop Top Plug	Drop Top Plug	4/21/2015	15:54:22	USER					PLUG LAUNCHED.
Event	20	Pump Displacement	Pump Displacement	4/21/2015	15:55:05	COM7	8.4	8.0	2000.0	119.2	FRESH WATER WITH .5 GAL CLAYWEB PER 10 BBLS AND 1 GAL MMCR IN FIRST 10 BBLS.
Event	21	Slow Rate	Slow Rate	4/21/2015	16:08:48	USER	8.4	4.0	1930.0	109.2	SLOWED RATE 10 BBLS PRIOR TO CALCULATED DISPLACEMENT
Event	22	Bump Plug	Bump Plug	4/21/2015	16:11:23	COM7			3000.0		AS PER COMPANY REP HES PRESSURED UP WELL TO 3000 PSI TO PERFORM A 10 MINUTE CASING TEST
Event	23	Check Floats	Check Floats	4/21/2015	16:21:04	USER					FLOATS HOLDING. HES RETURNED 1.5 BBL TO PUMP
Event	24	End Job	End Job	4/21/2015	16:22:07	COM7					PIPE WAS STATIC DURING JOB, GOOD CIRCULATION THROUGHOUT JOB. HES USED ALL CHEMICALS EXCEPT SUGAR FOR JOB.
Event	25	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	4/21/2015	16:30:00	USER					WITH ALL HES PERSONNEL
Event	26	Rig Down Lines	Rig Down Lines	4/21/2015	16:35:00	USER					
Event	27	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	4/21/2015	17:20:00	USER					WITH ALL HES PERSONNEL
Event	28	Crew Leave Location	Crew Leave Location	4/21/2015	17:30:00	USER					

Event	29	Comment	Comment	4/21/2015	17:31:00	USER
-------	----	---------	---------	-----------	----------	------

THANK YOU FOR USING  
HALLIBURTON CEMENT  
DEPARTMENT. JESSE  
SLAUGHTER AND CREW

# PICEANCE ENERGY - GUNDERSON 29-13E - PRODUCTION



- ① Call Out
- ② Pre-Convoy Safety Meeting
- ③ Crew Leave Yard
- ④ Arrive At Loc
- ⑤ Assessment Of Location Safety Meeting
- ⑥ Spot Equipment
- ⑦ Pre-Rig Up Safety Meeting
- ⑧ Rig-Up Equipment
- ⑨ Pre-Job Safety Meeting
- ⑩ Start Job
- ⑪ Prime Pumps
- ⑫ Drop Bottom Plug
- ⑬ Test Lines
- ⑭ Pump Tuned Space

**HALLIBURTON** | iCem® Service

Created: 2015-04-21 09:40:31, Version: 4.1.107

Edit

Customer: PICEANCE ENERGY LLC - EBUS

Job Date: 4/21/2015 2:02:27 PM

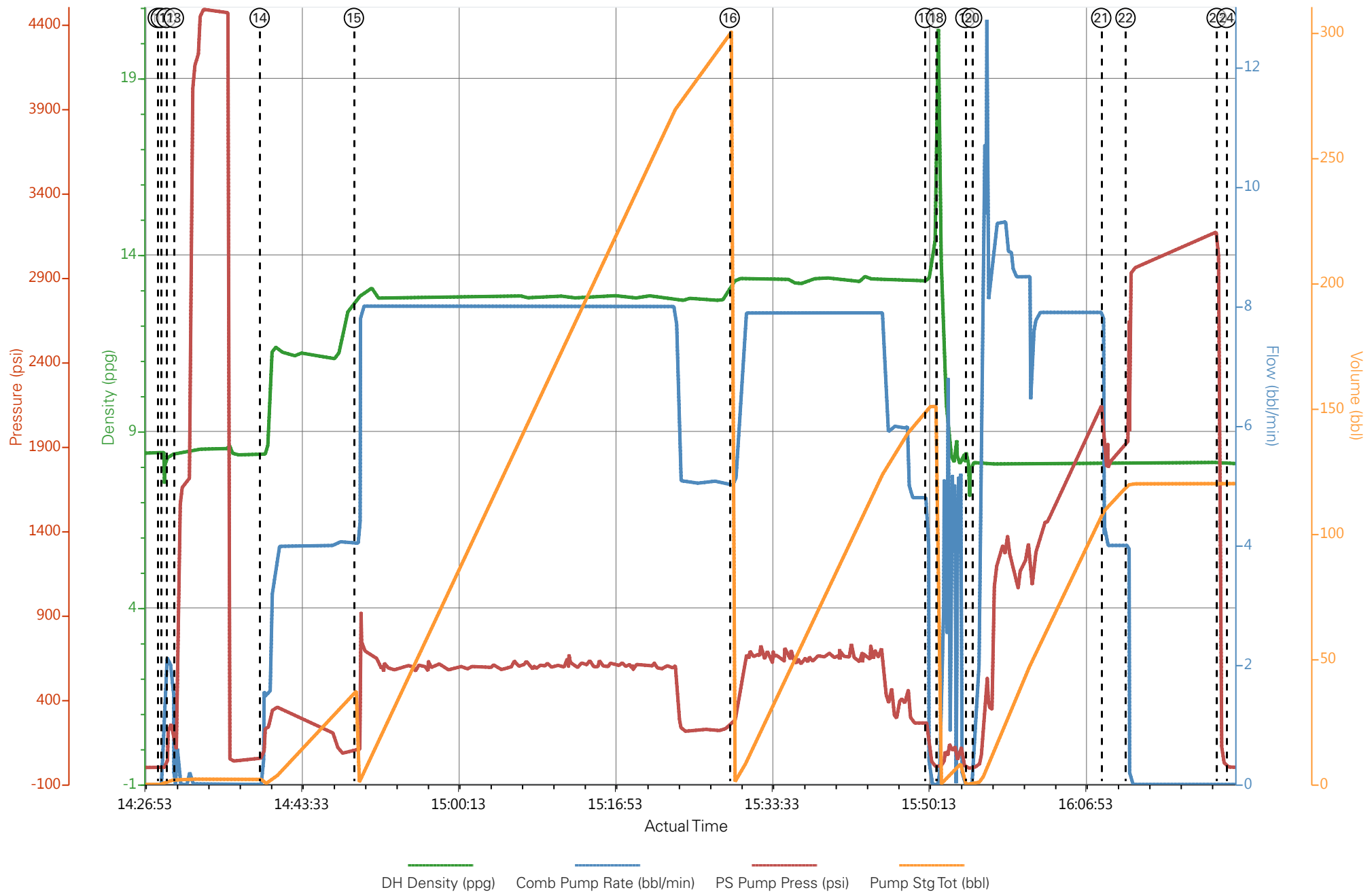
Well: GUNDERSON 29-13E

Representative: MATT SETTLES

Sales Order #: 902336007

Elite #1: JESSE SLAUGHTER / DIRK  
BRENNECKE

# PICEANCE ENERGY - GUNDERSON 29-13E - PRODUCTION



EVENT #	EVENT	VOLUME	SACKS	WEIGHT	YIELD	GAL/ SK
1	Start Job					
6	Test Lines	4500 PSI				
9	Tuned Spacer	40.0		11	4.55	30
13	Lead Cement	278.0	892	12.8	1.75	8.5
15	Tail Cement	139.0	413	13.3	1.89	8.66
	SHUTDOWN					
	Clean lines/drop plug					
22	Displace with CLAYWEB	119.2		8.4		
23	Slow rate	109.2				
26	Land Plug	1844 PSI	GO	500	PSI	OVER
	Release Psi / Job Over					
			Do Not Overdisplace			
DISPLACEMENT	TOTAL PIPE	SHOE JOINT LENGTH		FLOAT COLLAR	BBL/FT	H2O REQ.
119.20	7780	89.63		7690.37	0.0155	447 BBL
PSI to Lift Pipe		***** <u>Use Mud Scales on Each Tier</u> *****				
Total Displacement	119.20					
CALCULATED DIFFERENTIAL PSI		1844 PSI		TOTAL FLUID PUMPED		577 BBL
Collapse		Burst			SO#	902336007

# HALLIBURTON

## Water Analysis Report

Company: PICEANCE

Submitted by: JESSE SLAUGHTER

Attention: LAB

Lease GUNDERSON

Well # 29-13E

Date: 4/21/2015

Date Rec.:

S.O.# 902336007

Job Type: PRODUCTION

Specific Gravity	<i>MAX</i>	<b>1</b>
pH	<i>8</i>	<b>6</b>
Potassium (K)	<i>5000</i>	<b>250</b> Mg / L
Calcium (Ca)	<i>500</i>	<b>120</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>40-80</i>	<b>65</b> Deg
Total Dissolved Solids		<b>200</b> Mg / L

Respectfully: JESSE SLAUGHTER

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