

Piceance Energy LLC- EBUS

Gunderson 29-11E

Patterson 306

Post Job Summary

Cement Production Casing

Date Prepared: 04/30/2015
Job Date: 04/07/2015

Submitted by: Jenna Cook – Grand Junction Cement Engineer

The Road to Excellence Starts with Safety

Sold To #: 344919	Ship To #: 3123913	Quote #:	Sales Order #: 0902292941
Customer: PICEANCE ENERGY LLC - EBUS	Customer Rep: ROGER FOSTER		
Well Name: GUNDERSON	Well #: 29-11E	API/UWI #: 05-077-09768-00	
Field: VEGA	City (SAP): COLLBRAN	County/Parish: MESA	State: COLORADO
Legal Description: SE NE-29-9S-93W-2401FNL-1119FEL			
Contractor: PATTERSON-UTI ENERGY	Rig/Platform Name/Num: PATTERSON 306		
Job BOM: 7523			
Well Type: DIRECTIONAL GAS			
Sales Person: HALAMERICA\HX41066	Srvc Supervisor: John Keane		

Job

Formation Name	
Formation Depth (MD)	Top
Form Type	BHST
Job depth MD	7795ft
Water Depth	Wk Ht Above Floor 3 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	7.921	24	8 RD	J-55	0	1546	0	1546
Casing		4.5	4	11.6	8 RD	I-80	0	7797	0	7797
Open Hole Section			7.875				1546	7805	0	7805

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	4.5	1	HES	7795	Bottom Plug	4.5	1	HES
Float Collar	4.5	1	HES	7708	SSR plug set			
Insert Float					Plug Container	4.5	1	HES
Stage Tool					Centralizers	4.5	124	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/mi n	Total Mix Fluid Gal
2	VersaCem GJ4	VERSACEM (TM) SYSTEM	885	sack	12.8	1.752		6	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/mi n	Total Mix Fluid Gal
3	ExpandaCem GJ4	EXPANDACEM (TM) SYSTEM	413	sack	13.3	1.89		6	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/mi n	Total Mix Fluid Gal
4	Displacement	Displacement	119.5	bbl	8.33			10	
0.05 gal/bbl		CLA-WEB - TOTE (101985045)							
0.01 gal/bbl		MICRO MATRIX CEMENT RETARDER, 5 GAL PAIL (100003781)							
Cement Left In Pipe		Amount	90 ft			Reason		Shoe Joint	
Comment 32 BBL TUNED SPACER III CIRCULATED TO SURFACE									

4.5 Job Event Log

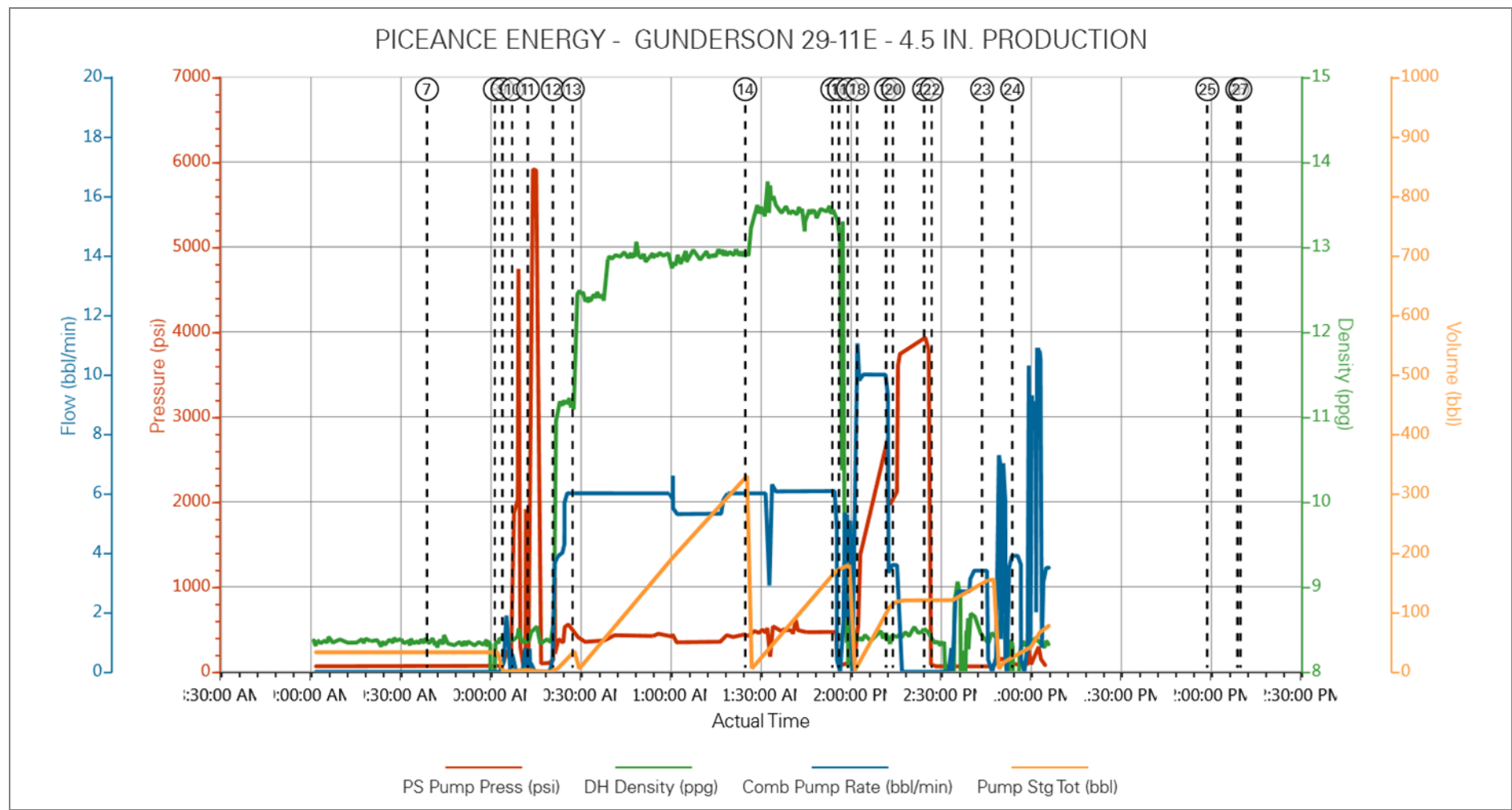
Type	Seq. No.	Activity	Date	Time	Source	Pass-Side Pump Pressure (psi)	Downhole Density (ppg)	Combined Pump Rate (bbl/min)	Pump Stage Total (bbl)	Comments
Event	1	Call Out	4/5/2015	02:00:00	USER					
Event	2	Pre-Convoy Safety Meeting	4/5/2015	04:30:00	USER					WITH HES
Event	3	Arrive At Loc	4/5/2015	06:30:00	USER					RIG RUNNING CASING UPON HES ARRIVAL
Event	4	Assessment Of Location Safety Meeting	4/5/2015	06:45:00	USER					WITH HES
Event	5	Pre-Rig Up Safety Meeting	4/5/2015	07:00:00	USER					WITH HES
Event	6	Rig-Up Equipment	4/5/2015	07:10:00	USER					1 F-550, 1 IRON TRAILER, 1 ELITE, 2 660 BULK TRUCKS, 1 BODY LOAD BULK TRUCK, 1 LINE RAN TO THE FLOOR, 1 LINE RAN TO THE PIT
Event	7	Pre-Job Safety Meeting	4/5/2015	09:40:00	USER					WITH HES, PICEANCE, AND PATERSON 306
Event	8	Start Job	4/5/2015	10:02:39	COM5					TD 7795 FT, TP 7797.7 FT, HOLE 7.875 IN, CSG 4.5 IN 11.6 LB/FT I-80, SHOE 89.67 FT, SURFACE CSG SET AT 1546 FT 8.625 IN 24 LB/FT J-55, MWT 9.9 LB/GAL, PV/YP 2/1
Event	9	Prime Pumps	4/5/2015	10:05:09	COM5	276.00	8.39	1.90	3.0	LAUNCHED BOTTOM PLUG
Event	10	Test Lines	4/5/2015	10:08:25	COM5	2009.00	8.41	0.00	3.1	PRESSURE NOT HOLDING
Event	11	Test Lines	4/5/2015	10:13:38	COM5	5612.00	8.50	0.00	3.4	LOW TEST AT 2007 PSI, HIGH TEST AT 5612 PSI, PRESSURE HOLDING,
Event	12	Pump Spacer 1	4/5/2015	10:21:56	COM5	396.00	11.02	3.80	40.0	MIXED AT 11.0 LB/GAL, 4.55 FT3/SK, 30 GAL/SK, DENSITY VERIFIED USING PRESSURIZED MUD SCALES

Type	Seq. No.	Activity	Date	Time	Source	Pass-Side Pump Pressure (psi)	Downhole Density (ppg)	Combined Pump Rate (bbl/min)	Pump Stage Total (bbl)	Comments
Event	13	Pump Lead Cement	4/5/2015	10:28:34	COM5	402.00	12.80	6.00	276.0	MIXED AT 12.8 LB/GAL, 885 SKS, 1.75 FT3/SK, 8.50 GAL/SK, DENSITY VERIFIED USING PRESSURIZED MUD SCALES
Event	14	Pump Tail Cement	4/5/2015	11:26:02	COM5	416.00	13.30	6.00	139.0	MIXED AT 13.3 LB/GAL, 413 SKS, 1.89 FT3/SK, 8.66 GAL/SK, DENSITY VERIFIED USING PRESSURIZED MUD SCALES
Event	15	Shutdown	4/5/2015	11:55:02	USER	485.00	13.34	6.10	139.0	
Event	16	Clean Lines	4/5/2015	11:57:18	USER	95.00	12.92	0.00	139.0	WASHED PUMPS AND LINES TO THE RIGS CELLAR
Event	17	Drop Top Plug	4/5/2015	12:00:17	USER	58.00	8.55	0.00	0.0	PLUG LAUNCHED
Event	18	Pump Displacement	4/5/2015	12:03:22	COM5	2700.00	8.37	10.00	109.0	FRESH WATER, MMCR AND CLA WEB ADDED
Event	19	Slow Rate	4/5/2015	12:13:00	USER	1971.00	8.30	3.60	119.5	SLOWED AT 109 BBL AWAY
Event	20	Bump Plug	4/5/2015	12:15:17	COM5	2122.00	8.46	3.60	119.5	PLUG BUMPED AT CALCULATED DISPLACEMENT
Event	21	Check Floats	4/5/2015	12:25:38	USER	3951.00	8.49	0.00	120.1	FLOATS HOLDING, 1.3 BBL RETURNED TO THE TRUCK
Event	22	End Job	4/5/2015	12:28:07	USER					GOOD CIRCULATION, PIPE WAS STATIC, NO ADD HOURS CHARGED, CIRCULATED 32 BBL TUNED SPACER III TO SURFACE. RIG DID NOT USE SUGAR
Event	23	Pre-Rig Down Safety Meeting	4/5/2015	12:45:00	USER					WITH HES
Event	24	Rig-Down Equipment	4/5/2015	12:55:00	USER					
Event	25	Pre-Convoy Safety Meeting	4/5/2015	14:00:00	USER					WITH HES

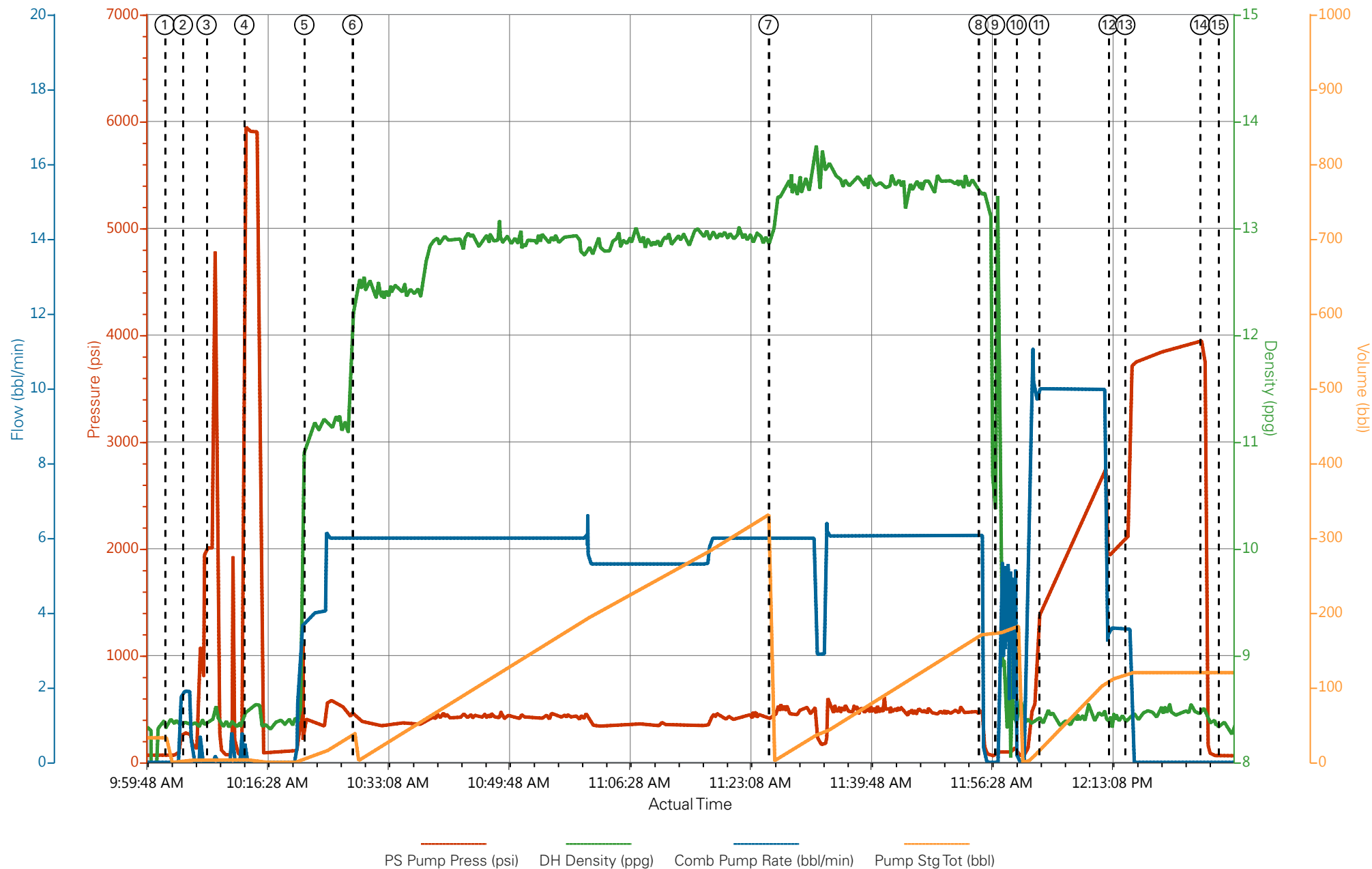
Type	Seq. No.	Activity	Date	Time	Source	Pass-Side Pump Pressure <i>(psi)</i>	Downhole Density <i>(ppg)</i>	Combined Pump Rate <i>(bbl/min)</i>	Pump Stage Total <i>(bbl)</i>	Comments
Event	26	Crew Leave Location	4/5/2015	14:10:00	USER					
Event	27	Comment	4/5/2015	14:11:00	USER					THANKS FOR USING HALLIBURTON, JOHN KEANE AND CREW

5.0 Custom Graphs

5.1 Custom Graph



PICEANCE ENERGY - GUNDERSON 29-11E - 4.5 IN. PRODUCTION



① Start Job 68;8.45;0;32.8	⑥ Pump Lead Cement 418;12.45;6;0.1	⑪ Pump Displacement 1412;8.36;10;19.9
② Fill Lines 276;8.39;1.9;1.7	⑦ Pump Tail Cement 418;12.94;6;0.1	⑫ Slow Rate 1971;8.31;3.6;110.9
③ Test Lines 2008;8.41;0;3.1	⑧ Shutdown 480;13.34;6.1;171.2	⑬ Bump Plug 2118;8.46;3.6;119
④ Test Lines 5918;8.5;0;3.4	⑨ Wash Pumps and Lines 96;12.63;0;172.2	⑭ Check Floats 3951;8.49;0;120.1
⑤ Pump Tuned Spacer III 391;11.03;3.8;4.6	⑩ Drop Top Plug 58;8.54;0;0	⑮ End Job 64;8.38;0;120.1

PATERSON 306

Pre-Planned Job Procedure Single Stage Production

EVENT #	EVENT	VOLUME	SACKS	WEIGHT	YIELD	GAL/ SK
1	START JOB		DENSITY OVER RATE			
	FILL LINES	2				
6	TEST LINES	5000				
9	TUNED SPACER	40		11	4.55	30
14	LEAD CEMENT	275.8	885	12.8	1.75	8.5
15	TAIL CEMENT	139.0	413	13.3	1.89	8.66
	SHUTDOWN			MUD WT.	9.9	
22	DROP PLUG			CASING	4.5	40.5
23	DISPLACE WITH H2O	119.5		OPEN HOLE	7.875	
	SLOW RATE	109				
26	BUMP PLUG	1876	+500	DISP FLUID	8.33	
	CHECK FLOATS	2376				
2	END JOB					
			Do Not Overdisplace			
DISPLACEMENT	TOTAL PIPE	SHOE JOINT LENGTH		ANN FACTOR	BBL/FT	H2O REQ.
119.47	7797.2	89.67		0.0406	0.0155	456
PSI TO LIFT	16852	*****Use Mud Scales on Each Tier*****				
PSI TO LAND	1876					
CEMENT TO SURFACE		96.9		TOTAL FLUID PUMPED		574
HOT	3,390	TOT	4,407	CO REP	ROGER FOSTER	
HOL	6,794	TOL	SURF		SO#	902292941

HALLIBURTON

Water Analysis Report

Company: PICEANCE ENERGY
Submitted by: JOHN KEANE
Attention: EVAN RUSSEL
Lease GUNDERSON
Well # 29-11E

Date: 4/5/2015
Date Rec.: 4/5/2015
S.O.# 902292941
Job Type: PRODUCTION

Specific Gravity	<i>MAX</i>	1
pH	<i>8</i>	7.3
Potassium (K)	<i>5000</i>	0 Mg / L
Calcium (Ca)	<i>500</i>	100 Mg / L
Iron (FE2)	<i>300</i>	0 Mg / L
Chlorides (Cl)	<i>3000</i>	0 Mg / L
Sulfates (SO ₄)	<i>1500</i>	<200 Mg / L
Chlorine (Cl ₂)		0 Mg / L
Temp	<i>40-80</i>	57 Deg
Total Dissolved Solids		690 Mg / L

Respectfully: JOHN KEANE

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 use