

PICEANCE ENERGY LLC - EBUS

Piceance 28-02M

Patterson 306

Post Job Summary
Cement Production Casing

Date Prepared: 09/14/2015

Job Date: 09/01/2015

Submitted by: Aaron Katz – Grand Junction Cement Engineer

The Road to Excellence Starts with Safety

Sold To #: 344919	Ship To #: 3673007	Quote #:	Sales Order #: 0902701081
Customer: PICEANCE ENERGY LLC - EBUS		Customer Rep: ROGER FOSTER	
Well Name: PICEANCE FED	Well #: 28-02M	API/UWI #: 05-077-10239-00	
Field: VEGA	City (SAP): COLLBRAN	County/Parish: MESA	State: COLORADO
Legal Description: SW NW-28-9S-93W-1560FNL-1212FWL			
Contractor: PATTERSON-UTI ENERGY		Rig/Platform Name/Num: PATTERSON 306	
Job BOM: 7523			
Well Type: DIRECTIONAL GAS			
Sales Person: HALAMERICA\HX41066		Srcv Supervisor: Eric Carter	

Job

Formation Name			
Formation Depth (MD)	Top	1616 FT.	Bottom 8266 FT.
Form Type	BHST		
Job depth MD	8256ft		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	1616		0
Casing		4.5	4	11.6	8 RD	I-80	0	8256		0
Open Hole Section			7.875				1616	8266	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	138	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 ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Tuned Spacer III	Tuned Spacer III	40	bbl	11	4.55	30	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 ³ /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
2	VersaCem	VERSACEM (TM) SYSTEM	964	sack	12.8	1.75	8.5	7	
	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	7	
	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	127	bbl	8.34			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	84 ft			Reason	Shoe Joint			
Comment									

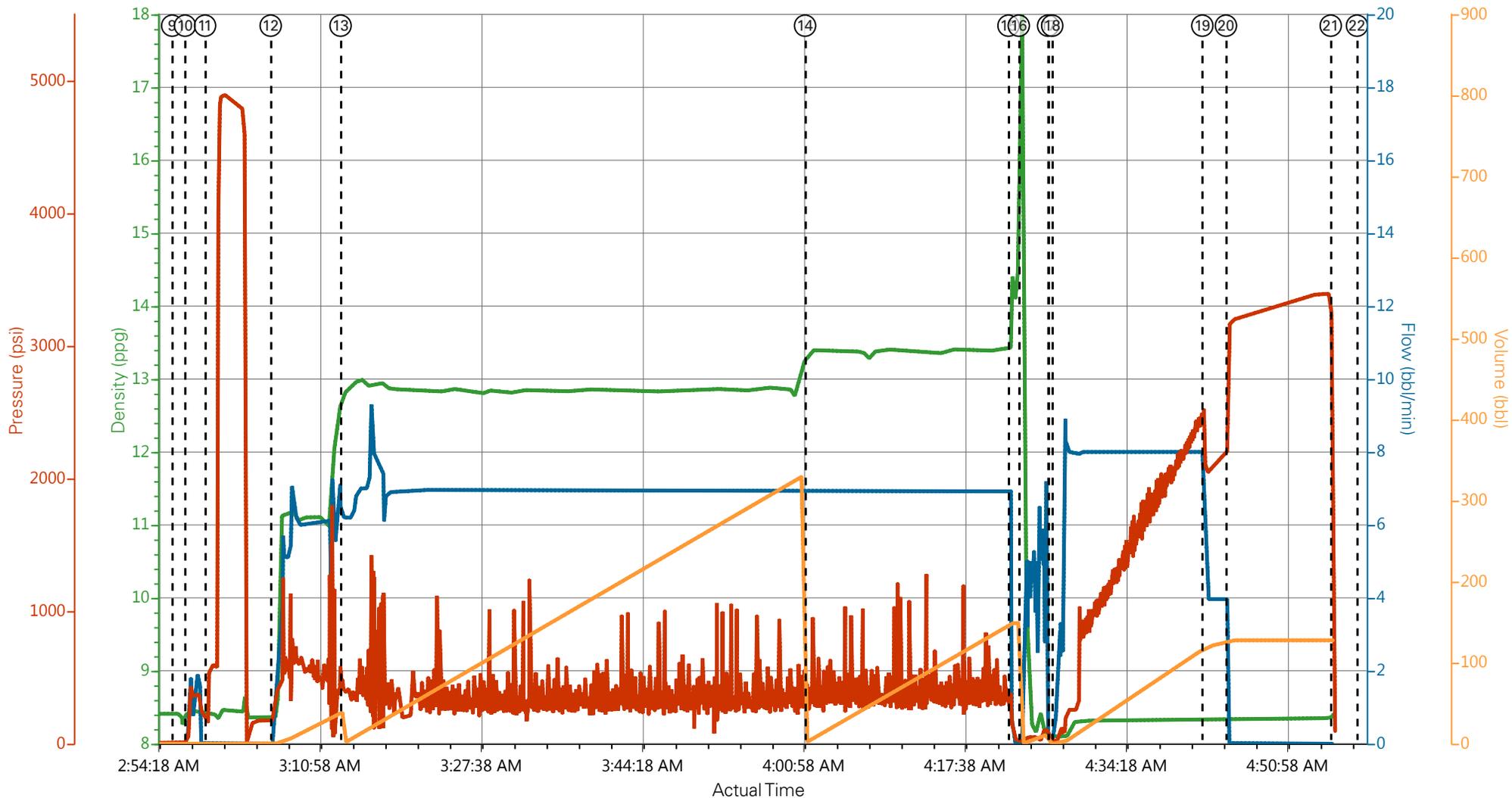
1.0 Real-Time Job Summary

1.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	PS Pump Press <i>(psi)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	8/31/2015	17:00:00	USER					
Event	2	Depart Yard Safety Meeting	8/31/2015	19:00:00	USER					ATTENDED BY ALL HES CREW
Event	3	Arrive At Loc	8/31/2015	21:00:00	USER					RIG RUNNING CASING
Event	4	Assessment Of Location Safety Meeting	9/1/2015	01:00:00	USER					ATTENDED BY ALL HES CREW
Event	5	Other	9/1/2015	01:10:00	USER					SPOT EQUIPMENT
Event	6	Pre-Rig Up Safety Meeting	9/1/2015	01:20:00	USER					ATTENDED BY ALL HES CREW
Event	7	Rig-Up Equipment	9/1/2015	01:30:00	USER					
Event	8	Pre-Job Safety Meeting	9/1/2015	02:30:00	USER					ATTENDED BY ALL HES CREW, RIG CREW AND COMPANY REP
Event	9	Start Job	9/1/2015	02:56:00	USER					TP 8256', TD 8266', MW 9.4 PPG, CASING 4.5", 11.6#, I-80, SJ 83.32', HOLE 7.875", SURFACE CASING 8.625", 24# SET AT 1616', RIG CIRCULATED FOR 2 HR'S PRIOR TO JOB
Event	10	Fill Lines	9/1/2015	02:57:19	USER	8.34	2	300	2	FRESH WATER
Event	11	Test Lines	9/1/2015	02:59:23	USER					PRESSURED UP TO PSI, PRESSURE HELD
Event	12	Pump Spacer	9/1/2015	03:06:10	USER	11	6	600	40	TUNED SPACER III MIXED AT 11 PPG, BOTTOM PLUG LAUNCHED
Event	13	Pump Lead Cement	9/1/2015	03:13:24	USER	12.8	7	400	300.5	964 SKS VERSACEM MIXED AT 12.8 PPG, 1.75 YIELD, 8.5 GL/SK
Event	14	Pump Tail Cement	9/1/2015	04:01:24	USER	13.3	7	380	139	413 SKS EXPANDACEM MIXED AT 13.3 PPG, 1.89 YIELD, 8.66 GL/SK
Event	15	Shutdown	9/1/2015	04:22:25	USER					

Event	16	Clean Lines	9/1/2015	04:23:29	USER					CLEANED PUMPS AND LINES TO CELLAR
Event	17	Drop Top Plug	9/1/2015	04:26:31	USER					PLUG LAUNCHED
Event	18	Pump Displacement	9/1/2015	04:26:56	USER	8.34	8	2500	117	FRESH WATER WITH CLAY-WEB AND MMCR
Event	19	Slow Rate	9/1/2015	04:42:27	USER	8.34	4	2180	10	
Event	20	Bump Plug	9/1/2015	04:44:53	USER			3200		PLUG LANDED
Event	21	Check Floats	9/1/2015	04:55:43	USER			3380		FLOATS HELD
Event	22	End Job	9/1/2015	04:58:26	USER					GOOD CIRCULATION THROUGHOUT JOB, PIPE NOT MOVED DURING JOB, 27 BBLS CEMENT TO SURFACE
Event	23	Post-Job Safety Meeting (Pre Rig-Down)	9/1/2015	05:00:00	USER					ATTENDED BY ALL HES CREW
Event	24	Rig-Down Equipment	9/1/2015	05:10:00	USER					
Event	25	Depart Location Safety Meeting	9/1/2015	05:50:00	USER					ATTENDED BY ALL HES CREW
Event	26	Crew Leave Location	9/1/2015	06:00:00	USER					THANK YOU FOR USING HALLIBURTON CEMENT, ERIC CARTER AND CREW.

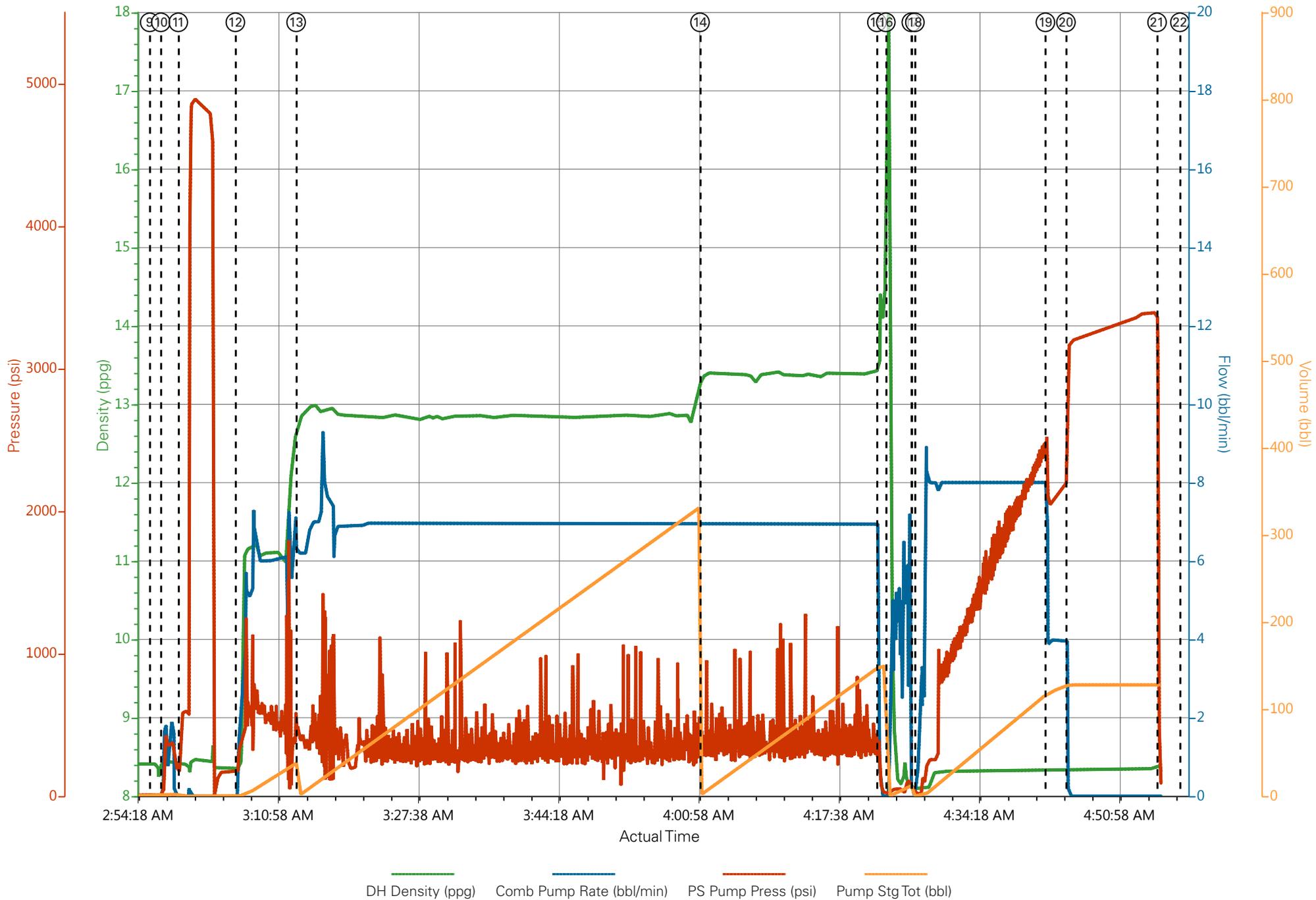
PICEANCE ENERGY - PICEANCE FED 28-02M - PRODUCTION



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

- | | | | | |
|---|---|------------------------------------|-----------------------------------|-------------------------|
| ① Call Out n/a;n/a;n/a;n/a | ⑥ Pre-Rig Up Safety Meeting n/a;n/a;n/a;n/a | ⑪ Test Lines 8.4;0;503;0 | ⑰ Clean Lines 15.67;1.7;24;0 | ⑳ Check Floats 8.36;0; |
| ② Depart Yard Safety Meeting n/a;n/a;n/a;n/a | ⑦ Rig-Up Equipment n/a;n/a;n/a;n/a | ⑫ Pump Spacer 8.35;0;178;0 | ⑱ Drop Top Plug 8.1;0;30;0 | ㉑ End Job n/a;n/a;n/a;n |
| ③ Arrive At Loc n/a;n/a;n/a;n/a | ⑧ Pre-Job Safety Meeting n/a;n/a;n/a;n/a | ⑬ Pump Lead Cement 12.79;6.2;353;1 | ㉒ Pump Displacement 8.09;1.7;15;0 | ㉓ Post-Job Safety Me |
| ④ Assessment Of Location Safety Meeting n/a;n/a;n/a;n/a | ⑨ Start Job 8.41;0;5;0 | ⑭ Pump Tail Cement 13.35;7;266;3.5 | ㉓ Slow Rate 8.33;3.9;2002;118.6 | ㉔ Rig-Down Equipmen |
| ⑤ Other n/a;n/a;n/a;n/a | ⑩ Fill Lines 8.41;1.4;88;0.1 | ⑮ Shutdown 14.27;0;140;148.9 | ㉔ Bump Plug 8.36;0;3155;127.7 | ㉕ Depart Location Saf |

PICEANCE ENERGY - PICEANCE FED 28-02M - PRODUCTION



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

HALLIBURTON

Water Analysis Report

Company: PICEANCE ENERGY

Date: 9/14/2015

Submitted by: ERIC CARTER

Date Rec.: 9/14/2015

Attention: J.Trout

S.O.# 902701081

Lease PATTERSON 306

Job Type: PRODUCTION

Well # PICEANCE FED 28-02M

Specific Gravity	<i>MAX</i>	1
pH	<i>8</i>	7
Potassium (K)	<i>5000</i>	0 Mg / L
Hardness	<i>500</i>	500 Mg / L
Iron (FE2)	<i>300</i>	0 Mg / L
Chlorides (Cl)	<i>3000</i>	500 Mg / L
Sulfates (SO ₄)	<i>1500</i>	<200 Mg / L
Temp	<i>40-80</i>	60 Deg
Total Dissolved Solids		550 Mg / L

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

Sales Order #: 0902701081	Line Item: 10	Survey Conducted Date: 9/1/2015
Customer: PICEANCE ENERGY LLC - EBUS		Job Type (BOM): CMT PRODUCTION CASING BOM
Customer Representative: ROGER FOSTER		API / UWI: (leave blank if unknown) 05-077-10239-00
Well Name: PICEANCE FED		Well Number: 0080734130
Well Type: DIRECTIONAL GAS	Well Country: USA	
H2S Present: No	Well State: COLORADO	Well County: 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	9/1/2015
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	

CUSTOMER SIGNATURE

Sales Order #: 0902701081	Line Item: 10	Survey Conducted Date: 9/1/2015
Customer: PICEANCE ENERGY LLC - EBUS		Job Type (BOM): CMT PRODUCTION CASING BOM
Customer Representative: ROGER FOSTER		API / UWI: (leave blank if unknown) 05-077-10239-00
Well Name: PICEANCE FED		Well Number: 0080734130
Well Type: DIRECTIONAL GAS	Well Country: USA	
H2S Present: No	Well State: COLORADO	Well County: MESA

KEY PERFORMANCE INDICATORS

General	
Survey Conducted Date	9/1/2015
The date the survey was conducted	

Cementing KPI Survey	
Type of Job	0
Select the type of job. (Cementing or Non-Cementing)	
Select the Maximum Deviation range for this Job	Deviated
What is the highest deviation for the job you just completed? This may not be the maximum well deviation.	
Total Operating Time (hours)	5
Total Operating Hours Including Rig-up, Pumping, Rig-down. Enter in decimal format.	
HSE Incident, Accident, Injury	No
HSE Incident, Accident, Injury. This should be recordable incidents only.	
Was the job purpose achieved?	Yes
Was the job delivered correctly as per customer agreed design?	
Pumping Hours	2.5
Total number of hours pumping fluid on this job. Enter in decimal format.	
Type of Rig Classification Job Was Performed	Drilling Rig (Portable)
Type Of Rig (classification) Job Was Performed On	
Number Of JSAs Performed	5
Number Of Jsas Performed	
Was this a Primary Cement Job (Yes / No)	Yes
Primary Cement Job= Casing job, Liner job, or Tie-back job.	
Number of Unplanned Shutdowns	0
Unplanned shutdown is when injection stops for any period of time.	
Customer Non-Productive Rig Time (hrs)	0

Sales Order #: 0902701081	Line Item: 10	Survey Conducted Date: 9/1/2015
Customer: PICEANCE ENERGY LLC - EBUS		Job Type (BOM): CMT PRODUCTION CASING BOM
Customer Representative: ROGER FOSTER		API / UWI: (leave blank if unknown) 05-077-10239-00
Well Name: PICEANCE FED		Well Number: 0080734130
Well Type: DIRECTIONAL GAS	Well Country: USA	
H2S Present: No	Well State: COLORADO	Well County: MESA

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.	
Was the non productive time or the unplanned shutdown caused by a problem with a piece of equipment? Was the non productive time or the unplanned shutdown caused by a problem with a piece of equipment?	No
Did We Run Wiper Plugs? Did We Run Top And Bottom Casing Wiper Plugs?	Both
If a top plug was run, was the plug bumped? (Yes/No/N/A) If a top plug was run, was the plug bumped? (Yes/No/N/A)	Yes
If applicable, was Halliburton float equipment used? (Yes/No/N/A) If applicable, was Halliburton float equipment used? (Yes/No/N/A)	Yes
If applicable, did the floats hold? (Yes/No/N/A) If applicable, did the floats hold? (Yes/No/N/A)	Yes
Mixing Density of Job Stayed in Designed Density Range (0-100%) Density Range defined as +/- .20 ppg. Calculation: Total BBLs cement mixed at designed density divided by total BBLs of cement multiplied by 100	98
Pump Rate (percent) of Job Stayed At Designed Pump Rate 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
If applicable, were there returns throughout the job? (Yes/No/N/A) If applicable, were there returns throughout the job? (Yes/No/N/A)	Yes
Nbr of Remedial Plug Jobs Rqd - HES Number Of Remedial Plug Jobs Needed After Primary Plug Pumped By HES	0
Nbr of Remedial Sqz Jobs Rqd - HES Number Of Remedial Squeeze Jobs Required After Primary Job Performed By HES	0