

Piceance Energy LLC- EBUS

Piceance 28-21M

Patterson 306

Post Job Summary

Cement Production Casing

Date Prepared: 12/11/2014

Job Date: 12/01/14

Submitted by: Evan Russell – Grand Junction Cement Engineer

The Road to Excellence Starts with Safety

Sold To #: 344919	Ship To #: 3124073	Quote #:	Sales Order #: 0901880039
Customer: PICEANCE ENERGY LLC - EBUS		Customer Rep:	
Well Name: PICEANCE	Well #: 28-21M	API/UWI #: 05-077-09942-00	
Field: VEGA	City (SAP): COLLBRAN	County/Parish: MESA	State: COLORADO
Legal Description: NE SW-28-9S-93W-2463FSL-1708FWL			
Contractor:		Rig/Platform Name/Num: Patterson 306	
Job BOM: 7523			
Well Type: DIRECTIONAL GAS			
Sales Person: HALAMERICA\HB80977		Srvc Supervisor: DUSTIN HYDE	

Job

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	8395ft	Job Depth TVD	8395ft
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		8.625	8.097	24			0	1536	0	0
Casing		4.5	4	11.6	LTC	I-80	0	8395		0
Open Hole Section			7.875				1536	8406	0	0

Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	4.5	1		8395	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			
Insert Float	4.5	1			Plug Container	4.5	1	HES
Stage Tool	4.5	1			Centralizers			

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	4.54		4	30	
122.6750 lbm/bbl		BARITE, BULK (100003681)								
36.83 gal/bbl		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	
2	VersaCem	VERSACEM (TM) SYSTEM	997	sack	12.8	1.75		7	8.48	
8.53 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	EXPANDACEM (TM) SYSTEM	404	sack	13.3	1.89		6	8.64	
8.68 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	Displacement	Displacement	128.7	bbl	8.34			8		
Cement Left In Pipe		Amount	90 ft		Reason			Shoe Joint		
Comment										

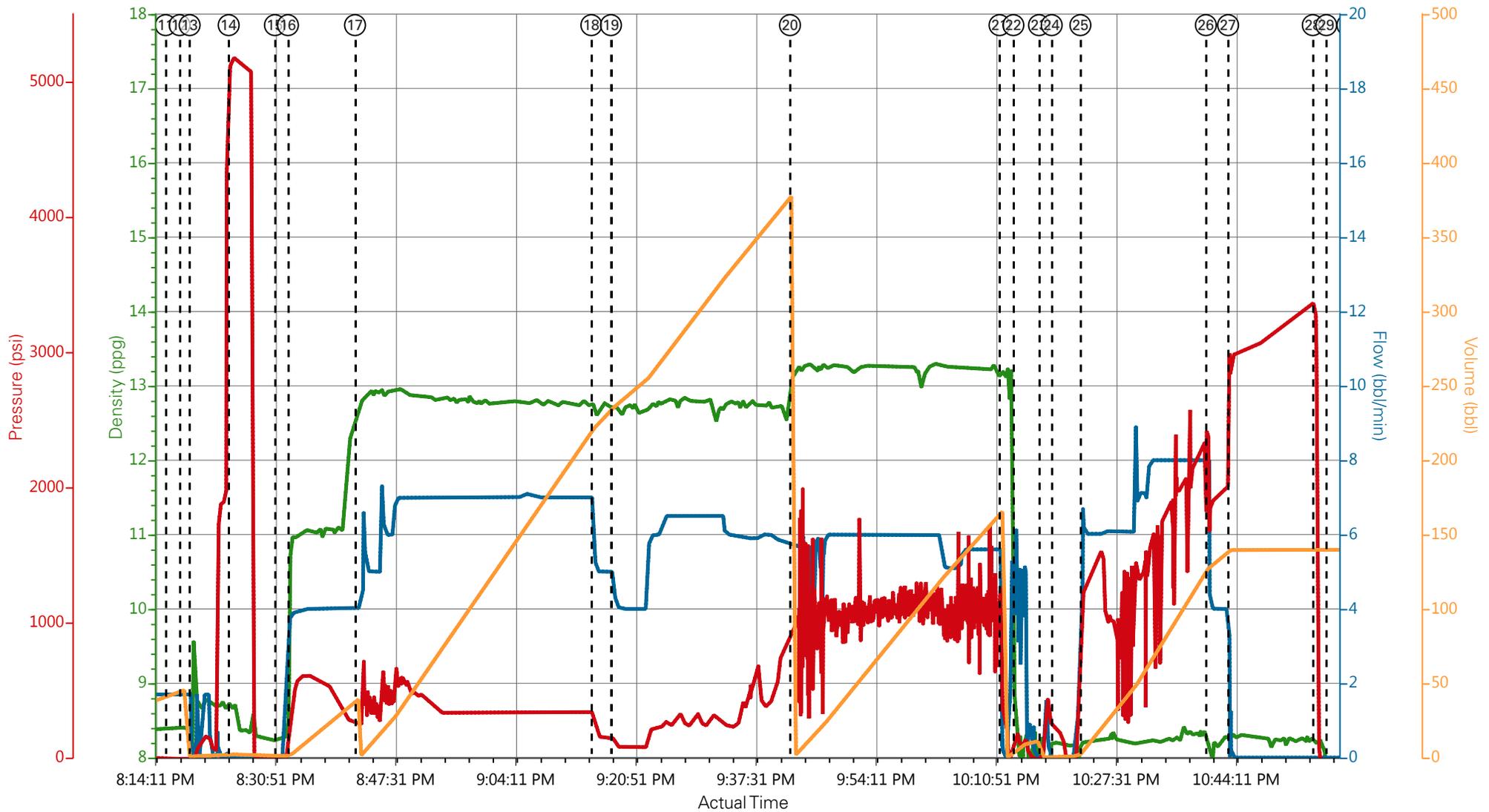
3.5 Job Event Log

Type	Seq. No.	Activity	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	12/1/2014	12:00:00	USER					TO BE ON LOCATION AT 15:30 GOING TO BE LATE
Event	2	Pre-Convoy Safety Meeting	12/1/2014	14:45:00	USER					
Event	3	Crew Leave Yard	12/1/2014	15:00:00	USER					1 HT 400 PUMP TRUCK E#8, 3 660 BULK TRUCKS, 1 550 PICKUP
Event	4	Arrive At Loc	12/1/2014	17:30:00	USER					RIG WAITING ON HES CIRCULATION ON WELL. CO. REP WAS DISPLEASED THAT HE CALLED OVER 24 HRS AGO TO LET US KNOW TO BE HERE AT 1530 AND AGAIN CALLED TO MAKE SURE WE WERE COMING AND IT WAS LIKE WE DIDN'T KNOW ABOUT IT.
Event	5	Assessment Of Location Safety Meeting	12/1/2014	17:45:00	USER					PERFORMED JSA AND WATER TEST
Event	6	Other	12/1/2014	18:00:00	USER					
Event	7	Pre-Rig Up Safety Meeting	12/1/2014	18:15:00	USER					ALL HES PERSONELPRESENT
Event	8	Rig-Up Equipment	12/1/2014	18:30:00	USER					1 HT 400 PUMP TRUCK, 3 660 BULK TRUCKS, 1 1200 CU/FT SILO, 1 550 PICKUP TRUCK
Event	9	Rig-Up Completed	12/1/2014	19:45:00	USER					RIG HAD BAIL BASKET ON LOCATION WHICH WAS EXPIRED. DID NOT USE, USED THE BAIL BASKET THAT HES BROUGHT AND WILL BE BRINGING BAIL BASKETS BACK TO YARD

Type	Seq. No.	Activity	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	10	Pre-Job Safety Meeting	12/1/2014	20:00:00	USER					MUD 9.6 VIS 48, PV 24, YP 22
Event	11	Start Job	12/1/2014	20:16:00	COM8					TD 8406', TP 8395' OF 4 1/2" 11.6# I-80 PRODUCTION CSG, SJ 89.36', OH 7 7/8"
Event	12	Drop Bottom Plug	12/1/2014	20:17:56	USER					PUT INTO CASING BEFORE STABING HEAD
Event	13	Prime Pumps	12/1/2014	20:19:20	COM8	8.33	2.0	165	2	FRESH WATER
Event	14	Test Lines	12/1/2014	20:24:45	COM8			5196		PRESSURE HELD @ 5196 PSI FALLING 1 PSI EVERY 3-4 SECONDS
Event	15	Check Weight	12/1/2014	20:31:10	COM8					
Event	16	Pump Spacer 1	12/1/2014	20:32:58	COM8	11.0	4.0	535	40	40 BBLS, 11 PPG, 4.54 YIELD, 30 GAL/SK
Event	17	Pump Lead Cement	12/1/2014	20:42:16	COM8	12.8	7.0	590	310.7	997 SKS, 12.8 PPG, 1.75 YIELD, 8.48 GAL/SK. BBL COUNTER SHOWING HIGH MIX WATER WAS RIGHT ON CALCULATED @8400 GALLONS
Event	18	Slow Rate	12/1/2014	21:15:05	USER	12.8	5.0	200	220	SLOWED TO KEEP GOOD DENSITY DUE TO COMING TO THE END OF SILO
Event	19	Slow Rate	12/1/2014	21:17:48	USER	12.8	4.0	92	236	SLOWED AGAIN DUE TO ENDING SILO
Event	20	Pump Tail Cement	12/1/2014	21:42:38	COM8	13.3	6.0	1200	136	404 SKS, 13.3 PPG, 1.89 YIELD, 8.64 GAL/SK. BBL COUNTER HIGH, MIX WATER CORRECT BY CALCULATION @ 3200 GAL
Event	21	Shutdown	12/1/2014	22:11:43	USER					
Event	22	Clean Lines	12/1/2014	22:13:38	USER					USED ABOUT 12 BBLS TO CELLAR

Type	Seq. No.	Activity	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	23	Pump Displacement	12/1/2014	22:17:12	COM8	8.33	8.0	2360	119	1 GAL MMCR IN FIRST 10 BBLS
Event	24	Shutdown	12/1/2014	22:18:58	USER					PLUG DID NOT GO DUE TO PRESSURE SHUTDOWN AND HOOKED UP TO 1"
Event	25	Drop Top Plug	12/1/2014	22:22:57	COM8					VERIFIED BY TATTLE TAIL
Event	26	Slow Rate	12/1/2014	22:40:21	USER	8.33	4.0	1873	10	
Event	27	Bump Plug	12/1/2014	22:43:27	COM8	8.33	4.0	2020	129	PLUG BUMPED
Event	28	Check Floats	12/1/2014	22:55:12	USER			3354		FLOATS HELD. 1.5 BBL FLOW BACK. 5 BBLS OF TUNED SPACER III
Event	29	End Job	12/1/2014	22:57:04	USER					
Event	30	Post-Job Safety Meeting (Pre Rig-Down)	12/1/2014	23:00:00	USER					
Event	31	Rig-Down Equipment	12/1/2014	23:15:00	USER					
Event	32	Rig-Down Completed	12/2/2014	00:30:00	USER					NO INJURIES TO REPORT
Event	33	Pre-Convoy Safety Meeting	12/2/2014	00:45:00	USER					
Event	34	Crew Leave Location	12/2/2014	01:00:00	USER					THANK YOU FOR USING HALLIBURTON CEMENT

Piceance Energy 28-21M 4 1/2" Production



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

- | | | | | | | |
|-----------------------------|---|--------------------------|-------------------------|---------------------|----------------------|------------------|
| ① Call Out | ⑤ Assessment Of Location Safety Meeting | ⑨ Rig-Up Completed | ⑬ Prime Lines | ⑰ Pump Lead Cement | 21 Shutdown | 25 Drop Top Plug |
| ② Pre-Convoy Safety Meeting | ⑥ Spot Equipment | ⑩ Pre-Job Safety Meeting | ⑭ Test Lines | ⑱ Slow Rate | 22 Clean Lines | 26 Slow Rate |
| ③ Crew Leave Yard | ⑦ Pre-Rig Up Safety Meeting | ⑪ Start Job | ⑮ Check weight | ⑲ Slow Rate | 23 Pump Displacement | 27 Bump Plug |
| ④ Arrive At Loc | ⑧ Rig-Up Equipment | ⑫ Drop Bottom Plug | ⑯ Pump Tuned Spacer III | 20 Pump Tail Cement | 24 Shutdown | 28 Check Floats |



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Customer: PICEANCE ENERGY LLC EBUSINESS

Job Date: 12/1/2014

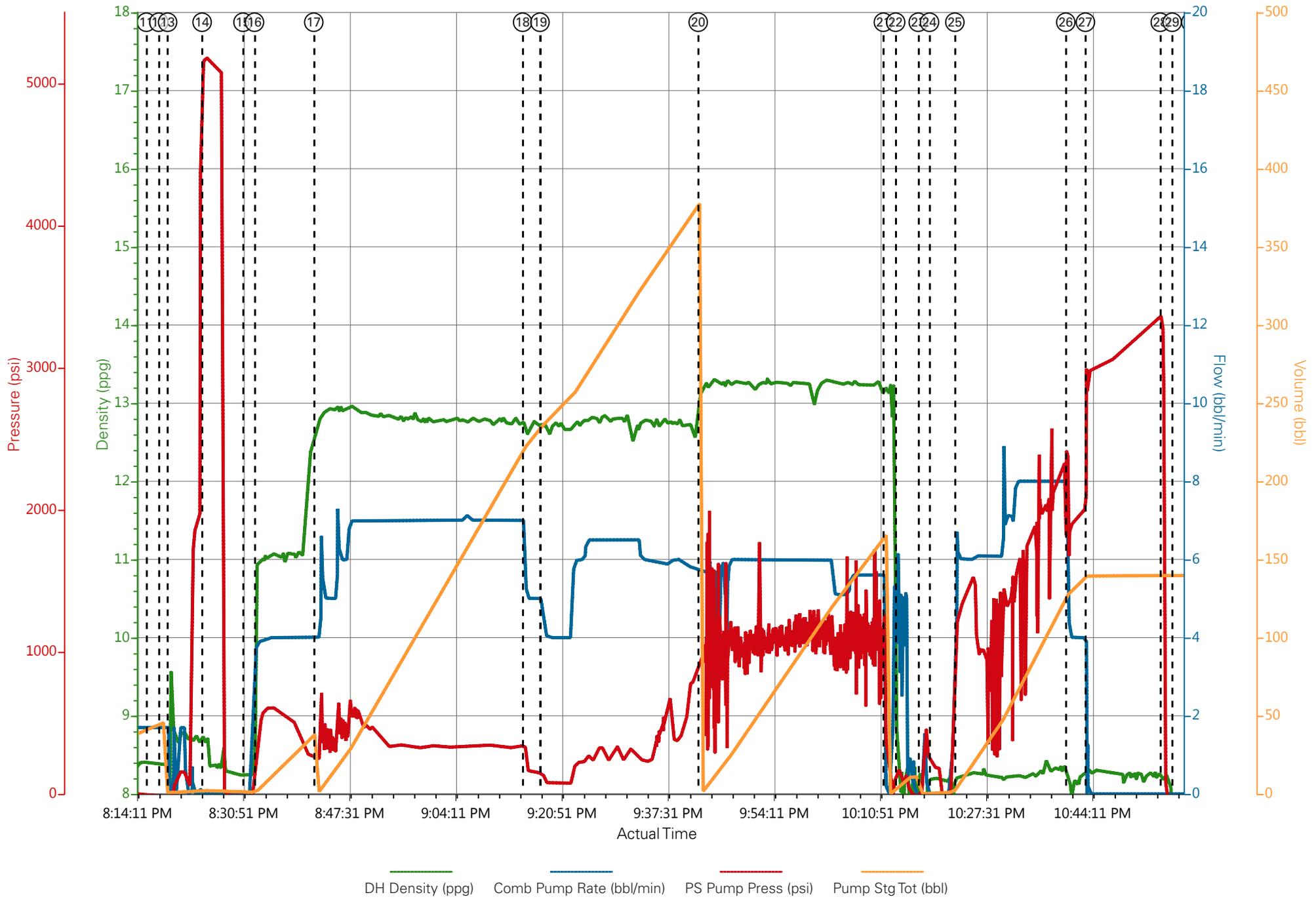
Well: Piceance 28-21M

Representative: Roger Foster

Sales Order #: 901880039

Elite #8: Dustin Hyde / Max Lobato

Piceance Energy 28-21M 4 1/2" Production



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

HALLIBURTON

Water Analysis Report

Company: PICEANCE
Submitted by: Dustin Hyde
Attention: J.TROUT
Lease: PICEANCE
Well #: 28-21M

Date: 12/1/2014
Date Rec.: 12/1/2014
S.O.#: 901880039
Job Type: PRODUCTION

Specific Gravity	<i>MAX</i>	1
pH	<i>8</i>	8
Potassium (K)	<i>5000</i>	200 Mg / L
Calcium (Ca)	<i>500</i>	120 Mg / L
Iron (FE2)	<i>300</i>	3 Mg / L
Chlorides (Cl)	<i>3000</i>	0 Mg / L
Sulfates (SO ₄)	<i>1500</i>	<200 Mg / L
Temp	<i>40-80</i>	75 Deg
Total Dissolved Solids		330 Mg / L

Respectfully: Dustin Hyde

Title: Cement 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.

Sales Order #: 0901880039	Line Item: 10	Survey Conducted Date: 12/2/2014
Customer: PICEANCE ENERGY LLC - EBUS		Job Type (BOM): CMT PRODUCTION CASING BOM
Customer Representative: ROGER FOSTER		API / UWI: (leave blank if unknown) 05-077-09942-00
Well Name: PICEANCE		Well Number: 0080127812
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	12/2/2014
Survey Interviewer	The survey interviewer is the person who initiated the survey.	HB43597
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

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KEY PERFORMANCE INDICATORS

General	
Survey Conducted Date	12/2/2014
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)	8
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	3.5
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)	2

Sales Order #: 0901880039	Line Item: 10	Survey Conducted Date: 12/2/2014
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Well Name: PICEANCE		Well Number: 0080127812
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.	
Reason For Non-Productive Rig Time	COORDINATOR CALLED CREW OUT LATE
Reason For Non-productive Rig Time (Cementing PSL Responsibility)	
Was the non productive time or the unplanned shutdown caused by a problem with a piece of equipment?	No
Was the non productive time or the unplanned shutdown caused by a problem with a piece of equipment?	
Did We Run Wiper Plugs?	Both
Did We Run Top And Bottom Casing Wiper Plugs?	
If a top plug was run, was the plug bumped? (Yes/No/N/A)	Yes
If a top plug was run, was the plug bumped? (Yes/No/N/A)	
If applicable, was Halliburton float equipment used? (Yes/No/N/A)	Not Available
If applicable, was Halliburton float equipment used? (Yes/No/N/A)	
If applicable, did the floats hold? (Yes/No/N/A)	Yes
If applicable, did the floats hold? (Yes/No/N/A)	
Mixing Density of Job Stayed in Designed Density Range (0-100%)	98
Density Range defined as +/- .20 ppg. Calculation: Total BBLs cement mixed at designed density divided by total BBLs of cement multiplied by 100	
Pump Rate (percent) of Job Stayed At Designed Pump Rate	97
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	
If applicable, were there returns throughout the job? (Yes/No/N/A)	Yes
If applicable, were there returns throughout the job? (Yes/No/N/A)	
Nbr of Remedial Plug Jobs Rqd - HES	0
Number Of Remedial Plug Jobs Needed After Primary Plug Pumped By HES	
Nbr of Remedial Sqz Jobs Rqd - HES	0
Number Of Remedial Squeeze Jobs Required After Primary Job Performed By HES	