

Piceance Energy LLC-EBUS

Piceance 28-10W

Patterson 306

Post Job Summary

Cement Surface Casing

Date Prepared: 07/22/2015

Job Date: 07/19/2015

Submitted by: Jenna Cook – Grand Junction Cement Engineer

The Road to Excellence Starts with Safety

Sold To #: 344919	Ship To #: 3123922	Quote #:	Sales Order #: 0902592121
Customer: PICEANCE ENERGY LLC - EBUS		Customer Rep: ROGER FOSTER	
Well Name: PICEANCE	Well #: 28-10W	API/UWI #: 05-077-09778-00	
Field: VEGA	City (SAP): COLLBRAN	County/Parish: MESA	State: COLORADO
Legal Description: SW NW-28-9S-93W-1612FNL-1242FWL			
Contractor: PATTERSON-UTI ENERGY		Rig/Platform Name/Num: PATTERSON 306	
Job BOM: 7521			
Well Type: DIRECTIONAL GAS			
Sales Person: HALAMERICA\HX41066		Srvc Supervisor: Eric Carter	
Job			

Formation Name	
Formation Depth (MD)	Top 82 FT Bottom 1578 FT
Form Type	BHST
Job depth MD	1567 FT 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		16	15.25	65			0	82		0
Casing		8.625	8.097	24			0	1567		0
Open Hole Section			11				82	1578	0	0

Tools and Accessories									
Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make	
Guide Shoe					Top Plug	8.625	1	HES	
Float Shoe					Bottom Plug	8.625	1	HES	
Float Collar					SSR plug set				
Insert Float					Plug Container	8.625	1	HES	
Stage Tool					Centralizers	8.625	19	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			6		
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	14.17	8	
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/min	Total Mix Fluid Gal
3	VariCem GJ5	VARICEM (TM) CEMENT	120	sack	12.8	2.18	12.11	8	
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/min	Total Mix Fluid Gal
4	Fresh Water Displacement	Fresh Water Displacement	96.8	bbl	8.3			8	
Cement Left In Pipe		Amount	44 ft		Reason		Shoe Joint		
Comment									

1.0 Real-Time Job Summary

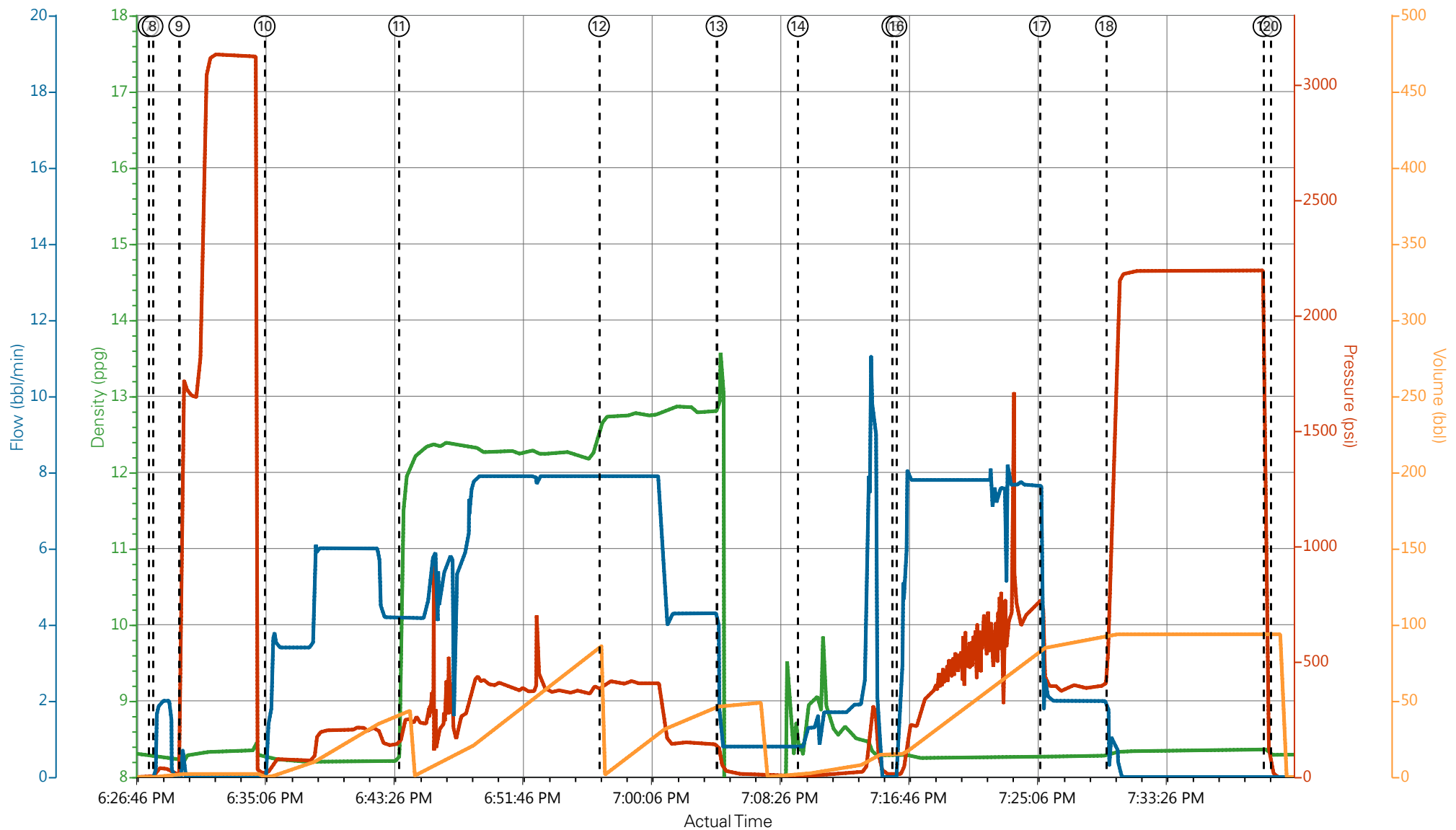
1.1 Job Event Log

Type	Seq. No.	Activity	Date	Time	Source	DH Density (ppg)	PS Pump Press (psi)	Comb Pump Rate (bbl/min)	Pump Stg Tot (bbl)	Comments
Event	1	Arrive at Location from Other Job or Site	7/19/2015	16:30:00	USER					RIG RUNNING CASING
Event	2	Assessment Of Location Safety Meeting	7/19/2015	16:35:00	USER					ATTENDED BY ALL HES CREW
Event	3	Other	7/19/2015	16:40:00	USER					SPOT EQUIPMENT
Event	4	Pre-Rig Up Safety Meeting	7/19/2015	16:50:00	USER					ATTENDED BY ALL HES CREW
Event	5	Rig-Up Equipment	7/19/2015	17:00:00	USER					
Event	6	Pre-Job Safety Meeting	7/19/2015	18:00:00	USER					ATTENDED BY ALL HES CREW, RIG CREW AND COMPANY REP
Event	7	Other	7/19/2015	18:27:43	USER					TP 1566.77', TD 1578', MW 9.4 PPG, CASING 8.625" 24# J-55, OH 12.25", CONDUCTOR CASING 16", 65# SET AT 82', RIG CIRCULATED FOR 1.5 HRS PRIOR TO JOB
Event	8	Other	7/19/2015	18:27:59	USER	8.34	405	2	2	FRESH WATER
Event	9	Test Lines	7/19/2015	18:29:42	USER					PRESSURED UP TO 3130 PSI, PRESSURE HELD
Event	10	Pump Spacer	7/19/2015	18:35:15	USER	8.34	210	6	40	FRESH WATER
Event	11	Pump Lead Cement	7/19/2015	18:43:57	USER	12.3	450	8	84.1	192 SKS VARICEM MIXED AT 12.3 PPG, 2.46 YIELD, 14.17 GAL/SK
Event	12	Pump Tail Cement	7/19/2015	18:56:54	USER	12.8	413	8	47.4	120 SKS VARICEM MIXED AT

12.8 PPG, 2.18 YIELD, 12.11
GAL/SK

Event	13	Shutdown	7/19/2015	19:04:30	USER					
Event	14	Comment	7/19/2015	19:09:46	USER					HES REPRIMED PUMP
Event	15	Drop Top Plug	7/19/2015	19:15:53	USER					PLUG LAUNCHED
Event	16	Pump Displacement	7/19/2015	19:16:09	USER	8.34	775	8	86.8	FRESH WATER
Event	17	Slow Rate	7/19/2015	19:25:26	USER	8.34	400	2	10	
Event	18	Bump Plug	7/19/2015	19:29:43	USER		2100			PLUG LANDED
Event	19	Check Floats	7/19/2015	19:39:54	USER		2195			FLOATS HELD
Event	20	Other	7/19/2015	19:40:23	USER					GOOD CIRCULATION THROUGHOUT JOB, PIPE NOT MOVED DURING JOB, 36 BBLS CEMENT TO SURFACE
Event	21	Post-Job Safety Meeting (Pre Rig-Down)	7/20/2015	19:45:00	USER					ATTENDED BY ALL HES CREW
Event	22	Rig-Down Equipment	7/20/2015	19:50:00	USER					
Event	23	Depart Location Safety Meeting	7/20/2015	20:20:00	USER					ATTENDED BY ALL HES CREW
Event	24	Crew Leave Location	7/20/2015	20:30:00	USER					THANK YOU FOR USING HALLIBURTON CEMENT, ERIC CARTER AND CREW

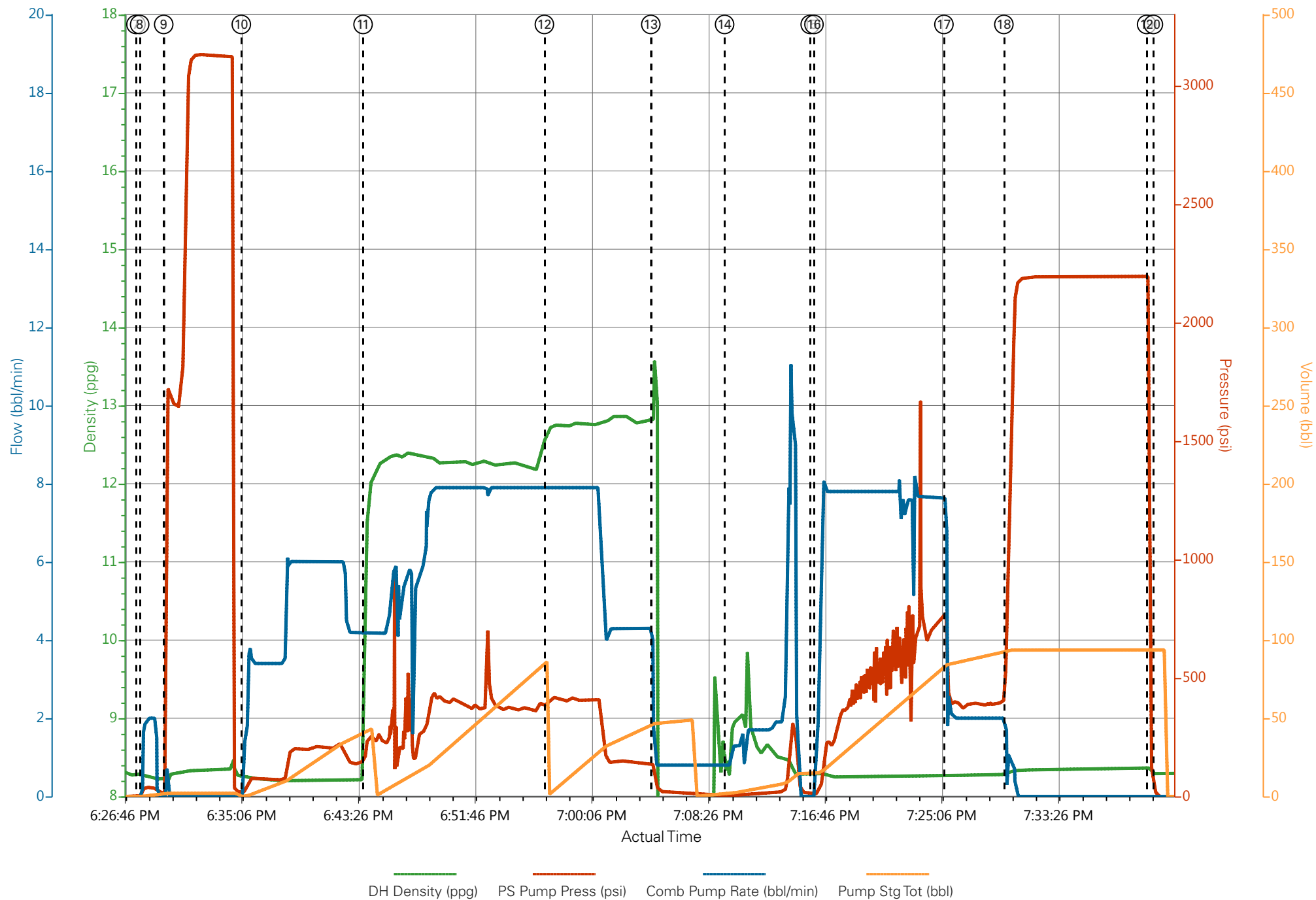
PICEANCE ENERGY - PICEANCE 28-10W - 8.625' SURFACE CASING



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

23;1727;0.7;2 ⑪ Pump Lead Cement 11.22;222;4.2;41.6 ⑬ Shutdown 13.34;93;0.8;46.6 ⑮ Drop Top Plug 8.29;11;0;14.7 ⑰ Slow Rate 8.28;729;4.8;84.5 ⑲ Check Floats 8.42;891;0;93.7 21 Post
er 8.27;17;0.7;0 ⑫ Pump Tail Cement 12.66;406;7.9;0.3 ⑭ Comment 8.36;3;0.8;1.8 ⑯ Pump Displacement 8.29;11;1.4;14.7 ⑱ Bump Plug 8.29;788;1.1;93.2 20 End Job 8.29;9;0;93.7 22 Rig-

PICEANCE ENERGY - PICEANCE 28-10W - 8.625' SURFACE CASING



Sales Order #: 0902592121	Line Item: 10	Survey Conducted Date: 7/19/2015
Customer: PICEANCE ENERGY LLC - EBUS		Job Type (BOM): CMT SURFACE CASING BOM
Customer Representative: ROGER FOSTER		API / UWI: (leave blank if unknown) 05-077-09778-00
Well Name: PICEANCE		Well Number: 0080127658
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	7/19/2015
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

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KEY PERFORMANCE INDICATORS

General	
Survey Conducted Date The date the survey was conducted	7/19/2015

Cementing KPI Survey	
Type of Job Select the type of job. (Cementing or Non-Cementing)	0
Select the Maximum Deviation range for this Job What is the highest deviation for the job you just completed? This may not be the maximum well deviation.	Vertical
Total Operating Time (hours) Total Operating Hours Including Rig-up, Pumping, Rig-down. Enter in decimal format.	3
HSE Incident, Accident, Injury HSE Incident, Accident, Injury. This should be recordable incidents only.	No
Was the job purpose achieved? Was the job delivered correctly as per customer agreed design?	Yes
Pumping Hours Total number of hours pumping fluid on this job. Enter in decimal format.	1
Type of Rig Classification Job Was Performed Type Of Rig (classification) Job Was Performed On	Drilling Rig (Portable)
Number Of JSAs Performed Number Of Jsas Performed	6
Was this a Primary Cement Job (Yes / No) Primary Cement Job= Casing job, Liner job, or Tie-back job.	Yes
Number of Unplanned Shutdowns Unplanned shutdown is when injection stops for any period of time.	0
Customer Non-Productive Rig Time (hrs)	0

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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	95
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	95
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

HALLIBURTON

Water Analysis Report

Company: PICEANCE ENERGY

Submitted by: ERIC CARTER

Attention: J.Trout

Lease: PATTERSON 306

Well #: PICEANCE 28-10W

Date: 7/22/2015

Date Rec.: 7/22/2015

S.O.#: 902592121

Job Type: SURFACE

Specific Gravity	<i>MAX</i>	1
pH	<i>8</i>	7
Potassium (K)	<i>5000</i>	0 Mg / L
Hardness	<i>500</i>	250 Mg / L
Iron (FE2)	<i>300</i>	0 Mg / L
Chlorides (Cl)	<i>3000</i>	250 Mg / L
Sulfates (SO ₄)	<i>1500</i>	<200 Mg / L
Temp	<i>40-80</i>	63 Deg
Total Dissolved Solids		430 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 its use.

JOB PROCEDURE

PATTERSON 306

Pre-Planned Job Procedure Single Stage

EVENT #	EVENT	VOLUME	SACKS	WEIGHT	YIELD	GAL/ SK
1	START JOB					
6	TEST LINES	3000.0				
10	WATER SPACER	40.0				
13	LEAD CEMENT	84.1	192	12.3	2.46	14.17
15	TAIL CEMENT	46.6	120	12.8	2.18	12.11
48	SHUTDOWN					
22	DROP PLUG					
23	DISPLACEMENT	96.8		Mud Wt.	9.4	
4	SLOW RATE	86.8		Casing	8.625	24
26	BUMP PLUG	347		Open Hole	11	
		2000				
4	CHECK FLOATS					
2	END JOB					
				Disp Fluid	8.34	
			Do Not Overdisplace			
DISPLACEMENT	TOTAL PIPE	SHOE JOINT LENGTH	ANN FACTOR	BBL/FT	H2O REQ.	
96.75	1566.77	45.52	0.0735	0.0636	236.1	
PSI to Lift Pipe	551.2	*****Use Mud Scales on Each Tier*****				
Total Displacement	96.75					
CALCULATED DIFFERENTIAL PSI		347	TOTAL FLUID PUMPED		267.5	
Collapse	1370	Burst	2950	S.O.#	902592121	
HOT	964.0	TOT	602.7	Company Rep: Roger Foster		
Bbls to Pit	47.9 BBLS					