HALLIBURTON

Cementing

Piceance Energy LLC- EBUS

Gunderson 29-09E

Patterson 306

Post Job Summary
Cement Surface Casing

Date Prepared: 04/15/2015
Job Date: 04/10/2015

Submitted by: Jenna Cook – Grand Junction Cement Engineer

HALLIBURTON

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 344919	**Ship To #:** 3123907	**Quote #:**	**Sales Order #:** 0902313201
Customer: PICEANCE ENERGY LLC - EBUS		**Customer Rep:** Roger Foster	
Well Name: GUNDERSON	**Well #:** 29-09E		**API/UWI #:** 05-077-09762-00
Field: VEGA	**City (SAP):** COLLBRAN	**County/Parish:** MESA	**State:** COLORADO
Legal Description: NE SW-29-9S-93W-2393FNL-1140FEL			
Contractor: PATTERSON-UTI ENERGY		**Rig/Platform Name/Num:** PATTERSON 306	
Job BOM: 7521			
Well Type: DIRECTIONAL GAS			
Sales Person: HALAMERICA\HB21661		**Srvc Supervisor:** Dustin Hyde	

Job

Formation Name				
Formation Depth (MD)	**Top**		**Bottom**	
Form Type			**BHST**	
Job depth MD	1549ft		**Job Depth TVD**	
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		16	15.25	65			0	60		
Casing		8.625	8.097	24		J-55	0	1549	0	1549
Open Hole Section			11				60	1559		1559

Tools and Accessories

Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make
Guide Shoe	8.625	1		1549		**Top Plug**	8.625	1	HES
Float Shoe	8.625	1				**Bottom Plug**	8.625	1	HES
Float Collar	8.625	1		1503		**SSR plug set**	8.625		
Insert Float	8.625	1				**Plug Container**	8.625	1	HES
Stage Tool	8.625	1				**Centralizers**	8.625		

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			4	

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		8	14.17
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	114	sack	12.8	2.18		8	12.11
12.11 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	93.6	bbl	8.3			9.5	

Cement Left In Pipe	Amount	46 ft	Reason	Shoe Joint

Comment

1.0 Real-Time Job Summary

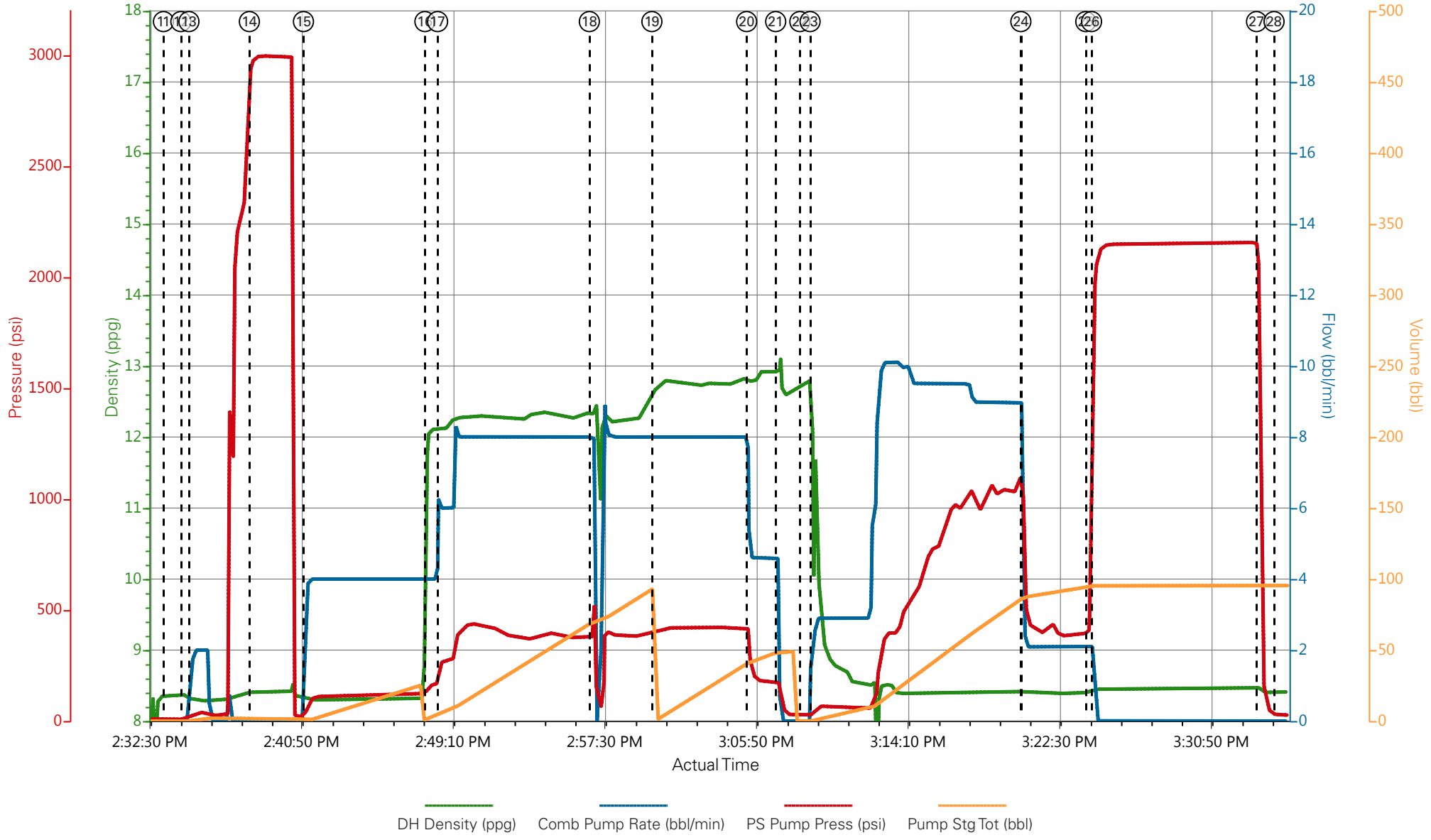
1.1 Job Event Log

Type	Seq. No.	Activity	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	4/10/2015	08:00:00	USER					ON LOCATION TO BE @ 1500
Event	2	Pre-Convoy Safety Meeting	4/10/2015	10:45:00	USER					ALL HES EMPLOYEES ATTENDED
Event	3	Crew Leave Yard	4/10/2015	11:00:00	USER					1 HT 400 PUMP TRUCK E#7, 2 660 BULK TRUCK, 1 550 SERVICE PICKUP
Event	4	Arrive At Loc	4/10/2015	13:00:00	USER					RIG GETTING READY TO START CIRCULATING
Event	5	Assessment Of Location Safety Meeting	4/10/2015	13:15:00	USER					ALL HES EMPLOYEES ATTENDED
Event	6	Other	4/10/2015	13:30:00	USER					1 HT 400 PUMP TRUCK E#7, 2 660 BULK TRUCK, 1 550 SERVICE PICKUP
Event	7	Pre-Rig Up Safety Meeting	4/10/2015	13:45:00	USER					ALL HES EMPLOYEES ATTENDED
Event	8	Rig-Up Equipment	4/10/2015	13:50:00	USER					1 HT 400 PUMP TRUCK E#7, 2 660 BULK TRUCK, 1 550 SERVICE PICKUP
Event	9	Rig-Up Completed	4/10/2015	14:20:00	USER					RIG CIRCULATED FOR 1.5 HRS
Event	10	Pre-Job Safety Meeting	4/10/2015	14:30:00	USER					ALL HES AND RIG CREW ATTENDED
Event	11	Start Job	4/10/2015	14:33:24	COM8					TD 1559', TP 1549', OH 11'', SJ 46.14', SCG 8 5/8'' 24# J-55, WF/WT 9.5

Event	12	Drop Bottom Plug	4/10/2015	14:34:21	USER					LOADED BOTTOM PLUG AND PRE LOADED TOP PLUG INTO PLUG CONTAINER
Event	13	Prime Pumps	4/10/2015	14:34:48	USER	8.33	2.0	40	2	FRESH WATER
Event	14	Test Lines	4/10/2015	14:38:07	COM8			2997		PRESSURE HELD @ 2997 PSI
Event	15	Pump Spacer 1	4/10/2015	14:41:05	COM8	8.33	4.0	120	25	FRESH WATER
Event	16	Pump Lead Cement	4/10/2015	14:47:46	COM8	12.3	8.0	390	84	192 SKS VARICEM CMT, 12.3 PPG, 2.46 YIELD, 14.17 GAL/SK
Event	17	Check Weight	4/10/2015	14:48:27	COM8	12.3				MUD CUP SAMPLE MATCHED RECIRC DENSITY
Event	18	Other	4/10/2015	14:56:48	USER				95	BOTTOM PLUG PRESSURED UP AND HIT KICK OUTS
Event	19	Pump Tail Cement	4/10/2015	15:00:14	COM8	12.8	8.0	420	44	114 SKS VARICEM CMT, 12.8 PPG, 2.18 YIELD, 12.11 GAL / SK
Event	20	Slow Rate	4/10/2015	15:05:27	USER					SLOWED TO END CMT
Event	21	Shutdown	4/10/2015	15:07:02	USER					END OF CMT WASHING UP ONTOP OF PLUG
Event	22	Drop Top Plug	4/10/2015	15:08:22	COM8					VERIFIED BY TATTLE TAIL
Event	23	Pump Displacement	4/10/2015	15:08:56	COM8	8.33	9.5	1080	85	FRESH WATER
Event	24	Slow Rate	4/10/2015	15:20:31	USER	8.33	2.0	385	10	SLOWED TO BUMP PLUG
Event	25	Bump Plug	4/10/2015	15:24:05	COM8	8.33	2.0	410	95	PLUG BUMPED BROUGHT UP TO 2000 PSI FOR CSG TEST
Event	26	Other	4/10/2015	15:24:24	USER			2146		10 MIN CSG TEST
Event	27	Check Floats	4/10/2015	15:33:28	USER			2156		FLOATS HELD 1 BBL FLOW BACK
Event	28	End Job	4/10/2015	15:34:26	COM8					GOOD RETURNS THROUGHOUT JOB 30 BBLS CMT TO SURFACE

Event	29	Post-Job Safety Meeting (Pre Rig-Down)	4/10/2015	15:44:49	USER	ALL HES EMPLOYEES ATTENDED
Event	30	Rig-Down Equipment	4/10/2015	15:55:00	USER	1 HT 400 PUMP TRUCK E#7, 2 660 BULK TRUCK, 1 550 SERVICE PICKUP
Event	31	Rig-Down Completed	4/10/2015	16:30:00	USER	NO INJURIES TO REPORT
Event	32	Pre-Convoy Safety Meeting	4/10/2015	16:45:00	USER	ALL HES EMPLOYEES ATTENDED
Event	33	Crew Leave Location	4/10/2015	17:00:00	USER	THANK YOU FOR USING HALLIBURTON CMT

PICEANCE ENERGY GUNDERSON 29-09E 8 5/8'' SURFACE



① Call Out	⑤ Assessment Of Location Safety Meeting	⑨ Rig-Up Completed	⑬ Prime Lines	⑰ Check weight	21 Shutdown	25 Bump Plug	29 Pos
② Pre-Convoy Safety Meeting	⑥ Spot Equipment	⑩ Pre-Job Safety Meeting	⑭ Test Lines	⑱ Kicked Out	22 Drop Top Plug	26 Casing Test	30 Rig
③ Crew Leave Yard	⑦ Pre-Rig Up Safety Meeting	⑪ Start Job	⑮ Pump H20 Spacer	⑲ Pump Tail Cement	23 Pump Displacement	27 Check Floats	31 Rig
④ Arrive At Loc	⑧ Rig-Up Equipment	⑫ Drop Bottom Plug	⑯ Pump Lead Cement	20 Slow Rate	24 Slow Rate	28 End Job	32 Pre

HALLIBURTON | iCem® Service

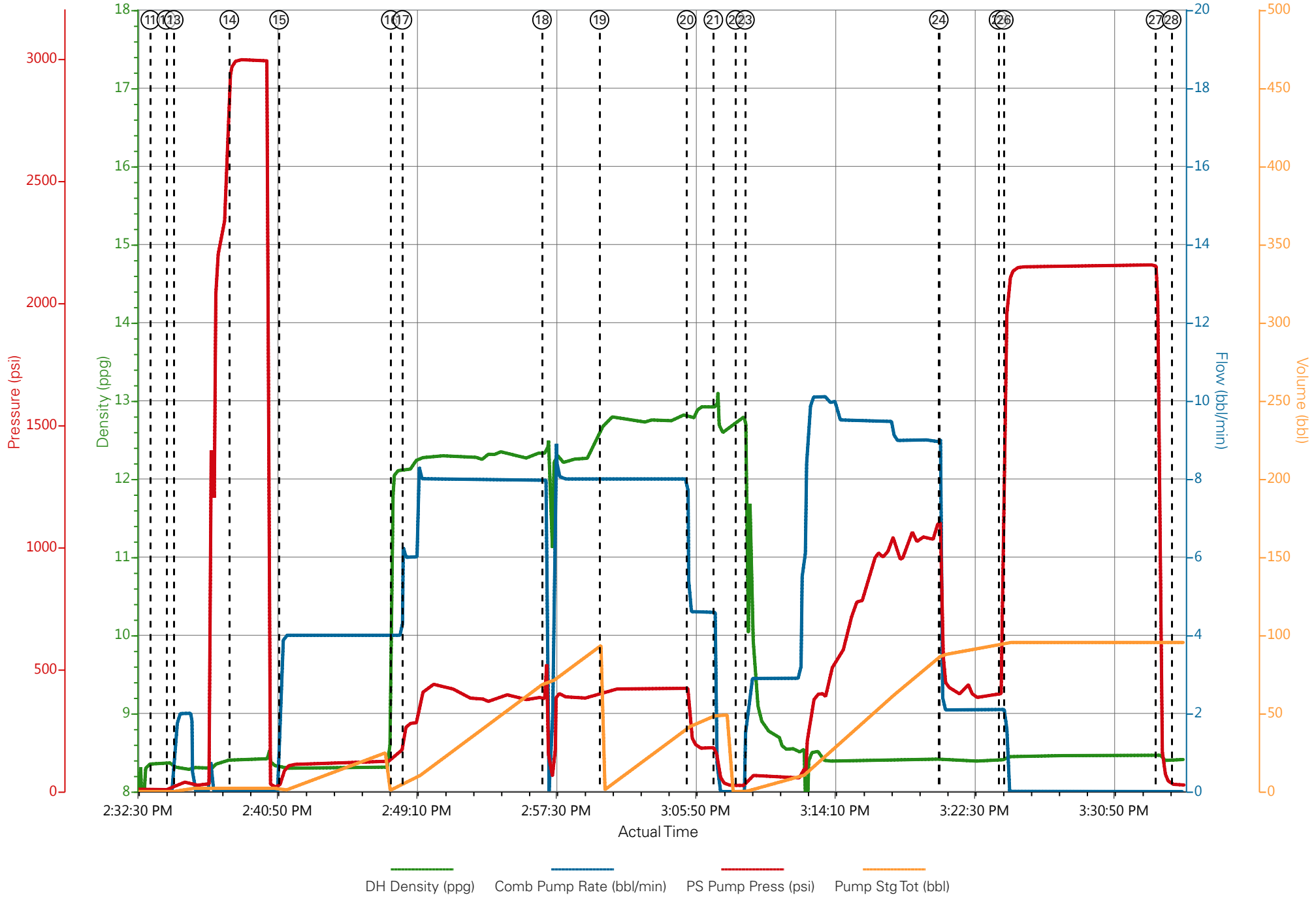
Created: 2015-04-10 14:07:35, Version: 4.1.107 Edit

Customer : PICEANCE ENERGY LLC
Representative : Roger Foster

Job Date : 4/10/2015
Sales Order # : 902313201

Well : Gunderson 29-09E
Elite #7 : Dustin Hyde / Roger Laulainen

PICEANCE ENERGY GUNDERSON 29-09E 8 5/8'' SURFACE



HALLIBURTON | iCem® Service

Created: 2015-04-10 14:07:35, Version: 4.1.107 Edit

Customer : PICEANCE ENERGY LLC
Representative : Roger Foster

Job Date : 4/10/2015
Sales Order # : 902313201

Well : Gunderson 29-09E
Elite #7 : Dustin Hyde / Roger Laulainen

HALLIBURTON

CUSTOMER SURVEY

Sales Order #:	**Line Item:**	**Survey Conducted Date:**
0902313201	10	4/10/2015
Customer:		**Job Type (BOM):**
PICEANCE ENERGY LLC - EBUS		CMT SURFACE CASING BOM
Customer Representative:		**API / UWI: (leave blank if unknown)**
		05-077-09762-00
Well Name:		**Well Number:**
GUNDERSON		0080127642
Well Type:	**Well Country:**	
DIRECTIONAL GAS	USA	
H2S Present:	**Well State:**	**Well County:**
No	COLORADO	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**	**4/10/2015**
Survey Interviewer	**The survey interviewer is the person who initiated the survey.**	**HB43597**
Customer Participation	**Did the customer partipcipate in this survey? (Y/N)**	**No**
Customer Representative	**Enter the Customer representative name**	
HSE	**Was our HSE performance satisfactory? Circle Y or N**	
Equipment	**Were you satisfied with our Equipment? Circle Y or N**	
Personnel	**Were you satisfied with our people? Circle Y or N**	
Customer Comment	**Customer's Comment**	

CUSTOMER SIGNATURE

HALLIBURTON

CUSTOMER SURVEY

Sales Order #:	**Line Item:**	**Survey Conducted Date:**
0902313201	10	4/10/2015
Customer:		**Job Type (BOM):**
PICEANCE ENERGY LLC - EBUS		CMT SURFACE CASING BOM
Customer Representative:		**API / UWI: (leave blank if unknown)**
		05-077-09762-00
Well Name:		**Well Number:**
GUNDERSON		0080127642
Well Type:	**Well Country:**	
DIRECTIONAL GAS	USA	
H2S Present:	**Well State:**	**Well County:**
No	COLORADO	MESA

KEY PERFORMANCE INDICATORS

General	
Survey Conducted Date The date the survey was conducted	4/10/2015

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.	4
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.	2
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	5
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

HALLIBURTON

CUSTOMER SURVEY

Sales Order #:	**Line Item:**	**Survey Conducted Date:**
0902313201	10	4/10/2015
Customer:		**Job Type (BOM):**
PICEANCE ENERGY LLC - EBUS		CMT SURFACE CASING BOM
Customer Representative:		**API / UWI: (leave blank if unknown)**
		05-077-09762-00
Well Name:		**Well Number:**
GUNDERSON		0080127642
Well Type:	**Well Country:**	
DIRECTIONAL GAS	USA	
H2S Present:	**Well State:**	**Well County:**
No	COLORADO	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 cment mixed at designed density divided by total BBLs of cement multiplied by 100	99
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	98
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