

Piceance Energy LLC - EBUS

Piceance 28-07W

Patterson 306

Post Job Summary

Cement Production Casing

Date Prepared: 9/21/2015
Job Date: 9/09/2015

Submitted by: Patrick Ealey – Grand Junction Cement Engineer

The Road to Excellence Starts with Safety

| | | | |
|--|----------------------|--------------------------------------|----------------------------|
| Sold To #: 344919 | Ship To #: 3123920 | Quote #: | Sales Order #: 0902731806 |
| Customer: PICEANCE ENERGY LLC - EBUS | | Customer Rep: MATT SETTLES | |
| Well Name: PICEANCE | | Well #: 28-07W | API/UWI #: 05-077-09775-00 |
| Field: VEGA | City (SAP): COLLBRAN | County/Parish: MESA | State: COLORADO |
| Legal Description: SW NW-28-9S-93W-1551FNL-1192FWL | | | |
| Contractor: PATTERSON-UTI ENERGY | | Rig/Platform Name/Num: PATTERSON 306 | |
| Job BOM: 7523 | | | |
| Well Type: DIRECTIONAL GAS | | | |
| Sales Person: HALAMERICA\HX41066 | | Srvc Supervisor: Eric Carter | |

Job

| | |
|-------------------------------|--|
| Formation Name | |
| Formation Depth (MD) | Top 1572ft Bottom 7873ft |
| Form Type | BHST |
| Job depth MD | 7863ft Job Depth TVD |
| Water Depth | Wk Ht Above Floor 4ft |
| 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 | 32 | | | 0 | 1572 | | 0 |
| Casing | | 4.5 | 4 | 11.6 | 8 RD | | 0 | 7863 | | 0 |
| Open Hole Section | | | 7.875 | | | | 1572 | 7873 | 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 | 131 | 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 | 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 ft3/sack | Mix Fluid Gal | Rate bbl/mi n | Total Mix Fluid Gal |
|---------------------|--------------|--|-------|---------|---------------------------|-------------------|------------------|---------------------|---------------------------|
| 2 | VersaCem | VERSACEM (TM) SYSTEM | 900 | sack | 12.8 | 1.75 | 8.5 | 8 | |
| 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 | EXPANDACEM (TM) SYSTEM | 413 | sack | 13.3 | 1.89 | 8.66 | 8 | |
| 0.25 lbm | | POLY-E-FLAKE (101216940) | | | | | | | |
| 8.66 Gal | | FRESH WATER | | | | | | | |
| 6 lbm | | KOL-SEAL, BULK (100064233) | | | | | | | |
| 20 % | | SS-200 - BULK (102240841) | | | | | | | |
| | | | | | | | | | |
| 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 | 120.5 | 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 | 89 ft | | Reason | | Shoe Joint | | |
| Comment | | | | | | | | | |

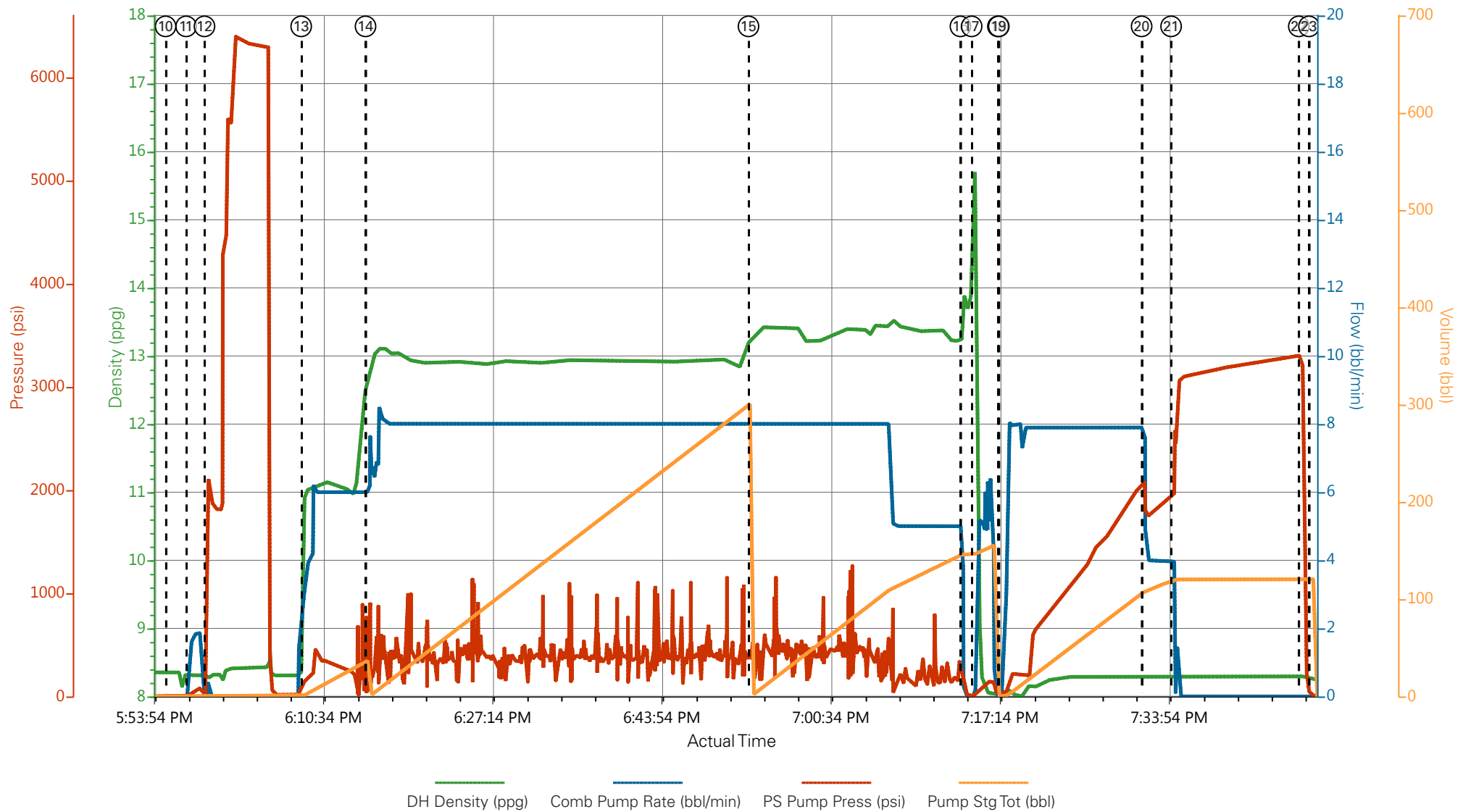
1.0 Real-Time Job Summary

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 | 9/9/2015 | 10:00:00 | USER | | | | | |
| Event | 2 | Depart Yard Safety Meeting | 9/9/2015 | 11:50:00 | USER | | | | | ATTENDED BY ALL HES CREW |
| Event | 3 | Crew Leave Yard | 9/9/2015 | 12:00:00 | USER | | | | | |
| Event | 4 | Arrive At Loc | 9/9/2015 | 14:00:00 | USER | | | | | RIG RUNNING CASING |
| Event | 5 | Assessment Of Location Safety Meeting | 9/9/2015 | 15:50:00 | USER | | | | | ATTENDED BY ALL HES CREW |
| Event | 6 | Other | 9/9/2015 | 16:00:00 | USER | | | | | SPOT EQUIPMENT |
| Event | 7 | Pre-Rig Up Safety Meeting | 9/9/2015 | 16:15:00 | USER | | | | | ATTENDED BY ALL HES CREW |
| Event | 8 | Rig-Up Equipment | 9/9/2015 | 16:30:00 | USER | | | | | |
| Event | 9 | Pre-Rig Up Safety Meeting | 9/9/2015 | 17:30:00 | USER | | | | | ATTENDED BY ALL HES CREW, RIG CREW AND COMPANY REP |
| Event | 10 | Other | 9/9/2015 | 17:55:17 | USER | | | | | TP 7863',TD 7873',MW 9.4 PPG, CASING 4.5" 11.6#, I-80, SJ 89', HOLE 7.875", SURFACE CASING 8.625", 24# SET AT 1572", RIG CIRCULATED 1 HR PRIOR TO JOB |
| Event | 11 | Other | 9/9/2015 | 17:57:18 | USER | 8.34 | 2 | 87 | 2 | FRESH WATER |
| Event | 12 | Test Lines | 9/9/2015 | 17:59:07 | USER | | | | | PRESSURED UP TO 6330 PSI, PRESSURE HELD |
| Event | 13 | Pump Spacer | 9/9/2015 | 18:08:38 | USER | 11 | 6 | 400 | 40 | TUNED SPACER III MIXED AT 11.0 PPG, BOTTOM PLUG LAUNCHED |
| Event | 14 | Pump Lead Cement | 9/9/2015 | 18:14:59 | USER | 12.8 | 8 | 390 | 280.5 | 900 SKS VERSACEM MIXED AT 12.8 PPG, 1.75 YIELD, 8.5 GAL/SK |
| Event | 15 | Pump Tail Cement | 9/9/2015 | 18:52:43 | USER | 13.3 | 8 | 480 | 139 | 413 SKS EXPANDACEM MIXED AT 13.3 PPG, 1.89 YIELD, 8.66 GAL/SK |

| | | | | | | | | | | |
|-------|----|--|----------|----------|------|------|---|------|-------|---|
| Event | 16 | Shutdown | 9/9/2015 | 19:13:35 | USER | | | | | |
| Event | 17 | Clean Lines | 9/9/2015 | 19:14:42 | USER | | | | | CLEANED PUMP AND LINES TO THE CELLAR |
| Event | 18 | Drop Top Plug | 9/9/2015 | 19:17:17 | USER | | | | | PLUG LAUNCHED |
| Event | 19 | Pump Displacement | 9/9/2015 | 19:17:22 | USER | 8.34 | 8 | 2075 | 110.5 | FRESH WATER WITH CLAY-WEB AND MMCR |
| Event | 20 | Slow Rate | 9/9/2015 | 19:31:27 | USER | 8.34 | 4 | 1980 | 10 | |
| Event | 21 | Bump Plug | 9/9/2015 | 19:34:21 | USER | | | 3080 | | PLUG LANDED |
| Event | 22 | Check Floats | 9/9/2015 | 19:46:56 | USER | | | 3300 | | FLOATS HELD |
| Event | 23 | Other | 9/9/2015 | 19:47:56 | USER | | | | | GOOD CIRCULATION THROUGHOUT JOB, PIPE NOT MOVED DURING JOB, 0 BBS CEMENT TO SURFACE |
| Event | 24 | Post-Job Safety Meeting (Pre Rig-Down) | 9/9/2015 | 19:50:00 | USER | | | | | ATTENDED BY ALL HES CREW |
| Event | 25 | Rig-Down Equipment | 9/9/2015 | 20:00:00 | USER | | | | | |
| Event | 26 | Depart Location Safety Meeting | 9/9/2015 | 20:50:00 | USER | | | | | ATTENDED BY ALL HES CREW |
| Event | 27 | Crew Leave Location | 9/9/2015 | 21:00:00 | USER | | | | | THANK YOU FOR USING HALLIBURTON CEMENT, ERIC CARTER AND CREW |

PICEANCE ENERGY - PICEANCE 28-07W - 4.5" PRODUCTION



| | | | |
|---|---|------------------------------------|--|
| ① Call Out n/a;n/a;n/a;n/a | ⑧ Pre-Rig Up Safety Meeting n/a;n/a;n/a;n/a | ⑮ Pump Tail Cement 13.26;8;546;0.9 | ⑳ Check Floats 8.29;0;3278;120.4 |
| ② Depart Yard Safety Meeting n/a;n/a;n/a;n/a | ⑨ Arrive At Loc n/a;n/a;n/a;n/a | ⑯ Shutdown 13.89;0;84;146.6 | ㉑ End Job 8.25;0;6;120.4 |
| ③ Crew Leave Yard n/a;n/a;n/a;n/a | ⑩ Start Job 8.36;0;5;0 | ⑰ Clean Lines 15.15;0;10;146.6 | ㉒ Post-Job Safety Meeting (Pre Rig-Down) n/a;n/a;n/a;n/a |
| ④ Assessment Of Location Safety Meeting n/a;n/a;n/a;n/a | ⑪ Fill Lines 8.29;0.7;20;0 | ⑱ Drop Top Plug 8.02;0;8;0 | ㉓ Rig-Down Equipment n/a;n/a;n/a;n/a |
| ⑤ Other n/a;n/a;n/a;n/a | ⑫ Test Lines 8.31;0.3;12;2 | ㉒ Pump Displacement 8.02;0.5;13;0 | ㉔ Depart Location Safety Meeting n/a;n/a;n/a;n/a |
| ⑥ Pre-Rig Up Safety Meeting n/a;n/a;n/a;n/a | ⑬ Pump Spacer 10.96;3.1;147;1.4 | ㉓ Slow Rate 8.28;4.9;1826;108.6 | ㉕ Crew Leave Location n/a;n/a;n/a;n/a |
| ⑦ Rig-Up Equipment n/a;n/a;n/a;n/a | ⑭ Pump Lead Cement 12.77;6;147;0.2 | ㉔ Bump Plug 8.28;4;1968;120 | |

▼ **HALLIBURTON** | iCem® Service

Created: 2015-09-09 10:28:47, Version: 4.1.107

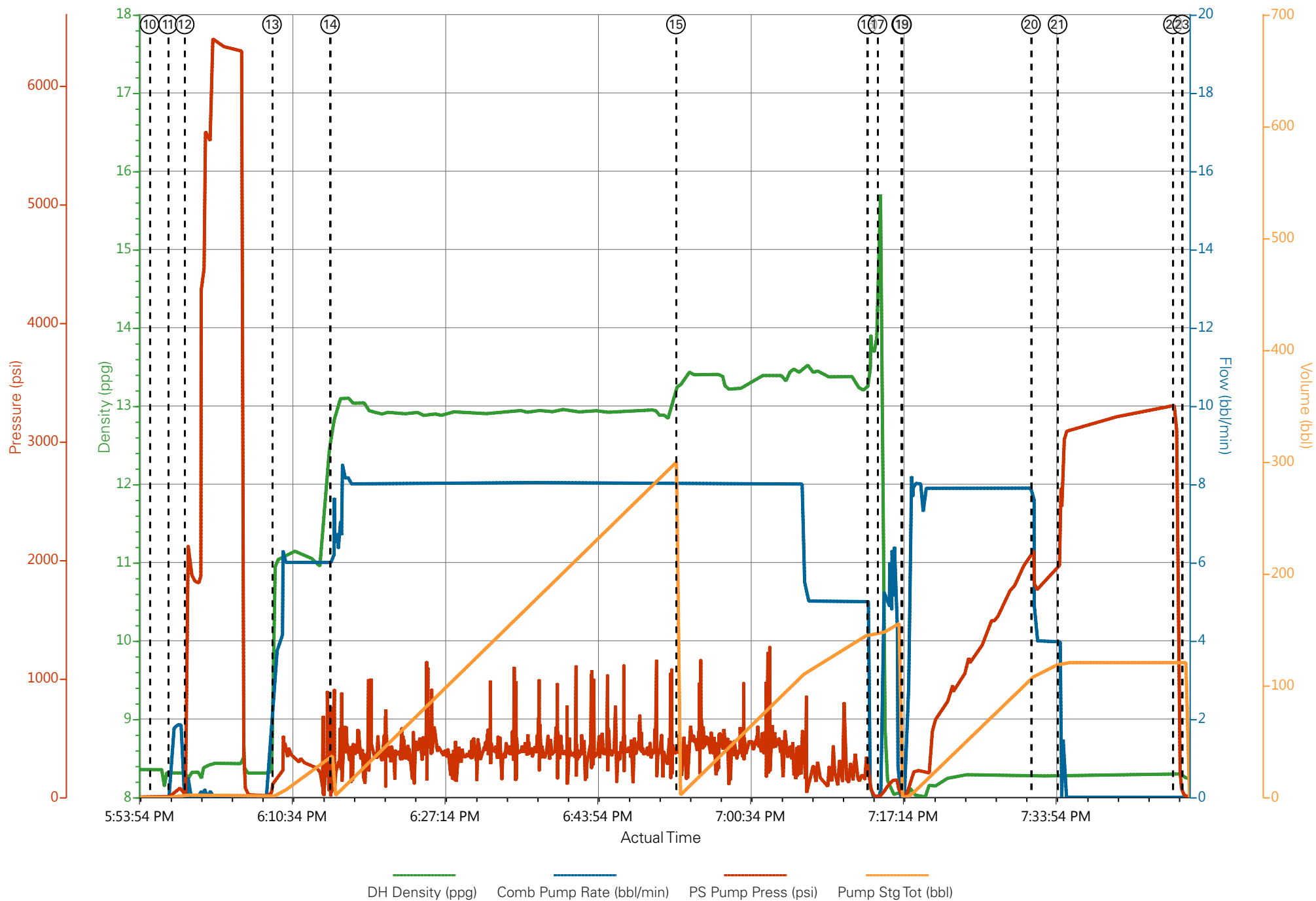
Edit

Customer: PICEANCE ENERGY LLC
Representative: MATT SETTLES

Job Date: 9/9/2015 5:46:47 PM
Sales Order #: 902731806

Well: PICEANCE 28-07W
ELITE 1: ERIC CARTER/ED DEUSSEN

PICEANCE ENERGY - PICEANCE 28-07W - 4.5" PRODUCTION



HALLIBURTON

Water Analysis Report

Company: PICEANCE ENERGY

Submitted by: ERIC CARTER

Attention: J.Trout

Lease PATTERSON 306

Well # PICEANCE 28-07W

Date: 9/9/2015

Date Rec.: 9/9/2015

S.O.# 902731806

Job Type: PRODUCTION

| | | |
|-----------------------------|--------------|-----------------------|
| Specific Gravity | <i>MAX</i> | <i>1</i> |
| pH | <i>8</i> | <i>7</i> |
| Potassium (K) | <i>5000</i> | <i>1000</i> Mg / L |
| Hardness | <i>500</i> | <i>250</i> Mg / L |
| Iron (FE2) | <i>300</i> | <i>10</i> Mg / L |
| Chlorides (Cl) | <i>3000</i> | <i>500</i> Mg / L |
| Sulfates (SO ₄) | <i>1500</i> | <i><200</i> Mg / L |
| Temp | <i>40-80</i> | <i>60</i> Deg |
| Total Dissolved Solids | | <i>OR</i> 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

| | | |
|---|--------------------------------|---|
| Sales Order #: 0902731806 | Line Item: 10 | Survey Conducted Date: 9/9/2015 |
| Customer: PICEANCE ENERGY LLC - EBUS | | Job Type (BOM): CMT PRODUCTION CASING BOM |
| Customer Representative: MATT SETTLES | | API / UWI: (leave blank if unknown) 05-077-09775-00 |
| Well Name: PICEANCE | | Well Number: 0080127655 |
| 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 | 9/9/2015 |
| 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 | MATT SETTLES |
| 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 | NA |

| |
|---------------------------|
| CUSTOMER SIGNATURE |
|---------------------------|

| | | |
|---|--------------------------------|---|
| Sales Order #: 0902731806 | Line Item: 10 | Survey Conducted Date: 9/9/2015 |
| Customer: PICEANCE ENERGY LLC - EBUS | | Job Type (BOM): CMT PRODUCTION CASING BOM |
| Customer Representative: MATT SETTLES | | API / UWI: (leave blank if unknown) 05-077-09775-00 |
| Well Name: PICEANCE | | Well Number: 0080127655 |
| Well Type: DIRECTIONAL GAS | Well Country: USA | |
| H2S Present: No | Well State: COLORADO | Well County: MESA |

KEY PERFORMANCE INDICATORS

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

| | |
|---|-------------------------|
| 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 | 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 |

| | | |
|---|--------------------------------|---|
| Sales Order #: 0902731806 | Line Item: 10 | Survey Conducted Date: 9/9/2015 |
| Customer: PICEANCE ENERGY LLC - EBUS | | Job Type (BOM): CMT PRODUCTION CASING BOM |
| Customer Representative: MATT SETTLES | | API / UWI: (leave blank if unknown) 05-077-09775-00 |
| Well Name: PICEANCE | | Well Number: 0080127655 |
| 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) | Not Available |
| 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 | 90 |
| 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 | 90 |
| 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 |