

PICEANCE ENERGY LLC - EBUS

Sup & Shep 25-11M

**Patterson 306**

## **Post Job Summary**

# **Cement Production Casing**

Date Prepared: 10/14/2014

Job Date: 10/07/2014

Submitted by: Kory Hugentobler – Grand Junction Cement Engineer

## The Road to Excellence Starts with Safety

|  |                      |                                       |                           |
|--|----------------------|---------------------------------------|---------------------------|
| Sold To #: 344919                                  | Ship To #: 3560680   | Quote #: 0021917544                   | Sales Order #: 0901631896 |
| Customer: PICEANCE ENERGY LLC - EBUS               |                      | Customer Rep: Roger Foster            |                           |
| Well Name: SUP & SHEP FEDERAL                      | Well #: 25-11M       | API/UWI #: 05-077-10219-00            |                           |
| Field: BUZZARD CREEK                               | City (SAP): COLLBRAN | County/Parish: MESA                   | State: COLORADO           |
| Legal Description: NE SW-25-9S-93W-2510FSL-1946FWL |                      |                                       |                           |
| Contractor:  |                      | Rig/Platform Name/Num: Major Drilling |                           |
| Job BOM: 7523                                      |                      |                                       |                           |
| Well Type: DIRECTIONAL GAS                         |                      |                                       |                           |
| Sales Person: HALAMERICA\HX41066                   |                      | Srvc Supervisor: Edward Deussen       |                           |

### Job

|                        |        |  |                   |
|------------------------|--------|--|-------------------|
| Formation Name         |        |  |                   |
| Formation Depth (MD)   | Top    |  | Bottom            |
| Form Type              |        |  | BHST              |
| Job depth MD           | 8502ft |  | 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            |            | 8.625   | 7.921 | 32            |        |       | 0         | 1547         |            | 0             |
| Casing            |            | 4.5     | 4     | 11.6          | LTC    | I-80  | 0         | 8502         |            | 0             |
| Open Hole Section |            |         | 7.875 |               |        |       | 1547      | 8510         | 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   |         |     |      |

### 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                     | 4.54           |               | 6.0          |                     |  |
| 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 |  |

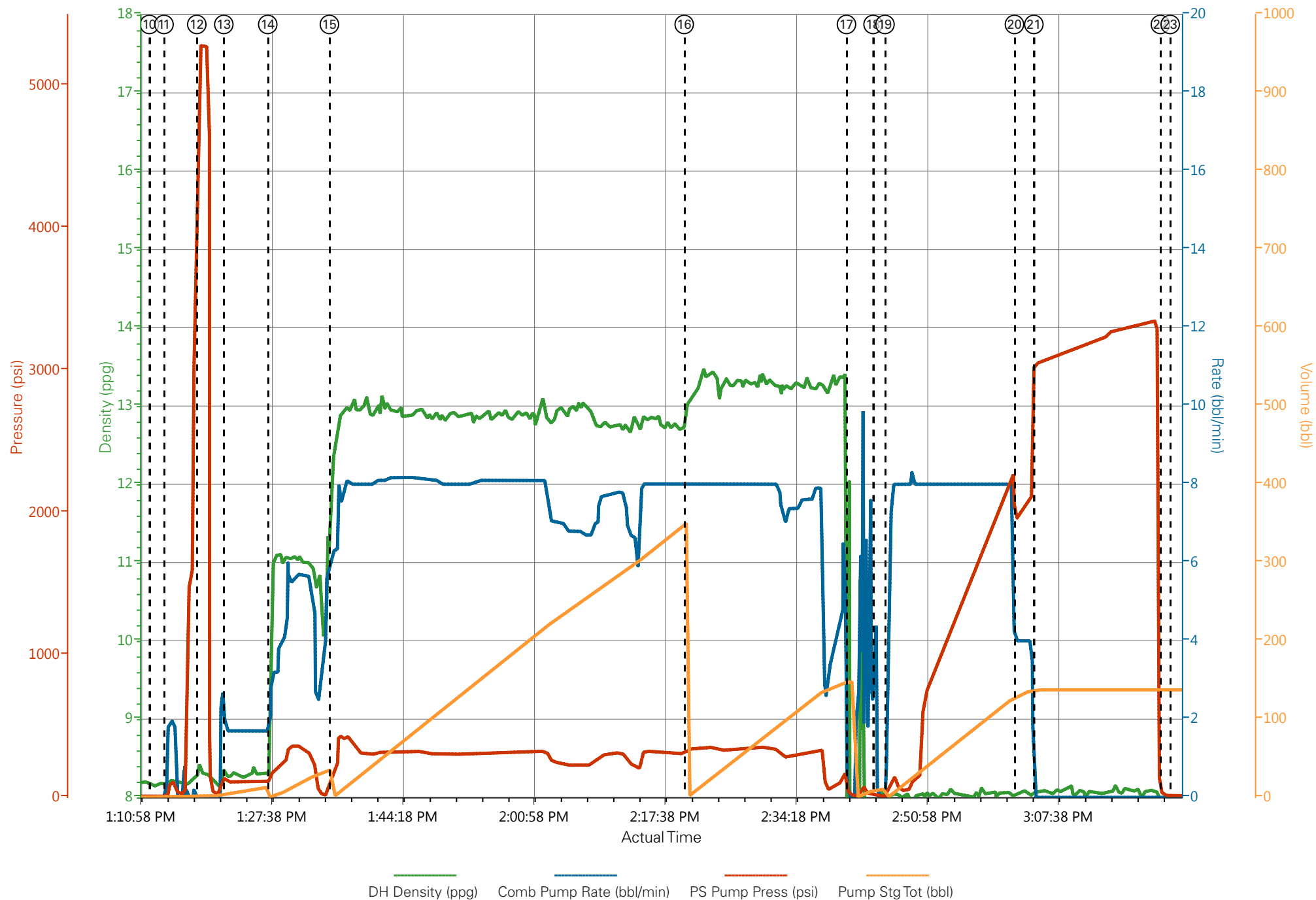
|                     |              |                        |          |         |                           |                   |                  |                 |                           |
|---------------------|--------------|------------------------|----------|---------|---------------------------|-------------------|------------------|-----------------|---------------------------|
| 2                   | VersaCem     | VERSACEM (TM) SYSTEM   | 1090     | sack    | 12.8                      | 1.75              |                  | 8.0             | 8.48                      |
|                     |              |                        |          |         |                           |                   |                  |                 |                           |
| Fluid #             | Stage Type   | Fluid Name             | Qty      | Qty UoM | Mixing Density<br>lbm/gal | Yield<br>ft3/sack | Mix Fluid<br>Gal | Rate<br>bbl/min | Total Mix<br>Fluid<br>Gal |
| 3                   | ExpandaCem   | EXPANDACEM (TM) SYSTEM | 390      | sack    | 13.3                      | 1.89              |                  | 8.0             | 8.48                      |
|                     |              |                        |          |         |                           |                   |                  |                 |                           |
| Fluid #             | Stage Type   | Fluid Name             | Qty      | Qty UoM | Mixing Density<br>lbm/gal | Yield<br>ft3/sack | Mix Fluid<br>Gal | Rate<br>bbl/min | Total Mix<br>Fluid<br>Gal |
| 4                   | Displacement | Displacement           | 130.4    | bbl     | 8.34                      |                   |                  | 8.0             |                           |
|                     |              |                        |          |         |                           |                   |                  |                 |                           |
| Cement Left In Pipe |              | Amount                 | 88.52 ft |         | Reason                    |                   | Shoe Joint       |                 |                           |
| Comment             |              |                        |          |         |                           |                   |                  |                 |                           |

## 3.1 Job Event Log

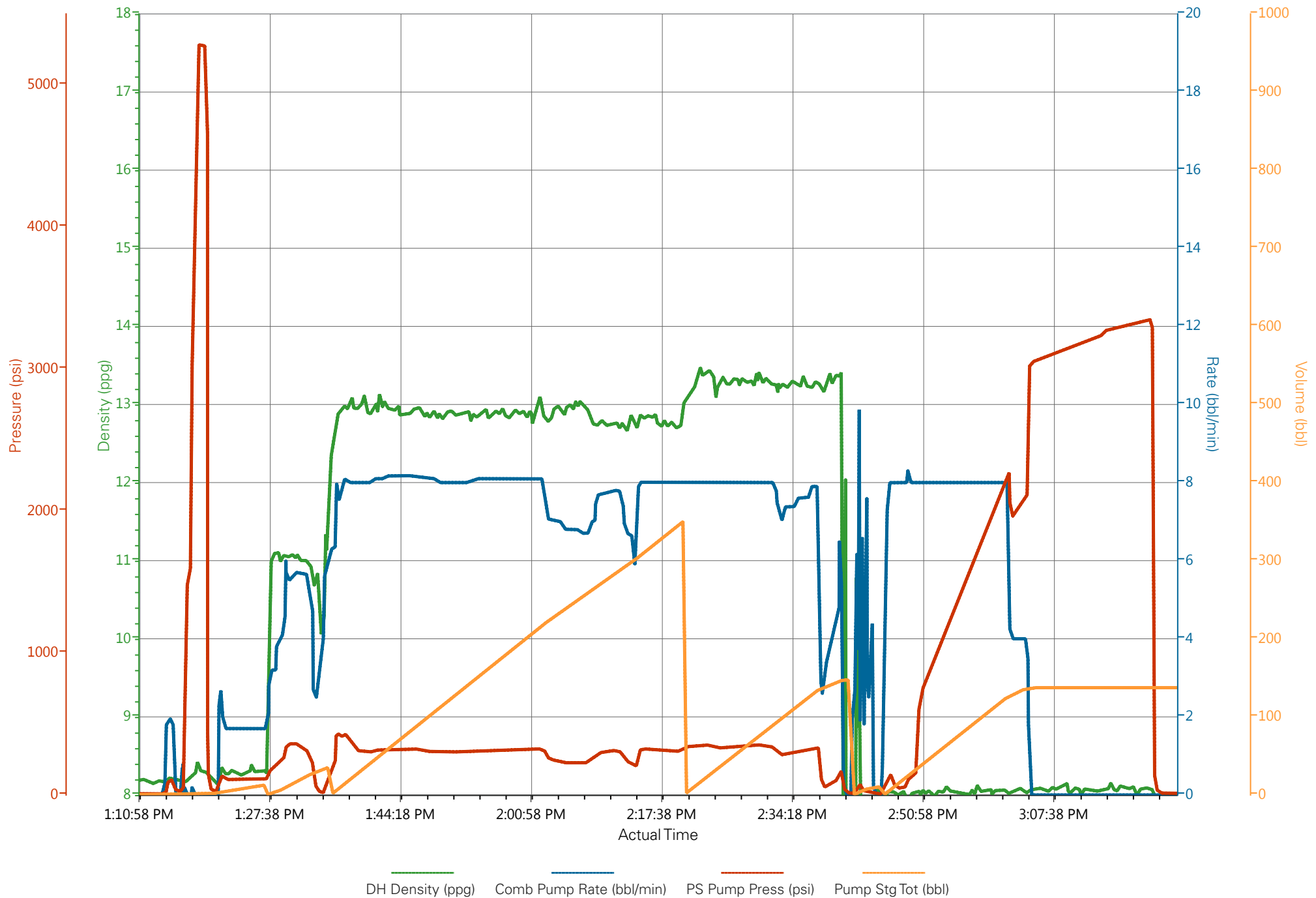
| Type  | Seq<br>No. | Graph Label                           | Date      | Time     | Source | DH<br>Density<br>(ppg) | Comb<br>Pump<br>Rate<br>(bbl/min) | PS Pump<br>Press<br>(psi) | Pump Stg<br>Tot<br>(bbl) | Comment   |
|-------|------------|---------------------------------------|-----------|----------|--------|------------------------|-----------------------------------|---------------------------|--------------------------|---|
| Event | 1          | Call Out                              | 10/7/2014 | 00:00:00 | USER   |                        |                                   |                           |                          |   |
| Event | 2          | Pre-Convoy Safety Meeting             | 10/7/2014 | 02:45:00 | USER   |                        |                                   |                           |                          |   |
| Event | 3          | Crew Leave Yard                       | 10/7/2014 | 03:00:00 | USER   |                        |                                   |                           |                          | 1 Elite, 1 bodyload, 3 660s, 1 pickup   |
| Event | 4          | Arrive at Location                    | 10/7/2014 | 05:00:00 | USER   |                        |                                   |                           |                          | Rig still running casing  |
| Event | 5          | Assessment Of Location Safety Meeting | 10/7/2014 | 05:15:00 | USER   |                        |                                   |                           |                          | JSA performed   |
| Event | 6          | Pre-Rig Up Safety Meeting             | 10/7/2014 | 07:45:00 | USER   |                        |                                   |                           |                          |   |
| Event | 7          | Rig-Up Equipment                      | 10/7/2014 | 08:00:00 | USER   |                        |                                   |                           |                          | 1 hard line w/ standpipe to floor, manifold on ground, hard line to cellar for washup, water hoses to day tank and upright, bulk hoses to 660s, bin, and bodyload |
| Event | 8          | Rig-Up Completed                      | 10/7/2014 | 09:00:00 | USER   |                        |                                   |                           |                          |   |
| Event | 9          | Pre-Job Safety Meeting                | 10/7/2014 | 09:45:00 | USER   |                        |                                   |                           |                          | Mud 9.4 ppg - Had problem with quick-latch container leaking - had to call for replacement cement head - wait on location - no addition to time on location       |
| Event | 10         | Start Job                             | 10/7/2014 | 13:12:25 | COM5   |                        |                                   |                           |                          | TD 8510', TP 8502', SJ 88.52', 4 1/2" 11.6# I-80 csg, 7 7/8" OH, 9 5/8" 32# surf csg @ 1547'  |
| Event | 11         | Prime Lines                           | 10/7/2014 | 13:14:16 | COM5   | 8.33                   | 2.0                               | 115                       | 2.0                      | Fresh water   |
| Event | 12         | Test Lines                            | 10/7/2014 | 13:18:26 | COM5   |                        |                                   | 5295                      |                          | Pressure held well  |
| Event | 13         | Drop Bottom Plug                      | 10/7/2014 | 13:21:52 | USER   |                        |                                   |                           |                          |   |
| Event | 14         | Pump Tuned Spacer                     | 10/7/2014 | 13:27:28 | COM5   | 11.0                   | 6.0                               | 172                       | 40.0                     | 11.0 ppg  |
| Event | 15         | Pump Lead Cement                      | 10/7/2014 | 13:35:18 | COM5   | 12.8                   | 8.0                               | 379                       | 339.7                    | 1090 sks, 12.8 ppg, 1.75 yield, 8.48 gal/sk   |
| Event | 16         | Pump Tail Cement                      | 10/7/2014 | 14:20:25 | COM5   | 13.3                   | 8.0                               | 342                       | 131.2                    | 390 sks, 13.3 ppg, 1.89 yield, 8.48gal/sk   |
| Event | 17         | Shutdown                              | 10/7/2014 | 14:41:03 | USER   |                        |                                   |                           |                          | Wash up into cellar   |
| Event | 18         | Drop Top Plug                         | 10/7/2014 | 14:44:26 | COM5   |                        |                                   |                           |                          |   |

|       |    |                             |           |          |      |     |     |      |       |   |
|-------|----|-----------------------------|-----------|----------|------|-----|-----|------|-------|---|
| Event | 19 | Pump Displacement           | 10/7/2014 | 14:45:57 | COM5 | 8.4 | 8.0 | 2275 | 130.4 | Fresh water w/ 1 gal MMCR                                     |
| Event | 20 | Slow Rate                   | 10/7/2014 | 15:02:24 | USER | 8.4 | 4.0 | 1976 | 10.0  | Good returns throughout job - 20 bbls tuned spacer to surface |
| Event | 21 | Bump Plug                   | 10/7/2014 | 15:04:52 | COM5 |     |     | 2118 |       | Casing test @ 3000 psi for 15 minutes                         |
| Event | 22 | Release Casing Pressure     | 10/7/2014 | 15:20:58 | USER |     |     | 3380 |       | Floats held - 1 1/2 bbl flowback                              |
| Event | 23 | End Job                     | 10/7/2014 | 15:22:13 | USER |     |     |      |       | No add hours due to wait for cement head replacement          |
| Event | 24 | Pre-Rig Down Safety Meeting | 10/7/2014 | 15:30:16 | USER |     |     |      |       |   |
| Event | 25 | Rig-Down Equipment          | 10/7/2014 | 15:45:00 | USER |     |     |      |       |   |
| Event | 26 | Rig-Down Completed          | 10/7/2014 | 16:30:00 | USER |     |     |      |       |   |
| Event | 27 | Pre-Convoy Safety Meeting   | 10/7/2014 | 16:45:00 | USER |     |     |      |       |   |
| Event | 28 | Crew Leave Location         | 10/7/2014 | 16:55:00 | USER |     |     |      |       | Thank you for using Halliburton                               |

# PICEANCE ENERGY - SUP & SHEP 25-11M - 4 1/2" PRODUCTION



# PICEANCE ENERGY - SUP & SHEP 25-11M - 4 1/2" PRODUCTION



# HALLIBURTON

## Water Analysis Report

Company: PICEANCE ENERGY

Submitted by: ED DEUSSEN

Attention: J.TROUT

Lease: FED SUP & SHEP

Well #: 25-11M

Date: 10/7/2014

Date Rec.: 10/7/2014

S.O.#: 901631896

Job Type: PRODUCTION

|                             |              |                       |
|-----------------------------|--------------|-----------------------|
| Specific Gravity            | <i>MAX</i>   | <b>1</b>              |
| pH                          | <i>8</i>     | <b>6.5</b>            |
| Potassium (K)               | <i>5000</i>  | <b>400</b> Mg / L     |
| Calcium (Ca)                | <i>500</i>   | <b>250</b> Mg / L     |
| Iron (FE2)                  | <i>300</i>   | <b>0</b> Mg / L       |
| Chlorides (Cl)              | <i>3000</i>  | <b>0</b> Mg / L       |
| Sulfates (SO <sub>4</sub> ) | <i>1500</i>  | <b>&lt;200</b> Mg / L |
|                             |              |                       |
| Temp                        | <i>40-80</i> | <b>52</b> Deg         |
| Total Dissolved Solids      |              | <b>140</b> Mg / L     |

Respectfully: ED DEUSSEN

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.



|  |                                |   |
|--|--------------------------------|---|
| <b>Sales Order #:</b><br>0901631896            | <b>Line Item:</b><br>10        | <b>Survey Conducted Date:</b><br>10/8/2014                    |
| <b>Customer:</b><br>PICEANCE ENERGY LLC - EBUS |                                | <b>Job Type (BOM):</b><br>CMT PRODUCTION CASING BOM.          |
| <b>Customer Representative:</b>                |                                | <b>API / UWI: (leave blank if unknown)</b><br>05-077-10219-00 |
| <b>Well Name:</b><br>SUP & SHEP FEDERAL        |                                | <b>Well Number:</b><br>0080641248                             |
| <b>Well Type:</b><br>DIRECTIONAL GAS           | <b>Well Country:</b><br>USA    |   |
| <b>H2S Present:</b><br>No                      | <b>Well State:</b><br>COLORADO | <b>Well County:</b><br>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                              | 10/8/2014 |
| Survey Interviewer      | The survey interviewer is the person who initiated the survey. | HB57194   |
| Customer Participation  | Did the customer participate 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   |           |

|                           |
|---------------------------|
| <b>CUSTOMER SIGNATURE</b> |
|---------------------------|

|  |                                |   |
|--|--------------------------------|---|
| <b>Sales Order #:</b><br>0901631896            | <b>Line Item:</b><br>10        | <b>Survey Conducted Date:</b><br>10/8/2014                    |
| <b>Customer:</b><br>PICEANCE ENERGY LLC - EBUS |                                | <b>Job Type (BOM):</b><br>CMT PRODUCTION CASING BOM.          |
| <b>Customer Representative:</b>                |                                | <b>API / UWI: (leave blank if unknown)</b><br>05-077-10219-00 |
| <b>Well Name:</b><br>SUP & SHEP FEDERAL        |                                | <b>Well Number:</b><br>0080641248                             |
| <b>Well Type:</b><br>DIRECTIONAL GAS           | <b>Well Country:</b><br>USA    |   |
| <b>H2S Present:</b><br>No                      | <b>Well State:</b><br>COLORADO | <b>Well County:</b><br>MESA                                   |

### KEY PERFORMANCE INDICATORS

| General   |           |
|---|-----------|
| <b>Survey Conducted Date</b><br>The date the survey was conducted | 10/8/2014 |

| Cementing KPI Survey  |                         |
|---|-------------------------|
| <b>Type of Job</b><br>Select the type of job. (Cementing or Non-Cementing)  | 0                       |
| <b>Select the Maximum Deviation range for this Job</b><br>What is the highest deviation for the job you just completed? This may not be the maximum well deviation. | Vertical                |
| <b>Total Operating Time (hours)</b><br>Total Operating Hours Including Rig-up, Pumping, Rig-down. Enter in decimal format.  | 6                       |
| <b>HSE Incident, Accident, Injury</b><br>HSE Incident, Accident, Injury. This should be recordable incidents only.  | No                      |
| <b>Was the job purpose achieved?</b><br>Was the job delivered correctly as per customer agreed design?  | Yes                     |
| <b>Pumping Hours</b><br>Total number of hours pumping fluid on this job. Enter in decimal format.   | 3                       |
| <b>Type of Rig Classification Job Was Performed</b><br>Type Of Rig (classification) Job Was Performed On  | Drilling Rig (Portable) |
| <b>Number Of JSAs Performed</b><br>Number Of Jsas Performed   | 5                       |
| <b>Was this a Primary Cement Job (Yes / No)</b><br>Primary Cement Job= Casing job, Liner job, or Tie-back job.  | Yes                     |
| <b>Number of Unplanned Shutdowns</b><br>Unplanned shutdown is when injection stops for any period of time.  | 0                       |
| <b>Customer Non-Productive Rig Time (hrs)</b>   | 2                       |

|  |                                |   |
|--|--------------------------------|---|
| <b>Sales Order #:</b><br>0901631896            | <b>Line Item:</b><br>10        | <b>Survey Conducted Date:</b><br>10/8/2014                    |
| <b>Customer:</b><br>PICEANCE ENERGY LLC - EBUS |                                | <b>Job Type (BOM):</b><br>CMT PRODUCTION CASING BOM.          |
| <b>Customer Representative:</b>                |                                | <b>API / UWI: (leave blank if unknown)</b><br>05-077-10219-00 |
| <b>Well Name:</b><br>SUP & SHEP FEDERAL        |                                | <b>Well Number:</b><br>0080641248                             |
| <b>Well Type:</b><br>DIRECTIONAL GAS           | <b>Well Country:</b><br>USA    |   |
| <b>H2S Present:</b><br>No                      | <b>Well State:</b><br>COLORADO | <b>Well County:</b><br>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.  |                     |
| <b>Reason For Non-Productive Rig Time</b><br>Reason For Non-productive Rig Time (Cementing PSL Responsibility)   | LEAK ON CEMENT HEAD |
| <b>Did We Run Wiper Plugs?</b><br>Did We Run Top And Bottom Casing Wiper Plugs?  | Both                |
| <b>If a top plug was run, was the plug bumped? (Yes/No/N/A)</b><br>If a top plug was run, was the plug bumped? (Yes/No/N/A)  | Yes                 |
| <b>If applicable, was Halliburton float equipment used? (Yes/No/N/A)</b><br>If applicable, was Halliburton float equipment used? (Yes/No/N/A)  | N/A                 |
| <b>If applicable, did the floats hold? (Yes/No/N/A)</b><br>If applicable, did the floats hold? (Yes/No/N/A)  | Yes                 |
| <b>Mixing Density of Job Stayed in Designed Density Range (0-100%)</b><br>Density Range defined as +/- .20 ppg. Calculation: Total BBLs cement mixed at designed density divided by total BBLs of cement multiplied by 100       | 99                  |
| <b>Pump Rate (percent) of Job Stayed At Designed Pump Rate</b><br>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 | 99                  |
| <b>If applicable, were there returns throughout the job? (Yes/No/N/A)</b><br>If applicable, were there returns throughout the job? (Yes/No/N/A)  | YES                 |
| <b>Nbr of Remedial Plug Jobs Rqd - HES</b><br>Number Of Remedial Plug Jobs Needed After Primary Plug Pumped By HES   | 0                   |
| <b>Nbr of Remedial Sqz Jobs Rqd - HES</b><br>Number Of Remedial Squeeze Jobs Required After Primary Job Performed By HES   | 0                   |