

API #3004560308  
Zachry 5

API #3004507298  
McClanahan 16



75 Suttle Street  
Durango, CO 81303  
970.247.4220 Phone  
970.247.4227 Fax  
www.greenanalytical.com

05 August 2015

Darrell Savage  
Conoco Phillips-Farmington  
3401 30th Street  
Farmington, NM 87401  
RE: Braden Head

OIL CONS. DIV DIST. 3  
AUG 19 2015

Enclosed are the results of analyses for samples received by the laboratory on 07/14/15 15:11.  
If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads 'Debbie Zufelt'.

Debbie Zufelt  
Reports Manager

All accredited analytes contained in this report are denoted by an asterisk (\*). For a complete list of accredited analytes please do not hesitate to contact us via any of the contact information contained in this report. All of our certifications can be viewed at <http://greenanalytical.com/certifications/>

Green Analytical Laboratories is NELAP accredited through the Texas Commission on Environmental Quality. Accreditation applies to drinking water and non-potable water matrices for trace metals and a variety of inorganic parameters. Green Analytical Laboratories is also accredited through the Colorado Department of Public Health and Environment and EPA region 8 for trace metals, Cyanide, Fluoride, Nitrate, and Nitrite in drinking water.

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water



[dzufelt@greenanalytical.com](mailto:dzufelt@greenanalytical.com) p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

[www.GreenAnalytical.com](http://www.GreenAnalytical.com)

Conoco Phillips-Farmington  
3401 30th Street  
Farmington NM, 87401

Project: Braden Head  
Project Name / Number: Area 22  
Project Manager: Darrell Savage

Reported:  
08/05/15 09:34

#### ANALYTICAL REPORT FOR SAMPLES

| Sample ID      | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|----------------|---------------|--------|----------------|----------------|
| Zachry #5      | 1507145-01    | Water  | 07/14/15 08:30 | 07/14/15 15:11 |
| McClanahan #16 | 1507145-02    | Water  | 07/14/15 09:57 | 07/14/15 15:11 |

OIL CONS. DIV DIST. 3

AUG 19 2015

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Conoco Phillips-Farmington  
3401 30th Street  
Farmington NM, 87401

Project: Braden Head  
Project Name / Number: Area 22  
Project Manager: Darrell Savage

Reported:  
08/05/15 09:34

**Zachry #5**

**1507145-01 (Water)**

| Analyte | Result | RL | MDL | Units | Dilution | Analyzed | Method | Notes | Analyst |
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|

**General Chemistry**

|           |      |      |      |      |    |          |              |  |     |
|-----------|------|------|------|------|----|----------|--------------|--|-----|
| Chloride* | 2400 | 200  | 100  | mg/L | 20 | 07/30/15 | 4500-Cl- C   |  | ABP |
| Sulfate   | 3630 | 500  | 84.0 | mg/L | 50 | 07/20/15 | 4500-SO42- E |  | ABP |
| TDS*      | 5630 | 10.0 |      | mg/L | 1  | 07/20/15 | EPA160.1     |  | ABP |

**McClanahan #16**

**1507145-02 (Water)**

| Analyte | Result | RL | MDL | Units | Dilution | Analyzed | Method | Notes | Analyst |
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|

**General Chemistry**

|           |      |      |      |      |     |          |              |  |     |
|-----------|------|------|------|------|-----|----------|--------------|--|-----|
| Chloride* | 540  | 100  | 50.0 | mg/L | 10  | 07/30/15 | 4500-Cl- C   |  | ABP |
| Sulfate   | 5480 | 1000 | 168  | mg/L | 100 | 07/20/15 | 4500-SO42- E |  | ABP |
| TDS*      | 8300 | 10.0 |      | mg/L | 1   | 07/20/15 | EPA160.1     |  | ABP |

| Analyte | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC | %REC<br>Limits | RPD | RPD<br>Limit | Notes |
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|

OIL CONS. DIV DIST. 3

AUG 19 2015

Green Analytical Laboratories

*Debbie Zufelt*

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Conoco Phillips-Farmington  
3401 30th Street  
Farmington NM, 87401

Project: Braden Head  
Project Name / Number: Area 22  
Project Manager: Darrell Savage

Reported:  
08/05/15 09:34

### Notes and Definitions

|     |   |
|-----|---|
| DET | Analyte DETECTED  |
| ND  | Analyte NOT DETECTED at or above the reporting limit  |
| NR  | Not Reported  |
| dry | Sample results reported on a dry weight basis<br>*Results reported on as received basis unless designated as dry. |
| RPD | Relative Percent Difference   |
| LCS | Laboratory Control Sample (Blank Spike)   |
| RL  | Report Limit  |
| MDL | Method Detection Limit  |

Green Analytical Laboratories

A handwritten signature in black ink that reads 'Debbie Zufelt'.

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



|  |                       |   |
|--|-----------------------|---|
| Client: COP                                    | Phone# (505) 320-2634 | Contact: Darrell Savage                             |
| Address: 3401 E. 30th St. Farmington, NM 87402 |                       | E-Mail Address: darrell.g.savage@conocophillips.com |

|   |                     |
|---|---------------------|
|  | 75 Suttle Street    |
|   | Durango, CO 81303   |
|   | Phone: 970-247-4220 |
|   | FAX: 970-247-4227   |

| CHAIN OF CUSTODY RECORD          |
|----------------------------------|
| GAL Work Order # <u>1507-145</u> |
| PO#                              |
| Project Name: <u>Area 22</u>     |

25.8°C  
NO1 u u

|                  |   |
|------------------|---|
| Sample Location: | (1)BumperSpring, (2)CompressorDischarge, (3)Flowline, (4)Meter, (5)Oil Tank<br>(6)PigLauncher, (7)PigReceiver, (8)Pipeline, (9)Pit Tank, (10)PostFilter, (11)PreFilter<br>(12)SeparatorInlet, (13)SeparatorOutlet, (14)SeparatorDump, (15)SWDInlet<br>(16)SWDOutlet, (17)TransferPump, (18)ValveCan, (19)WaterTank, (20)Wellhead<br>(21)Other |
| Sample Type:     | (1)Casing, (2)CO2GasTube, (3)Coupon, (4)Water, (5)H2SGasTube, (6)Metals<br>(7)O2GasTube, (8)PipeSection, (9)Residual, (10)Sludge, (11)Solid, (12)Tubing, (13)Other  |

| Collection              |         |      |                       |                 |             |                   | Preservative    |             | Analyses Required |        |                    |           |                |  |
|-------------------------|---------|------|-----------------------|-----------------|-------------|-------------------|-----------------|-------------|-------------------|--------|--------------------|-----------|----------------|--|
| Well Name (Sample Name) | Date    | Time | Collected By: (Init.) | Sample Location | Sample Type | No. of Containers | Filtered: Y / N | Unpreserved | H2SO4             | Other: | Iron and Manganese | Phosphate | Full Water API | Barium Head<br>TDS Chlorides<br>Sulfates |
| 1. ZACHRY # 5           | 7-14-15 | 8:30 | DS                    | 20              | 4           | 1                 | N               | Y           |                   |        |                    |           |                | X  |
| 2. McClanahan # 16      | 7-14-15 | 9:57 | DS                    | 20              | 4           | 1                 | N               | Y           |                   |        |                    |           |                | X  |
| 3.                      |         |      |                       |                 |             |                   |                 |             |                   |        |                    |           |                |  |
| 4.                      |         |      |                       |                 |             |                   |                 |             |                   |        |                    |           |                |  |
| 5.                      |         |      |                       |                 |             |                   |                 |             |                   |        |                    |           |                |  |
| 6.                      |         |      |                       |                 |             |                   |                 |             |                   |        |                    |           |                |  |
| 7.                      |         |      |                       |                 |             |                   |                 |             |                   |        |                    |           |                |  |
| 8.                      |         |      |                       |                 |             |                   |                 |             |                   |        |                    |           |                |  |
| 9.                      |         |      |                       |                 |             |                   |                 |             |                   |        |                    |           |                |  |
| 10.                     |         |      |                       |                 |             |                   |                 |             |                   |        |                    |           |                |  |
| 11.                     |         |      |                       |                 |             |                   |                 |             |                   |        |                    |           |                |  |
| 12.                     |         |      |                       |                 |             |                   |                 |             |                   |        |                    |           |                |  |
| 13.                     |         |      |                       |                 |             |                   |                 |             |                   |        |                    |           |                |  |
| 14.                     |         |      |                       |                 |             |                   |                 |             |                   |        |                    |           |                |  |
| 15.                     |         |      |                       |                 |             |                   |                 |             |                   |        |                    |           |                |  |
| 16.                     |         |      |                       |                 |             |                   |                 |             |                   |        |                    |           |                |  |
| 17.                     |         |      |                       |                 |             |                   |                 |             |                   |        |                    |           |                |  |
| 18.                     |         |      |                       |                 |             |                   |                 |             |                   |        |                    |           |                |  |
| 19.                     |         |      |                       |                 |             |                   |                 |             |                   |        |                    |           |                |  |
| 20.                     |         |      |                       |                 |             |                   |                 |             |                   |        |                    |           |                |  |

|                       |                |              |                         |                |              |
|-----------------------|----------------|--------------|-------------------------|----------------|--------------|
| Relinquished by:      | Date:          | Time:        | Received By:            | Date:          | Time:        |
| <u>Darrell Savage</u> | <u>7-14-15</u> | <u>15:11</u> | <u>Christin Clam</u>    | <u>7/14/15</u> | <u>15:11</u> |
| <u>Christin Clam</u>  | <u>7/14/15</u> | <u>16:55</u> | <u>Kangaroo Express</u> | <u>7/14/15</u> | <u>16:55</u> |

Kangaroo 7-15-15 930 Michael Valentine

[illegible]