

**TABLE 1**  
**UHRICH 13-29 TANK BATTERY**  
**SOIL ANALYTICAL RESULTS SUMMARY TABLE**

| Sample ID  | Date Sampled | Depth (feet bgs) | Benzene (mg/kg) | Toluene (mg/kg) | Ethylbenzene (mg/kg) | Total Xylenes (mg/kg) | Naphthalene (mg/kg) | TPH <sup>(2)</sup> (mg/kg) |
|--|--------------|------------------|-----------------|-----------------|----------------------|-----------------------|---------------------|----------------------------|
| <b>COGCC standards for soil (mg/kg) <sup>(1)</sup></b> |              |                  | <b>0.17</b>     | <b>85</b>       | <b>100</b>           | <b>175</b>            | <b>23</b>           | <b>500</b>                 |
| SS01 @ 13'   | 4/6/2017     | 13               | <b>1.4</b>      | 7.6             | 1.8                  | 29                    | 0.58                | <b>1,520</b>               |
| SS02 @ 20'   | 4/10/2017    | 20               | <b>1.9</b>      | 12              | 8.1                  | 55                    | 1.6                 | <b>3,800</b>               |
| SS03 @ 12'   | 4/14/2017    | 12               | <0.0020         | <0.0050         | <0.0050              | <0.010                | <0.010              | <50                        |
| SS04 @ 22'   | 4/14/2017    | 22               | <0.0020         | <0.0050         | <0.0050              | <0.010                | <0.010              | <50                        |
| SS05 @ 12'   | 4/14/2017    | 12               | <0.0020         | <0.0050         | <0.0050              | <0.010                | <0.010              | <50                        |
| SS06 @ 22'   | 4/14/2017    | 22               | 0.010           | 0.0060          | <0.0050              | <0.010                | <0.010              | <50                        |
| SS07 @ 13'   | 4/17/2017    | 13               | <b>0.73</b>     | 1.6             | 3.8                  | 16                    | 0.39                | <b>2,800</b>               |
| SS08 @ 22'   | 4/17/2017    | 22               | <b>0.39</b>     | 11              | 3.3                  | 25                    | 0.28                | <b>1,290</b>               |
| SS09 @ 12'   | 4/17/2017    | 12               | <0.0020         | <0.0050         | <0.0050              | <0.010                | <0.010              | <50                        |
| SS10 @ 22'   | 4/17/2017    | 22               | <0.0020         | <0.0050         | <0.0050              | <0.010                | <0.010              | <50                        |
| SS11 @ 12'   | 4/17/2017    | 12               | <0.0020         | <0.0050         | <0.0050              | <0.010                | <0.010              | 0.50                       |
| SS12 @ 22'   | 4/17/2017    | 22               | <0.0020         | <0.0050         | <0.0050              | <0.010                | <0.010              | <50                        |
| SS13 @ 12'   | 4/17/2017    | 12               | <0.0020         | <0.0050         | <0.0050              | <0.010                | <0.010              | <50                        |
| SS14 @ 22'   | 4/17/2017    | 22               | <0.0020         | <0.0050         | <0.0050              | <0.010                | <0.010              | <50                        |
| SS15 @ 12'   | 4/17/2017    | 12               | <0.0020         | <0.0050         | <0.0050              | <0.010                | <0.010              | <50                        |
| SS16 @ 22'   | 4/17/2017    | 22               | <0.0020         | <0.0050         | <0.0050              | <0.010                | <0.010              | <50                        |
| SS17 @ 12'   | 4/17/2017    | 12               | <0.0020         | <0.0050         | <0.0050              | <0.010                | <0.010              | <50                        |
| SS18 @ 22'   | 4/17/2017    | 22               | <0.0020         | <0.0050         | <0.0050              | <0.010                | <0.010              | <50                        |
| SS19 @ 12'   | 4/18/2017    | 12               | <0.0020         | <0.0050         | <0.0050              | <0.010                | <0.010              | <50                        |
| SS20 @ 22'   | 4/18/2017    | 22               | <0.0020         | <0.0050         | <0.0050              | <0.010                | <0.010              | <50                        |

**Notes:**

- Standards for soil are taken from 2 CCR 404-1, Table 910-1, effective January 30, 2015.
  - TPH - Total volatile and extractable petroleum hydrocarbons. Value calculated by adding GRO and DRO concentrations.
- COGCC = Colorado Oil and Gas Conservation Commission  
(<) = Analytical result is less than the indicated laboratory reporting limit.  
GRO = Total volatile petroleum hydrocarbons - gasoline range organics  
DRO = Total extractable petroleum hydrocarbons - diesel range organics  
mg/kg = Milligrams per kilogram  
bgs = Below ground surface  
**BOLD** = Analytical result is in exceedance of COGCC soil standards.

**TABLE 2**  
**UHRICH 13-29 TANK BATTERY**  
**GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE**

| Sample ID   | Date Sampled | Benzene<br>(µg/L) | Toluene<br>(µg/L) | Ethylbenzene<br>(µg/L) | Total<br>Xylenes<br>(µg/L) | Depth to Water<br>(feet bgs) <sup>(2)</sup> |
|---|--------------|-------------------|-------------------|------------------------|----------------------------|---|
| <b>COGCC Table 910-1<br/>Groundwater Standard (µg/L) <sup>(1)</sup></b> |              | <b>5</b>          | <b>560</b>        | <b>700</b>             | <b>1,400</b>               |   |
| GW01  | 5/1/2017     | 3.2               | 1.8               | <1.0                   | 4.3                        | ~24   |

**Notes:**

1. Groundwater standards referenced from 2 CCR 404-1, Table 910-1, effective January 30, 2015.

2. Depth to groundwater measured from ground surface.

COGCC = Colorado Oil and Gas Conservation Commission

µg/L= Micrograms per liter

bgs = Below ground surface

(<) = Analytical result is less than the indicated laboratory reporting limit.

**BOLD** = Analytical result is in exceedance of COGCC groundwater standards.

## **ATTACHMENT A**

# Summit Scientific

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741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 06, 2017

Mark Longhurst  
PDC Energy  
1775 Sherman St. STE. 3000  
Denver, CO 80203  
RE: Uhrich 13-29

Enclosed are the results of analyses for samples received by Summit Scientific on 04/06/17 17:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ben Shrewsbury', with a long, sweeping horizontal line extending to the right.

Ben Shrewsbury  
Laboratory Manager



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/06/17 22:15

### ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|-----------|---------------|--------|----------------|----------------|
| SS01@13'  | 1704050-01    | Soil   | 04/06/17 11:53 | 04/06/17 17:10 |

Summit Scientific

*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.*



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

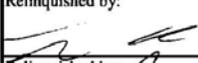
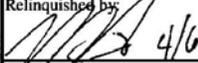
Reported:  
04/06/17 22:15

# Summit Scientific 1704050

741 Corporate Circle Suite 1 • Golden, Colorado 80401  
303-277-9310 • 303-374-5933 Fax

Page 1 of 1

|                              |                                 |
|------------------------------|---------------------------------|
| Client: PDC                  | Project Manager: Mark Longhurst |
| Address:                     | E-Mail: Mark.Longhurst@pdce.com |
| City/State/Zip:              | Project Name: Uhrich 13-29      |
| Phone: Fax:                  | Project Number:                 |
| Sampler Name: Tyler Blessing |                                 |

| Sample Description  | Date Sampled | Time Sampled | Number of Containers | Preservative  |                  |      |                 | Matrix   |      |                         | Analyze For:    |   |           |  | Special Instructions |  |
|---|--------------|--------------|----------------------|---|------------------|------|-----------------|--|------|-------------------------|-----------------|---|-----------|--|----------------------|--|
|   |              |              |                      | HCl   | HNO <sub>3</sub> | None | Other (Specify) | Groundwater  | Soil | Air - Canister Serial # | Other (Specify) | GBTEXN (9260)   | DRO (TPH) |  |                      |  |
| SS01 @ 13'  | 4/6/2017     | 11:53        | 1                    |   | X                |      |                 | X  |      |                         |                 | X   | X         |  |                      | -Run<br>Hold<br>on wood<br>from Tasman |
| SS02 @ 11'  | 4/6/2017     | 11:54        | 1                    |   | X                |      |                 | X  |      |                         |                 | X   | X         |  |                      |  |
| SS03 @ 11'  | 4/6/2017     | 11:55        | 1                    |   | X                |      |                 | X  |      |                         |                 | X   | X         |  |                      |  |
| SS04 @ 11'  | 4/6/2017     | 11:57        | 1                    |   | X                |      |                 | X  |      |                         |                 | X   | X         |  |                      |  |
| SS05 @ 11'  | 4/6/2017     | 11:59        | 1                    |   | X                |      |                 | X  |      |                         |                 | X   | X         |  |                      |  |
| Relinquished by:  Date/Time: 4/6/17 1630 |              |              |                      | Received by:  Date/Time: 4/6/17 1630 |                  |      |                 | Turn Around Time (Check)   |      |                         |                 | Notes:  |           |  |                      |  |
| Relinquished by:  Date/Time: 4/6/17 1710 |              |              |                      | Received by:  Date/Time: 4-6-17 1710 |                  |      |                 | Same Day <input checked="" type="checkbox"/> 72 Hours <input type="checkbox"/> |      |                         |                 | 24 Hours <input type="checkbox"/> Standard <input type="checkbox"/>         |           |  |                      |  |
| Relinquished by:  |              |              |                      | Received in Lab by:   |                  |      |                 | 48 Hours <input type="checkbox"/>  |      |                         |                 | Sample Integrity: 5.0°C   |           |  |                      |  |
|   |              |              |                      |   |                  |      |                 | Temperature Upon Receipt: 5.0°C  |      |                         |                 | Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |           |  |                      |  |

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PDC Energy  
 1775 Sherman St. STE. 3000  
 Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
 Project Manager: Mark Longhurst

Reported:  
 04/06/17 22:15

**Sample Receipt Checklist**

S2 Work Order: 1304050

Client: PDC Client Project ID: Uhrich 13-29

Shipped Via: P/U Airbill #: \_\_\_\_\_  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Matrix (check all that apply):  Air  Soil/Solid  Water  Other: \_\_\_\_\_  
(Describe)

|           |            |  |  |  |  |
|-----------|------------|--|--|--|--|
| Cooler ID |            |  |  |  |  |
| Temp (°C) | <u>5.0</u> |  |  |  |  |

Thermometer ID: 61857155-K

|   | Yes                                 | No | N/A                                 | Comments (if any) |
|---|-------------------------------------|----|-------------------------------------|-------------------|
| If samples require cooling, was the temperature just above 0°C to ≤ 6°C <sup>(1)</sup> ?  | <input checked="" type="checkbox"/> |    |                                     |                   |
| NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun. |                                     |    |                                     |                   |
| Were all samples received intact <sup>(1)</sup> ?   | <input checked="" type="checkbox"/> |    |                                     |                   |
| Was adequate sample volume provided <sup>(1)</sup> ?  | <input checked="" type="checkbox"/> |    |                                     |                   |
| If custody seals are present, are they intact <sup>(1)</sup> ?  |                                     |    | <input checked="" type="checkbox"/> |                   |
| Are short holding time analytes or samples with HTs due within 48 hours present?  |                                     |    | <input checked="" type="checkbox"/> |                   |
| Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?   | <input checked="" type="checkbox"/> |    |                                     |                   |
| Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?   | <input checked="" type="checkbox"/> |    |                                     |                   |
| Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?   | <input checked="" type="checkbox"/> |    |                                     |                   |
| Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?   | <input checked="" type="checkbox"/> |    |                                     |                   |
| For volatiles in water – is there headspace present? If yes, contact client and note in narrative.  |                                     |    | <input checked="" type="checkbox"/> |                   |
| Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ?  |                                     |    | <input checked="" type="checkbox"/> |                   |
| Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect  |                                     |    | <input checked="" type="checkbox"/> |                   |
| If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ?  |                                     |    | <input checked="" type="checkbox"/> |                   |
| Record the pH in Comments.  |                                     |    | <input checked="" type="checkbox"/> |                   |
| If dissolved metals are requested, were samples field filtered?   |                                     |    | <input checked="" type="checkbox"/> |                   |
| Additional Comments (if any):   |                                     |    |                                     |                   |

<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.

Nakita  
 Custodian Printed Name

[Signature]  
 Signature or Initials of Custodian

4/6/17 17:10  
 Date/Time



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

Reported:  
04/06/17 22:15

SS01@13'  
1704050-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 04/06/17 11:53

| Analyte       | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|--------|-------|
| C10-C28 (DRO) | 620    | 50              | mg/kg | 1        | 1704069 | 04/06/17 | 04/06/17 | 8015M  |       |

Date Sampled: 04/06/17 11:53

| Analyte                        | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: <i>o</i> -Terphenyl |        | 101 %           | 30-150 |          | "     | "        | "        | "      |       |

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 04/06/17 11:53

| Analyte                     | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Naphthalene                 | 0.58   | 0.010           | mg/kg | 1        | 1704070 | 04/06/17 | 04/06/17 | EPA 8260B |       |
| Benzene                     | 1.4    | 0.20            | "     | 100      | "       | "        | 04/06/17 | "         |       |
| Toluene                     | 7.6    | 0.50            | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene                | 1.8    | 0.50            | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)             | 29     | 1.0             | "     | "        | "       | "        | 04/06/17 | "         |       |
| Gasoline Range Hydrocarbons | 900    | 50              | "     | "        | "       | "        | 04/06/17 | "         |       |

Date Sampled: 04/06/17 11:53

| Analyte                          | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 |        | 173 %           | 23-173 |          | "     | "        | 04/06/17 | "      |       |
| Surrogate: Toluene-d8            |        | 86.4 %          | 20-170 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 452 %           | 21-167 |          | "     | "        | "        | "      | S-02  |

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PDC Energy  
 1775 Sherman St. STE. 3000  
 Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
 Project Manager: Mark Longhurst

**Reported:**  
 04/06/17 22:15

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch 1704069 - EPA 3550A**

|  |      |    |       |                               |      |                               |        |       |    |  |       |
|--|------|----|-------|-------------------------------|------|-------------------------------|--------|-------|----|--|-------|
| <b>Blank (1704069-BLK1)</b>            |      |    |       | Prepared & Analyzed: 04/06/17 |      |                               |        |       |    |  |       |
| C10-C28 (DRO)                          | ND   | 50 | mg/kg |                               |      |                               |        |       |    |  |       |
| Surrogate: <i>o</i> -Terphenyl         | 12.6 |    | "     | 12.5                          | 101  | 30-150                        |        |       |    |  |       |
| <b>LCS (1704069-BS1)</b>               |      |    |       | Prepared & Analyzed: 04/06/17 |      |                               |        |       |    |  |       |
| C10-C28 (DRO)                          | 463  | 50 | mg/kg | 499                           | 92.8 | 73-134                        |        |       |    |  |       |
| Surrogate: <i>o</i> -Terphenyl         | 12.1 |    | "     | 12.5                          | 96.4 | 30-150                        |        |       |    |  |       |
| <b>Matrix Spike (1704069-MS1)</b>      |      |    |       | Source: 1704050-01            |      | Prepared & Analyzed: 04/06/17 |        |       |    |  |       |
| C10-C28 (DRO)                          | 1780 | 50 | mg/kg | 499                           | 618  | 232                           | 50-148 |       |    |  | QM-07 |
| Surrogate: <i>o</i> -Terphenyl         | 13.4 |    | "     | 12.5                          | 107  | 30-150                        |        |       |    |  |       |
| <b>Matrix Spike Dup (1704069-MSD1)</b> |      |    |       | Source: 1704050-01            |      | Prepared & Analyzed: 04/06/17 |        |       |    |  |       |
| C10-C28 (DRO)                          | 1790 | 50 | mg/kg | 499                           | 618  | 235                           | 50-148 | 0.679 | 20 |  | QM-07 |
| Surrogate: <i>o</i> -Terphenyl         | 13.7 |    | "     | 12.5                          | 110  | 30-150                        |        |       |    |  |       |

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PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

Reported:  
04/06/17 22:15

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

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

**Batch 1704070 - EPA 5030 Soil MS**

**Blank (1704070-BLK1)**

Prepared & Analyzed: 04/06/17

|   |               |        |          |               |  |             |               |  |  |  |
|---|---------------|--------|----------|---------------|--|-------------|---------------|--|--|--|
| Naphthalene                             | ND            | 0.010  | mg/kg    |               |  |             |               |  |  |  |
| Benzene                                 | ND            | 0.0020 | "        |               |  |             |               |  |  |  |
| Toluene                                 | ND            | 0.0050 | "        |               |  |             |               |  |  |  |
| Ethylbenzene                            | ND            | 0.0050 | "        |               |  |             |               |  |  |  |
| Xylenes (total)                         | ND            | 0.010  | "        |               |  |             |               |  |  |  |
| Gasoline Range Hydrocarbons             | ND            | 0.50   | "        |               |  |             |               |  |  |  |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>0.0377</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>94.2</i> | <i>23-173</i> |  |  |  |
| <i>Surrogate: Toluene-d8</i>            | <i>0.0404</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>101</i>  | <i>20-170</i> |  |  |  |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | <i>0.0387</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>96.8</i> | <i>21-167</i> |  |  |  |

**LCS (1704070-BS1)**

Prepared & Analyzed: 04/06/17

|   |               |        |          |               |  |             |               |  |  |  |
|---|---------------|--------|----------|---------------|--|-------------|---------------|--|--|--|
| Naphthalene                             | 0.0171        | 0.010  | mg/kg    |               |  |             | 66-138        |  |  |  |
| Benzene                                 | 0.0879        | 0.0020 | "        | 0.100         |  | 87.9        | 58-130        |  |  |  |
| Toluene                                 | 0.101         | 0.0050 | "        | 0.100         |  | 101         | 61-134        |  |  |  |
| Ethylbenzene                            | 0.115         | 0.0050 | "        | 0.0992        |  | 115         | 74-139        |  |  |  |
| m,p-Xylene                              | 0.242         | 0.010  | "        | 0.200         |  | 121         | 73-137        |  |  |  |
| o-Xylene                                | 0.106         | 0.0050 | "        | 0.0980        |  | 108         | 73-141        |  |  |  |
| Xylenes (total)                         | 0.348         | 0.010  | "        |               |  |             | 0-200         |  |  |  |
| Gasoline Range Hydrocarbons             | 2.54          | 0.50   | "        |               |  |             | 30-150        |  |  |  |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>0.0396</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>98.9</i> | <i>23-173</i> |  |  |  |
| <i>Surrogate: Toluene-d8</i>            | <i>0.0396</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>99.0</i> | <i>20-170</i> |  |  |  |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | <i>0.0387</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>96.8</i> | <i>21-167</i> |  |  |  |

**Matrix Spike (1704070-MS1)**

Source: 1704050-01

Prepared & Analyzed: 04/06/17

|   |               |        |          |               |       |             |               |  |  |       |
|---|---------------|--------|----------|---------------|-------|-------------|---------------|--|--|-------|
| Naphthalene                             | 0.361         | 0.010  | mg/kg    |               | 0.576 |             | 10-158        |  |  |       |
| Benzene                                 | 0.343         | 0.0020 | "        | 0.100         | 1.45  | NR          | 30-131        |  |  | QM-07 |
| Toluene                                 | 1.65          | 0.0050 | "        | 0.100         | 7.62  | NR          | 30-134        |  |  | QM-07 |
| Ethylbenzene                            | 0.578         | 0.0050 | "        | 0.0992        | 1.79  | NR          | 22-153        |  |  | QM-07 |
| m,p-Xylene                              | 5.05          | 0.010  | "        | 0.200         | 22.8  | NR          | 10-159        |  |  | QM-07 |
| o-Xylene                                | 2.20          | 0.0050 | "        | 0.0980        | 6.65  | NR          | 31-151        |  |  | QM-07 |
| Xylenes (total)                         | 7.26          | 0.010  | "        |               | 29.4  |             | 30-160        |  |  |       |
| Gasoline Range Hydrocarbons             | 175           | 0.50   | "        |               | 897   |             | 30-160        |  |  |       |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>0.0444</i> |        | <i>"</i> | <i>0.0400</i> |       | <i>111</i>  | <i>23-173</i> |  |  |       |
| <i>Surrogate: Toluene-d8</i>            | <i>0.0366</i> |        | <i>"</i> | <i>0.0400</i> |       | <i>91.6</i> | <i>20-170</i> |  |  |       |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | <i>0.0909</i> |        | <i>"</i> | <i>0.0400</i> |       | <i>227</i>  | <i>21-167</i> |  |  | S-02  |

Summit Scientific

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.



PDC Energy  
 1775 Sherman St. STE. 3000  
 Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
 Project Manager: Mark Longhurst

Reported:  
 04/06/17 22:15

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

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

**Batch 1704070 - EPA 5030 Soil MS**

| <b>Matrix Spike Dup (1704070-MSD1)</b>  | <b>Source: 1704050-01</b> |        |          | <b>Prepared &amp; Analyzed: 04/06/17</b> |      |             |               |      |    |       |
|---|---------------------------|--------|----------|--|------|-------------|---------------|------|----|-------|
| Naphthalene                             | 0.227                     | 0.010  | mg/kg    | 0.576                                    |      |             | 10-158        | 45.7 | 42 | QM-07 |
| Benzene                                 | 0.584                     | 0.0020 | "        | 0.100                                    | 1.45 | NR          | 30-131        | 51.9 | 34 | QM-07 |
| Toluene                                 | 1.35                      | 0.0050 | "        | 0.100                                    | 7.62 | NR          | 30-134        | 19.7 | 30 | QM-07 |
| Ethylbenzene                            | 0.361                     | 0.0050 | "        | 0.0992                                   | 1.79 | NR          | 22-153        | 46.3 | 24 | QM-07 |
| m,p-Xylene                              | 3.14                      | 0.010  | "        | 0.200                                    | 22.8 | NR          | 10-159        | 46.8 | 68 | QM-07 |
| o-Xylene                                | 1.22                      | 0.0050 | "        | 0.0980                                   | 6.65 | NR          | 31-151        | 57.2 | 38 | QM-07 |
| Xylenes (total)                         | 4.36                      | 0.010  | "        | 29.4                                     |      |             | 30-160        | 49.9 | 30 | QM-07 |
| Gasoline Range Hydrocarbons             | 96.5                      | 0.50   | "        | 897                                      |      |             | 30-160        | 58.1 | 30 | QM-07 |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>0.0399</i>             |        | <i>"</i> | <i>0.0400</i>                            |      | <i>99.8</i> | <i>23-173</i> |      |    |       |
| <i>Surrogate: Toluene-d8</i>            | <i>0.0377</i>             |        | <i>"</i> | <i>0.0400</i>                            |      | <i>94.4</i> | <i>20-170</i> |      |    |       |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | <i>0.0658</i>             |        | <i>"</i> | <i>0.0400</i>                            |      | <i>164</i>  | <i>21-167</i> |      |    |       |

Summit Scientific

*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.*



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/06/17 22:15

### Notes and Definitions

- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- 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
- RPD Relative Percent Difference

# Summit Scientific

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741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 10, 2017

Mark Longhurst  
PDC Energy  
1775 Sherman St. STE. 3000  
Denver, CO 80203  
RE: Uhrich 13-29

Enclosed are the results of analyses for samples received by Summit Scientific on 04/10/17 18:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ben Shrewsbury', with a long, sweeping horizontal line extending to the right.

Ben Shrewsbury  
Laboratory Manager



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/10/17 22:38

### ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|-----------|---------------|--------|----------------|----------------|
| SS02@20'  | 1704101-01    | Soil   | 04/10/17 14:43 | 04/10/17 18:00 |

Summit Scientific

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PDC Energy  
 1775 Sherman St. STE. 3000  
 Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
 Project Manager: Mark Longhurst

Reported:  
 04/10/17 22:38

**Sample Receipt Checklist**

S2 Work Order: 1704101

Client: PDC Client Project ID: Uhrich 13-29

Shipped Via: P/U Airbill #: \_\_\_\_\_  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Matrix (check all that apply):  Air  Soil/Solid  Water  Other: \_\_\_\_\_  
(Describe)

|           |            |  |  |  |  |
|-----------|------------|--|--|--|--|
| Cooler ID |            |  |  |  |  |
| Temp (°C) | <u>5.6</u> |  |  |  |  |

Thermometer ID: 61857155-K

|   | Yes                                 | No | N/A                                 | Comments (if any) |
|---|-------------------------------------|----|-------------------------------------|-------------------|
| If samples require cooling, was the temperature just above 0°C to ≤ 6°C <sup>(1)</sup> ?  | <input checked="" type="checkbox"/> |    |                                     |                   |
| NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun. |                                     |    |                                     |                   |
| Were all samples received intact <sup>(1)</sup> ?   | <input checked="" type="checkbox"/> |    |                                     |                   |
| Was adequate sample volume provided <sup>(1)</sup> ?  | <input checked="" type="checkbox"/> |    |                                     |                   |
| If custody seals are present, are they intact <sup>(1)</sup> ?  |                                     |    | <input checked="" type="checkbox"/> |                   |
| Are short holding time analytes or samples with HTs due within 48 hours present?  |                                     |    | <input checked="" type="checkbox"/> |                   |
| Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?   | <input checked="" type="checkbox"/> |    |                                     |                   |
| Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?   | <input checked="" type="checkbox"/> |    |                                     |                   |
| Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?   | <input checked="" type="checkbox"/> |    |                                     |                   |
| Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?   | <input checked="" type="checkbox"/> |    |                                     |                   |
| For volatiles in water – is there headspace present? <b>If yes, contact client and note in narrative.</b>                                   |                                     |    | <input checked="" type="checkbox"/> |                   |
| Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ?  |                                     |    | <input checked="" type="checkbox"/> |                   |
| Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect  |                                     |    |                                     |                   |
| If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ?  |                                     |    | <input checked="" type="checkbox"/> |                   |
| Record the pH in Comments.  |                                     |    |                                     |                   |
| If dissolved metals are requested, were samples field filtered?   |                                     |    | <input checked="" type="checkbox"/> |                   |
| Additional Comments (if any):   |                                     |    |                                     |                   |

<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.

Nakita  
 Custodian Printed Name

[Signature]  
 Signature or Initials of Custodian

4/10/17 1745  
 Date/Time



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

Reported:  
04/10/17 22:38

**SS02@20'**  
**1704101-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/10/17 14:43**

| Analyte              | Result      | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method | Notes |
|----------------------|-------------|-----------------|-------|----------|---------|----------|----------|--------|-------|
| <b>C10-C28 (DRO)</b> | <b>1400</b> | 50              | mg/kg | 1        | 1704104 | 04/10/17 | 04/10/17 | 8015M  |       |

Date Sampled: **04/10/17 14:43**

| Analyte                       | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| <i>Surrogate: o-Terphenyl</i> |        | 115 %           | 30-150 |          | "     | "        | "        | "      |       |

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/10/17 14:43**

| Analyte                            | Result      | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|------------------------------------|-------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| <b>Naphthalene</b>                 | <b>1.6</b>  | 1.0             | mg/kg | 100      | 1704106 | 04/10/17 | 04/10/17 | EPA 8260B |       |
| <b>Benzene</b>                     | <b>1.9</b>  | 0.20            | "     | "        | "       | "        | "        | "         |       |
| <b>Toluene</b>                     | <b>12</b>   | 0.50            | "     | "        | "       | "        | "        | "         |       |
| <b>Ethylbenzene</b>                | <b>8.1</b>  | 0.50            | "     | "        | "       | "        | "        | "         |       |
| <b>Xylenes (total)</b>             | <b>55</b>   | 1.0             | "     | "        | "       | "        | "        | "         |       |
| <b>Gasoline Range Hydrocarbons</b> | <b>2400</b> | 50              | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/10/17 14:43**

| Analyte                                 | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| <i>Surrogate: 1,2-Dichloroethane-d4</i> |        | 99.0 %          | 23-173 |          | "     | "        | "        | "      |       |
| <i>Surrogate: Toluene-d8</i>            |        | 101 %           | 20-170 |          | "     | "        | "        | "      |       |
| <i>Surrogate: 4-Bromofluorobenzene</i>  |        | 117 %           | 21-167 |          | "     | "        | "        | "      |       |

Summit Scientific

*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.*



PDC Energy  
 1775 Sherman St. STE. 3000  
 Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
 Project Manager: Mark Longhurst

**Reported:**  
 04/10/17 22:38

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch 1704104 - EPA 3550A**

|  |      |    |       |                               |      |                               |        |      |  |    |  |
|--|------|----|-------|-------------------------------|------|-------------------------------|--------|------|--|----|--|
| <b>Blank (1704104-BLK1)</b>            |      |    |       | Prepared & Analyzed: 04/10/17 |      |                               |        |      |  |    |  |
| C10-C28 (DRO)                          | ND   | 50 | mg/kg |                               |      |                               |        |      |  |    |  |
| <i>Surrogate: o-Terphenyl</i>          | 13.7 |    | "     | 12.5                          |      | 109                           | 30-150 |      |  |    |  |
| <b>LCS (1704104-BS1)</b>               |      |    |       | Prepared & Analyzed: 04/10/17 |      |                               |        |      |  |    |  |
| C10-C28 (DRO)                          | 464  | 50 | mg/kg | 499                           |      | 93.0                          | 73-134 |      |  |    |  |
| <i>Surrogate: o-Terphenyl</i>          | 12.5 |    | "     | 12.5                          |      | 100                           | 30-150 |      |  |    |  |
| <b>Matrix Spike (1704104-MS1)</b>      |      |    |       | Source: 1704099-01            |      | Prepared & Analyzed: 04/10/17 |        |      |  |    |  |
| C10-C28 (DRO)                          | 458  | 50 | mg/kg | 499                           | 21.8 | 87.3                          | 50-148 |      |  |    |  |
| <i>Surrogate: o-Terphenyl</i>          | 12.5 |    | "     | 12.5                          |      | 100                           | 30-150 |      |  |    |  |
| <b>Matrix Spike Dup (1704104-MSD1)</b> |      |    |       | Source: 1704099-01            |      | Prepared & Analyzed: 04/10/17 |        |      |  |    |  |
| C10-C28 (DRO)                          | 465  | 50 | mg/kg | 499                           | 21.8 | 88.8                          | 50-148 | 1.59 |  | 20 |  |
| <i>Surrogate: o-Terphenyl</i>          | 12.4 |    | "     | 12.5                          |      | 99.0                          | 30-150 |      |  |    |  |

Summit Scientific

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PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

Reported:  
04/10/17 22:38

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

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

**Batch 1704106 - EPA 5030 Soil MS**

**Blank (1704106-BLK1)**

Prepared & Analyzed: 04/10/17

|   |               |        |          |               |  |             |               |  |  |  |
|---|---------------|--------|----------|---------------|--|-------------|---------------|--|--|--|
| Naphthalene                             | ND            | 0.010  | mg/kg    |               |  |             |               |  |  |  |
| Benzene                                 | ND            | 0.0020 | "        |               |  |             |               |  |  |  |
| Toluene                                 | ND            | 0.0050 | "        |               |  |             |               |  |  |  |
| Ethylbenzene                            | ND            | 0.0050 | "        |               |  |             |               |  |  |  |
| Xylenes (total)                         | ND            | 0.010  | "        |               |  |             |               |  |  |  |
| Gasoline Range Hydrocarbons             | ND            | 0.50   | "        |               |  |             |               |  |  |  |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>0.0393</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>98.2</i> | <i>23-173</i> |  |  |  |
| <i>Surrogate: Toluene-d8</i>            | <i>0.0392</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>98.0</i> | <i>20-170</i> |  |  |  |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | <i>0.0397</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>99.2</i> | <i>21-167</i> |  |  |  |

**LCS (1704106-BS1)**

Prepared & Analyzed: 04/10/17

|   |               |        |          |               |  |             |               |  |  |  |
|---|---------------|--------|----------|---------------|--|-------------|---------------|--|--|--|
| Naphthalene                             | ND            | 0.010  | mg/kg    |               |  |             | 66-138        |  |  |  |
| Benzene                                 | 0.106         | 0.0020 | "        | 0.100         |  | 106         | 58-130        |  |  |  |
| Toluene                                 | 0.115         | 0.0050 | "        | 0.100         |  | 115         | 61-134        |  |  |  |
| Ethylbenzene                            | 0.120         | 0.0050 | "        | 0.0992        |  | 121         | 74-139        |  |  |  |
| m,p-Xylene                              | 0.123         | 0.010  | "        | 0.200         |  | 61.7        | 73-137        |  |  |  |
| o-Xylene                                | 0.113         | 0.0050 | "        | 0.0980        |  | 115         | 73-141        |  |  |  |
| Xylenes (total)                         | 0.236         | 0.010  | "        |               |  |             | 0-200         |  |  |  |
| Gasoline Range Hydrocarbons             | 2.71          | 0.50   | "        |               |  |             | 30-150        |  |  |  |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>0.0406</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>101</i>  | <i>23-173</i> |  |  |  |
| <i>Surrogate: Toluene-d8</i>            | <i>0.0405</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>101</i>  | <i>20-170</i> |  |  |  |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | <i>0.0390</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>97.6</i> | <i>21-167</i> |  |  |  |

**Matrix Spike (1704106-MS1)**

Source: 1704101-01

Prepared & Analyzed: 04/10/17

|   |              |        |          |               |      |            |               |  |  |             |
|---|--------------|--------|----------|---------------|------|------------|---------------|--|--|-------------|
| Naphthalene                             | 1.01         | 0.010  | mg/kg    |               | 1.61 |            | 10-158        |  |  |             |
| Benzene                                 | 0.911        | 0.0020 | "        | 0.100         | 1.95 | NR         | 30-131        |  |  | QM-07       |
| Toluene                                 | 3.17         | 0.0050 | "        | 0.100         | 11.6 | NR         | 30-134        |  |  | QM-07       |
| Ethylbenzene                            | 5.41         | 0.0050 | "        | 0.0992        | 8.15 | NR         | 22-153        |  |  | QM-07       |
| m,p-Xylene                              | 17.9         | 0.010  | "        | 0.200         | 35.0 | NR         | 10-159        |  |  | QM-07       |
| o-Xylene                                | 12.5         | 0.0050 | "        | 0.0980        | 19.7 | NR         | 31-151        |  |  | QM-07       |
| Xylenes (total)                         | 30.4         | 0.010  | "        |               | 54.6 |            | 30-160        |  |  |             |
| Gasoline Range Hydrocarbons             | 809          | 0.50   | "        |               | 2390 |            | 30-160        |  |  |             |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>0.233</i> |        | <i>"</i> | <i>0.0400</i> |      | <i>583</i> | <i>23-173</i> |  |  | <i>S-02</i> |
| <i>Surrogate: Toluene-d8</i>            | <i>0.665</i> |        | <i>"</i> | <i>0.0400</i> |      | <i>NR</i>  | <i>20-170</i> |  |  | <i>S-02</i> |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | <i>0.295</i> |        | <i>"</i> | <i>0.0400</i> |      | <i>738</i> | <i>21-167</i> |  |  | <i>S-02</i> |

Summit Scientific

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.



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

Reported:  
04/10/17 22:38

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

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

**Batch 1704106 - EPA 5030 Soil MS**

| <b>Matrix Spike Dup (1704106-MSD1)</b>  | <b>Source: 1704101-01</b> |        |       | <b>Prepared &amp; Analyzed: 04/10/17</b> |      |      |        |      |    |       |
|---|---------------------------|--------|-------|--|------|------|--------|------|----|-------|
| Naphthalene                             | 2.23                      | 0.010  | mg/kg |  | 1.61 |      | 10-158 | 74.9 | 42 | QM-07 |
| Benzene                                 | 2.67                      | 0.0020 | "     | 0.100                                    | 1.95 | 726  | 30-131 | 98.3 | 34 | QM-07 |
| Toluene                                 | 12.9                      | 0.0050 | "     | 0.100                                    | 11.6 | NR   | 30-134 | 121  | 30 | QM-07 |
| Ethylbenzene                            | 8.21                      | 0.0050 | "     | 0.0992                                   | 8.15 | 65.5 | 22-153 | 41.2 | 24 | QM-07 |
| m,p-Xylene                              | 24.7                      | 0.010  | "     | 0.200                                    | 35.0 | NR   | 10-159 | 32.0 | 68 | QM-07 |
| o-Xylene                                | 18.6                      | 0.0050 | "     | 0.0980                                   | 19.7 | NR   | 31-151 | 39.4 | 38 | QM-07 |
| Xylenes (total)                         | 43.4                      | 0.010  | "     |  | 54.6 |      | 30-160 | 35.1 | 30 | QM-07 |
| Gasoline Range Hydrocarbons             | 1040                      | 0.50   | "     |  | 2390 |      | 30-160 | 24.8 | 30 | QM-07 |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | 0.337                     |        | "     | 0.0400                                   |      | 844  | 23-173 |      |    | S-02  |
| <i>Surrogate: Toluene-d8</i>            | 1.02                      |        | "     | 0.0400                                   |      | NR   | 20-170 |      |    | S-02  |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | 0.358                     |        | "     | 0.0400                                   |      | 895  | 21-167 |      |    | S-02  |

Summit Scientific

*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.*



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/10/17 22:38

### Notes and Definitions

- S-02      The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- QM-07    The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- 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
- RPD      Relative Percent Difference

# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 16, 2017

Mark Longhurst  
PDC Energy  
1775 Sherman St. STE. 3000  
Denver, CO 80203  
RE: Uhrich 13-29

Enclosed are the results of analyses for samples received by Summit Scientific on 04/14/17 17:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury  
President



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/17 13:03

### ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|-----------|---------------|--------|----------------|----------------|
| SS03@12'  | 1704152-01    | Soil   | 04/14/17 08:58 | 04/14/17 17:45 |
| SS04@22'  | 1704152-02    | Soil   | 04/14/17 09:00 | 04/14/17 17:45 |
| SS05@12'  | 1704152-03    | Soil   | 04/14/17 13:11 | 04/14/17 17:45 |
| SS06@22'  | 1704152-04    | Soil   | 04/14/17 13:15 | 04/14/17 17:45 |

Summit Scientific

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PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

Reported:  
04/16/17 13:03

# Summit Scientific *1704152*

741 Corporate Circle Suite I • Golden, Colorado 80401  
303-277-9310 • 303-374-5933 Fax

Page 1 of 1

Client: PDC  
Address: \_\_\_\_\_  
City/State/Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Sampler Name: Chris Armbruster

Project Manager: Mark Longhurst  
E-Mail: Mark.Longhurst@pdcc.com  
Project Name: Uhrich 13-29  
Project Number: \_\_\_\_\_

| Sample Description                       | Date Sampled | Time Sampled                   | Number of Containers | Preservative                    |                  |                                |                 | Matrix   |      |                         | Analyze For:         |               |           |    |    |  | Special Instructions |  |  |  |
|--|--------------|--------------------------------|----------------------|---------------------------------|------------------|--------------------------------|-----------------|--|------|-------------------------|----------------------|---------------|-----------|----|----|--|----------------------|--|--|--|
|  |              |                                |                      | HCl                             | HNO <sub>3</sub> | None                           | Other (Specify) | Groundwater  | Soil | Air - Canister Serial # | Other (Specify)      | GBTEXN (8260) | DRO (TPH) | EC | pH |  |                      |  |  |  |
| SS03@12'                                 | 4/14/2017    | 8:58                           | 1                    |                                 | X                |                                |                 | X  |      |                         |                      | X             | X         |    |    |  |                      |  |  |  |
| SS04@22'                                 | 4/14/2017    | 9:00                           | 1                    |                                 | X                |                                |                 | X  |      |                         |                      | X             | X         |    |    |  |                      |  |  |  |
| SS05@12'                                 | 4/14/2017    | 1:11                           | 1                    |                                 | X                |                                |                 | X  |      |                         |                      | X             | X         |    |    |  |                      |  |  |  |
| SS06@22'                                 | 4/14/2017    | 1:15                           | 1                    |                                 | X                |                                |                 | X  |      |                         |                      | X             | X         |    |    |  |                      |  |  |  |
|  |              |                                |                      |                                 |                  |                                |                 |  |      |                         |                      |               |           |    |    |  |                      |  |  |  |
|  |              |                                |                      |                                 |                  |                                |                 |  |      |                         |                      |               |           |    |    |  |                      |  |  |  |
|  |              |                                |                      |                                 |                  |                                |                 |  |      |                         |                      |               |           |    |    |  |                      |  |  |  |
|  |              |                                |                      |                                 |                  |                                |                 |  |      |                         |                      |               |           |    |    |  |                      |  |  |  |
| Relinquished by: <u>Chris Armbruster</u> |              | Date/Time: <u>4/14/17 1620</u> |                      | Received by: <u>[Signature]</u> |                  | Date/Time: <u>4/14/17 1620</u> |                 | Turn Around Time (Check)   |      |                         | Notes: <u>on ice</u> |               |           |    |    |  |                      |  |  |  |
| Relinquished by: <u>[Signature]</u>      |              | Date/Time: <u>4/14/17 1700</u> |                      | Received by: <u>[Signature]</u> |                  | Date/Time: <u>4/14/17 1700</u> |                 | Same Day <input checked="" type="checkbox"/> 72 Hours <input type="checkbox"/> |      |                         |                      |               |           |    |    |  |                      |  |  |  |
| Relinquished by: _____                   |              | Date/Time: _____               |                      | Received in Lab by: _____       |                  | Date/Time: _____               |                 | 24 Hours <input type="checkbox"/> Standard <input type="checkbox"/>            |      |                         |                      |               |           |    |    |  |                      |  |  |  |
|  |              |                                |                      |                                 |                  |                                |                 | 48 Hours <input type="checkbox"/>  |      |                         |                      |               |           |    |    |  |                      |  |  |  |
|  |              |                                |                      |                                 |                  |                                |                 | Sample Integrity: Temperature Upon Receipt: <u>2.5°C</u>                       |      |                         |                      |               |           |    |    |  |                      |  |  |  |
|  |              |                                |                      |                                 |                  |                                |                 | Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>    |      |                         |                      |               |           |    |    |  |                      |  |  |  |

www.s2scientific.com

Summit Scientific

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PDC Energy  
 1775 Sherman St. STE. 3000  
 Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
 Project Manager: Mark Longhurst

Reported:  
 04/16/17 13:03

**Sample Receipt Checklist**

S2 Work Order: 1704152

Client: PDC Client Project ID: Uhrich 13-29

Shipped Via: PIU Airbill #: \_\_\_\_\_  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Matrix (check all that apply):  Air  Soil/Solid  Water  Other: \_\_\_\_\_  
(Describe)

|           |            |  |  |  |  |
|-----------|------------|--|--|--|--|
| Cooler ID |            |  |  |  |  |
| Temp (°C) | <u>2.5</u> |  |  |  |  |

Thermometer ID: 61857155-K

|   | Yes                                 | No | N/A                                 | Comments (if any) |
|---|-------------------------------------|----|-------------------------------------|-------------------|
| If samples require cooling, was the temperature just above 0°C to ≤ 6°C <sup>(1)</sup> ?  | <input checked="" type="checkbox"/> |    |                                     |                   |
| NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun. |                                     |    |                                     |                   |
| Were all samples received intact <sup>(1)</sup> ?   | <input checked="" type="checkbox"/> |    |                                     |                   |
| Was adequate sample volume provided <sup>(1)</sup> ?  | <input checked="" type="checkbox"/> |    |                                     |                   |
| If custody seals are present, are they intact <sup>(1)</sup> ?  |                                     |    | <input checked="" type="checkbox"/> |                   |
| Are short holding time analytes or samples with HTs due within 48 hours present?  |                                     |    | <input checked="" type="checkbox"/> |                   |
| Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?   | <input checked="" type="checkbox"/> |    |                                     |                   |
| Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?   | <input checked="" type="checkbox"/> |    |                                     |                   |
| Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?   | <input checked="" type="checkbox"/> |    |                                     |                   |
| Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?   | <input checked="" type="checkbox"/> |    |                                     |                   |
| For volatiles in water – is there headspace present? <b>If yes, contact client and note in narrative.</b>                                   |                                     |    | <input checked="" type="checkbox"/> |                   |
| Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ?  |                                     |    | <input checked="" type="checkbox"/> |                   |
| Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect  |                                     |    |                                     |                   |
| If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ?  |                                     |    | <input checked="" type="checkbox"/> |                   |
| Record the pH in Comments.  |                                     |    |                                     |                   |
| If dissolved metals are requested, were samples field filtered?   |                                     |    | <input checked="" type="checkbox"/> |                   |
| Additional Comments (if any):   |                                     |    |                                     |                   |
|   |                                     |    |                                     |                   |

<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.

Nakita  
 Custodian Printed Name

[Signature]  
 Signature or Initials of Custodian

4/14/17 1700  
 Date/Time

[Signature]



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/17 13:03

**SS03@12'**  
**1704152-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/14/17 08:58**

| Analyte       | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|--------|-------|
| C10-C28 (DRO) | ND     | 50              | mg/kg | 1        | 1704164 | 04/14/17 | 04/14/17 | 8015M  |       |

Date Sampled: **04/14/17 08:58**

| Analyte                        | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: <i>o</i> -Terphenyl |        | 115 %           | 30-150 |          | "     | "        | "        | "      |       |

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/14/17 08:58**

| Analyte                     | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Naphthalene                 | ND     | 0.010           | mg/kg | 1        | 1704163 | 04/14/17 | 04/15/17 | EPA 8260B |       |
| Benzene                     | ND     | 0.0020          | "     | "        | "       | "        | "        | "         |       |
| Toluene                     | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene                | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)             | ND     | 0.010           | "     | "        | "       | "        | "        | "         |       |
| Gasoline Range Hydrocarbons | ND     | 0.50            | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/14/17 08:58**

| Analyte                          | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 |        | 99.9 %          | 23-173 |          | "     | "        | "        | "      |       |
| Surrogate: Toluene-d8            |        | 103 %           | 20-170 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 90.3 %          | 21-167 |          | "     | "        | "        | "      |       |

Summit Scientific

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PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/17 13:03

**SS04@22'**  
**1704152-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/14/17 09:00**

| Analyte       | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|--------|-------|
| C10-C28 (DRO) | ND     | 50              | mg/kg | 1        | 1704164 | 04/14/17 | 04/14/17 | 8015M  |       |

Date Sampled: **04/14/17 09:00**

| Analyte                        | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: <i>o</i> -Terphenyl |        | 117 %           | 30-150 |          | "     | "        | "        | "      |       |

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/14/17 09:00**

| Analyte                     | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Naphthalene                 | ND     | 0.010           | mg/kg | 1        | 1704163 | 04/14/17 | 04/15/17 | EPA 8260B |       |
| Benzene                     | ND     | 0.0020          | "     | "        | "       | "        | "        | "         |       |
| Toluene                     | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene                | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)             | ND     | 0.010           | "     | "        | "       | "        | "        | "         |       |
| Gasoline Range Hydrocarbons | ND     | 0.50            | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/14/17 09:00**

| Analyte                          | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 |        | 98.6 %          | 23-173 |          | "     | "        | "        | "      |       |
| Surrogate: Toluene-d8            |        | 97.8 %          | 20-170 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 86.8 %          | 21-167 |          | "     | "        | "        | "      |       |

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PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/17 13:03

**SS05@12'**  
**1704152-03 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/14/17 13:11**

| Analyte       | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|--------|-------|
| C10-C28 (DRO) | ND     | 50              | mg/kg | 1        | 1704164 | 04/14/17 | 04/15/17 | 8015M  |       |

Date Sampled: **04/14/17 13:11**

| Analyte                       | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| <i>Surrogate: o-Terphenyl</i> |        | 113 %           | 30-150 |          | "     | "        | "        | "      |       |

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/14/17 13:11**

| Analyte                     | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Naphthalene                 | ND     | 0.010           | mg/kg | 1        | 1704163 | 04/14/17 | 04/15/17 | EPA 8260B |       |
| Benzene                     | ND     | 0.0020          | "     | "        | "       | "        | "        | "         |       |
| Toluene                     | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene                | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)             | ND     | 0.010           | "     | "        | "       | "        | "        | "         |       |
| Gasoline Range Hydrocarbons | ND     | 0.50            | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/14/17 13:11**

| Analyte                                 | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| <i>Surrogate: 1,2-Dichloroethane-d4</i> |        | 101 %           | 23-173 |          | "     | "        | "        | "      |       |
| <i>Surrogate: Toluene-d8</i>            |        | 103 %           | 20-170 |          | "     | "        | "        | "      |       |
| <i>Surrogate: 4-Bromofluorobenzene</i>  |        | 93.7 %          | 21-167 |          | "     | "        | "        | "      |       |

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PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/17 13:03

**SS06@22'**  
**1704152-04 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/14/17 13:15**

| Analyte       | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|--------|-------|
| C10-C28 (DRO) | ND     | 50              | mg/kg | 1        | 1704164 | 04/14/17 | 04/15/17 | 8015M  |       |

Date Sampled: **04/14/17 13:15**

| Analyte                        | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: <i>o</i> -Terphenyl |        | 112 %           | 30-150 |          | "     | "        | "        | "      |       |

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/14/17 13:15**

| Analyte                     | Result        | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------------------------|---------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Naphthalene                 | ND            | 0.010           | mg/kg | 1        | 1704163 | 04/14/17 | 04/15/17 | EPA 8260B |       |
| <b>Benzene</b>              | <b>0.010</b>  | 0.0020          | "     | "        | "       | "        | "        | "         |       |
| <b>Toluene</b>              | <b>0.0060</b> | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene                | ND            | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)             | ND            | 0.010           | "     | "        | "       | "        | "        | "         |       |
| Gasoline Range Hydrocarbons | ND            | 0.50            | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/14/17 13:15**

| Analyte                          | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 |        | 104 %           | 23-173 |          | "     | "        | "        | "      |       |
| Surrogate: Toluene-d8            |        | 102 %           | 20-170 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 93.5 %          | 21-167 |          | "     | "        | "        | "      |       |

Summit Scientific

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PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/17 13:03

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch 1704164 - EPA 3550A**

**Blank (1704164-BLK1)**

Prepared & Analyzed: 04/14/17

|                               |      |    |       |      |  |     |        |  |  |  |
|-------------------------------|------|----|-------|------|--|-----|--------|--|--|--|
| C10-C28 (DRO)                 | ND   | 50 | mg/kg |      |  |     |        |  |  |  |
| <i>Surrogate: o-Terphenyl</i> | 14.3 |    | "     | 12.5 |  | 114 | 30-150 |  |  |  |

**LCS (1704164-BS1)**

Prepared & Analyzed: 04/14/17

|                               |      |    |       |      |  |     |        |  |  |  |
|-------------------------------|------|----|-------|------|--|-----|--------|--|--|--|
| C10-C28 (DRO)                 | 511  | 50 | mg/kg | 499  |  | 102 | 73-134 |  |  |  |
| <i>Surrogate: o-Terphenyl</i> | 14.1 |    | "     | 12.5 |  | 113 | 30-150 |  |  |  |

**Matrix Spike (1704164-MS1)**

Source: 1704152-01

Prepared & Analyzed: 04/14/17

|                               |      |    |       |      |      |     |        |  |  |  |
|-------------------------------|------|----|-------|------|------|-----|--------|--|--|--|
| C10-C28 (DRO)                 | 543  | 50 | mg/kg | 499  | 24.2 | 104 | 50-148 |  |  |  |
| <i>Surrogate: o-Terphenyl</i> | 14.4 |    | "     | 12.5 |      | 115 | 30-150 |  |  |  |

**Matrix Spike Dup (1704164-MSD1)**

Source: 1704152-01

Prepared & Analyzed: 04/14/17

|                               |      |    |       |      |      |     |        |      |    |  |
|-------------------------------|------|----|-------|------|------|-----|--------|------|----|--|
| C10-C28 (DRO)                 | 533  | 50 | mg/kg | 499  | 24.2 | 102 | 50-148 | 1.80 | 20 |  |
| <i>Surrogate: o-Terphenyl</i> | 14.1 |    | "     | 12.5 |      | 113 | 30-150 |      |    |  |

Summit Scientific

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PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

Reported:  
04/16/17 13:03

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

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

**Batch 1704163 - EPA 5030 Soil MS**

**Blank (1704163-BLK1)**

Prepared: 04/14/17 Analyzed: 04/15/17

|   |               |        |          |               |  |             |               |  |  |  |
|---|---------------|--------|----------|---------------|--|-------------|---------------|--|--|--|
| Naphthalene                             | ND            | 0.010  | mg/kg    |               |  |             |               |  |  |  |
| Benzene                                 | ND            | 0.0020 | "        |               |  |             |               |  |  |  |
| Toluene                                 | ND            | 0.0050 | "        |               |  |             |               |  |  |  |
| Ethylbenzene                            | ND            | 0.0050 | "        |               |  |             |               |  |  |  |
| Xylenes (total)                         | ND            | 0.010  | "        |               |  |             |               |  |  |  |
| Gasoline Range Hydrocarbons             | ND            | 0.50   | "        |               |  |             |               |  |  |  |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>0.0361</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>90.2</i> | <i>23-173</i> |  |  |  |
| <i>Surrogate: Toluene-d8</i>            | <i>0.0393</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>98.2</i> | <i>20-170</i> |  |  |  |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | <i>0.0379</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>94.8</i> | <i>21-167</i> |  |  |  |

**LCS (1704163-BS1)**

Prepared: 04/14/17 Analyzed: 04/15/17

|   |               |        |          |               |  |             |               |  |  |  |
|---|---------------|--------|----------|---------------|--|-------------|---------------|--|--|--|
| Naphthalene                             | ND            | 0.010  | mg/kg    |               |  |             | 66-138        |  |  |  |
| Benzene                                 | 0.0842        | 0.0020 | "        | 0.100         |  | 84.2        | 58-130        |  |  |  |
| Toluene                                 | 0.100         | 0.0050 | "        | 0.100         |  | 100         | 61-134        |  |  |  |
| Ethylbenzene                            | 0.113         | 0.0050 | "        | 0.0992        |  | 114         | 74-139        |  |  |  |
| m,p-Xylene                              | 0.243         | 0.010  | "        | 0.200         |  | 122         | 73-137        |  |  |  |
| o-Xylene                                | 0.109         | 0.0050 | "        | 0.0980        |  | 111         | 73-141        |  |  |  |
| Xylenes (total)                         | 0.352         | 0.010  | "        |               |  |             | 0-200         |  |  |  |
| Gasoline Range Hydrocarbons             | 2.42          | 0.50   | "        |               |  |             | 30-150        |  |  |  |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>0.0413</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>103</i>  | <i>23-173</i> |  |  |  |
| <i>Surrogate: Toluene-d8</i>            | <i>0.0387</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>96.8</i> | <i>20-170</i> |  |  |  |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | <i>0.0370</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>92.4</i> | <i>21-167</i> |  |  |  |

**Matrix Spike (1704163-MS1)**

Source: 1704152-01

Prepared: 04/14/17 Analyzed: 04/15/17

|   |               |        |          |               |    |             |               |  |  |  |
|---|---------------|--------|----------|---------------|----|-------------|---------------|--|--|--|
| Naphthalene                             | ND            | 0.010  | mg/kg    |               | ND |             | 10-158        |  |  |  |
| Benzene                                 | 0.0839        | 0.0020 | "        | 0.100         | ND | 83.9        | 30-131        |  |  |  |
| Toluene                                 | 0.102         | 0.0050 | "        | 0.100         | ND | 102         | 30-134        |  |  |  |
| Ethylbenzene                            | 0.116         | 0.0050 | "        | 0.0992        | ND | 117         | 22-153        |  |  |  |
| m,p-Xylene                              | 0.249         | 0.010  | "        | 0.200         | ND | 125         | 10-159        |  |  |  |
| o-Xylene                                | 0.111         | 0.0050 | "        | 0.0980        | ND | 113         | 31-151        |  |  |  |
| Xylenes (total)                         | 0.360         | 0.010  | "        |               | ND |             | 30-160        |  |  |  |
| Gasoline Range Hydrocarbons             | 2.46          | 0.50   | "        |               | ND |             | 30-160        |  |  |  |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>0.0424</i> |        | <i>"</i> | <i>0.0400</i> |    | <i>106</i>  | <i>23-173</i> |  |  |  |
| <i>Surrogate: Toluene-d8</i>            | <i>0.0395</i> |        | <i>"</i> | <i>0.0400</i> |    | <i>98.8</i> | <i>20-170</i> |  |  |  |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | <i>0.0381</i> |        | <i>"</i> | <i>0.0400</i> |    | <i>95.2</i> | <i>21-167</i> |  |  |  |

Summit Scientific

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.



PDC Energy  
 1775 Sherman St. STE. 3000  
 Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
 Project Manager: Mark Longhurst

**Reported:**  
 04/16/17 13:03

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

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

**Batch 1704163 - EPA 5030 Soil MS**

| <b>Matrix Spike Dup (1704163-MSD1)</b>  | <b>Source: 1704152-01</b> |        |          | Prepared: 04/14/17 |    | Analyzed: 04/15/17 |               |       |  |    |
|---|---------------------------|--------|----------|--------------------|----|--------------------|---------------|-------|--|----|
| Naphthalene                             | ND                        | 0.010  | mg/kg    |                    | ND |                    | 10-158        |       |  | 42 |
| Benzene                                 | 0.0861                    | 0.0020 | "        | 0.100              | ND | 86.1               | 30-131        | 2.54  |  | 34 |
| Toluene                                 | 0.102                     | 0.0050 | "        | 0.100              | ND | 102                | 30-134        | 0.147 |  | 30 |
| Ethylbenzene                            | 0.112                     | 0.0050 | "        | 0.0992             | ND | 113                | 22-153        | 3.45  |  | 24 |
| m,p-Xylene                              | 0.243                     | 0.010  | "        | 0.200              | ND | 122                | 10-159        | 2.46  |  | 68 |
| o-Xylene                                | 0.108                     | 0.0050 | "        | 0.0980             | ND | 110                | 31-151        | 2.22  |  | 38 |
| Xylenes (total)                         | 0.351                     | 0.010  | "        |                    | ND |                    | 30-160        | 2.39  |  | 30 |
| Gasoline Range Hydrocarbons             | 2.52                      | 0.50   | "        |                    | ND |                    | 30-160        | 2.47  |  | 30 |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>0.0406</i>             |        | <i>"</i> | <i>0.0400</i>      |    | <i>102</i>         | <i>23-173</i> |       |  |    |
| <i>Surrogate: Toluene-d8</i>            | <i>0.0401</i>             |        | <i>"</i> | <i>0.0400</i>      |    | <i>100</i>         | <i>20-170</i> |       |  |    |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | <i>0.0369</i>             |        | <i>"</i> | <i>0.0400</i>      |    | <i>92.2</i>        | <i>21-167</i> |       |  |    |

Summit Scientific

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PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/17 13:03

### 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  
RPD Relative Percent Difference

# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 18, 2017

Mark Longhurst  
PDC Energy  
1775 Sherman St. STE. 3000  
Denver, CO 80203  
RE: Uhrich 13-29

Enclosed are the results of analyses for samples received by Summit Scientific on 04/17/17 17:39. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', written in a cursive style.

Paul Shrewsbury  
President



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/18/17 06:27

### ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|-----------|---------------|--------|----------------|----------------|
| SS07@13'  | 1704163-01    | Soil   | 04/17/17 09:35 | 04/17/17 17:39 |
| SS08@22'  | 1704163-02    | Soil   | 04/17/17 09:49 | 04/17/17 17:39 |
| SS09@12'  | 1704163-03    | Soil   | 04/17/17 10:33 | 04/17/17 17:39 |
| SS10@22'  | 1704163-04    | Soil   | 04/17/17 10:38 | 04/17/17 17:39 |
| SS11@12'  | 1704163-05    | Soil   | 04/17/17 10:55 | 04/17/17 17:39 |
| SS12@22'  | 1704163-06    | Soil   | 04/17/17 11:00 | 04/17/17 17:39 |
| SS13@12'  | 1704163-07    | Soil   | 04/17/17 11:08 | 04/17/17 17:39 |
| SS14@22'  | 1704163-08    | Soil   | 04/17/17 11:11 | 04/17/17 17:39 |
| SS15@12'  | 1704163-09    | Soil   | 04/17/17 11:20 | 04/17/17 17:39 |
| SS16@22'  | 1704163-10    | Soil   | 04/17/17 11:28 | 04/17/17 17:39 |
| SS17@12'  | 1704163-11    | Soil   | 04/17/17 11:32 | 04/17/17 17:39 |
| SS18@22'  | 1704163-12    | Soil   | 04/17/17 11:36 | 04/17/17 17:39 |

Summit Scientific

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PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

Reported:  
04/18/17 06:27

# Summit Scientific 1704163.1

741 Corporate Circle Suite I • Golden, Colorado 80401  
303-277-9310 • 303-374-5933 Fax

Page 1 of 2

Client: PDC  
Address:  
City/State/Zip:  
Phone: Fax:  
Sampler Name: Chris Armbruster

Project Manager: Mark Longhurst  
E-Mail: Mark.Longhurst@pdce.com  
Project Name: Uhrich 13-29  
Project Number:

| Sample Description                | Date Sampled | Time Sampled            | Number of Containers | Preservative             |                  |                          |                 | Matrix                   |      |  | Analyze For:    |                                      |           |                                   |    |                                   | Special Instructions |        |  |  |
|-----------------------------------|--------------|-------------------------|----------------------|--------------------------|------------------|--------------------------|-----------------|--------------------------|------|--|-----------------|--------------------------------------|-----------|-----------------------------------|----|-----------------------------------|----------------------|--------|--|--|
|                                   |              |                         |                      | HCl                      | HNO <sub>3</sub> | None                     | Other (Specify) | Groundwater              | Soil | Air - Canister Serial #                      | Other (Specify) | GBTEXN (8260)                        | DRO (TPH) | EC                                | pH |                                   |                      |        |  |  |
| SS07@13'                          | 4/17/2017    | 9:35                    | 1                    |                          |                  | X                        |                 |                          |      |  |                 | X                                    | X         |                                   |    |                                   |                      |        |  |  |
| SS08@22'                          | 4/17/2017    | 9:49                    | 1                    |                          |                  | X                        |                 |                          | X    |  |                 | X                                    | X         |                                   |    |                                   |                      |        |  |  |
| SS09@12'                          | 4/17/2017    | 10:33                   | 1                    |                          |                  | X                        |                 |                          | X    |  |                 | X                                    | X         |                                   |    |                                   |                      |        |  |  |
| SS10@22'                          | 4/17/2017    | 10:38                   | 1                    |                          |                  | X                        |                 |                          | X    |  |                 | X                                    | X         |                                   |    |                                   |                      |        |  |  |
| SS11@12'                          | 4/17/2017    | 10:55                   | 1                    |                          |                  | X                        |                 |                          | X    |  |                 | X                                    | X         |                                   |    |                                   |                      |        |  |  |
| SS12@22'                          | 4/17/2017    | 11:00                   | 1                    |                          |                  | X                        |                 |                          | X    |  |                 | X                                    | X         |                                   |    |                                   |                      |        |  |  |
| SS13@12'                          | 17-Apr       | 11:08                   | 1                    |                          |                  | X                        |                 |                          | X    |  |                 | X                                    | X         |                                   |    |                                   |                      |        |  |  |
| SS14@22'                          | 4/17/2017    | 11:11                   | 1                    |                          |                  | X                        |                 |                          | X    |  |                 | X                                    | X         |                                   |    |                                   |                      |        |  |  |
| SS15@12'                          | 4/17/2017    | 11:20                   | 1                    |                          |                  | X                        |                 |                          | X    |  |                 | X                                    | X         |                                   |    |                                   |                      |        |  |  |
| SS16@22'                          | 4/17/2017    | 11:28                   | 1                    |                          |                  | X                        |                 |                          | X    |  |                 | X                                    | X         |                                   |    |                                   |                      |        |  |  |
| Relinquished by: Chris Armbruster |              | Date/Time: 4/17/17 3:30 |                      | Received by: [Signature] |                  | Date/Time: 4/17          |                 | Turn Around Time (Check) |      | Same Day <input checked="" type="checkbox"/> |                 | 72 Hours <input type="checkbox"/>    |           | 24 Hours <input type="checkbox"/> |    | Standard <input type="checkbox"/> |                      | Notes: |  |  |
| Relinquished by: [Signature]      |              | Date/Time: 5:39p        |                      | Received by: [Signature] |                  | Date/Time: 4-17-17 17:39 |                 | Sample Integrity:        |      | Temperature Upon Receipt: 5.10               |                 | Intact: Yes <input type="checkbox"/> |           | No <input type="checkbox"/>       |    |                                   |                      |        |  |  |

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PDC Energy  
 1775 Sherman St. STE. 3000  
 Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
 Project Manager: Mark Longhurst

Reported:  
 04/18/17 06:27

# Summit Scientific 1704163.2

741 Corporate Circle Suite I • Golden, Colorado 80401  
 303-277-9310 • 303-374-5933 Fax

Page 1 of 2

Client: PDC  
 Address:  
 City/State/Zip:  
 Phone: Fax:  
 Sampler Name: Chris Armbruster

Project Manager: Mark Longhurst  
 E-Mail: Mark.Longhurst@pdce.com  
 Project Name: Uhrich 13-29  
 Project Number:

| Sample Description                   | Date Sampled               | Time Sampled        | Number of Containers        | Preservative                   |                                     |  |                          | Matrix      |      |                         | Analyze For:    |               |           |    |    |  | Special Instructions |  |
|--------------------------------------|----------------------------|---------------------|-----------------------------|--------------------------------|-------------------------------------|--|--------------------------|-------------|------|-------------------------|-----------------|---------------|-----------|----|----|--|----------------------|--|
|                                      |                            |                     |                             | HCl                            | HNO <sub>3</sub>                    | None   | Other (Specify)          | Groundwater | Soil | Air - Canister Serial # | Other (Specify) | GBTEXN (8260) | DRO (TPH) | EC | pH |  |                      |  |
| SS17@12'                             | 4/17/2017                  | 11:32               | 1                           |                                | X                                   |  |                          | X           |      |                         |                 | X             | X         |    |    |  |                      |  |
| SS18@22'                             | 4/17/2017                  | 11:36               | 1                           |                                | X                                   |  |                          | X           |      |                         |                 | X             | X         |    |    |  |                      |  |
|                                      |                            |                     |                             |                                |                                     |  |                          |             |      |                         |                 |               |           |    |    |  |                      |  |
|                                      |                            |                     |                             |                                |                                     |  |                          |             |      |                         |                 |               |           |    |    |  |                      |  |
|                                      |                            |                     |                             |                                |                                     |  |                          |             |      |                         |                 |               |           |    |    |  |                      |  |
|                                      |                            |                     |                             |                                |                                     |  |                          |             |      |                         |                 |               |           |    |    |  |                      |  |
|                                      |                            |                     |                             |                                |                                     |  |                          |             |      |                         |                 |               |           |    |    |  |                      |  |
|                                      |                            |                     |                             |                                |                                     |  |                          |             |      |                         |                 |               |           |    |    |  |                      |  |
|                                      |                            |                     |                             |                                |                                     |  |                          |             |      |                         |                 |               |           |    |    |  |                      |  |
| Relinquished by:<br>Chris Armbruster | Date/Time:<br>4/17/17 3:30 | Received by:<br>    | Date/Time:<br>4/17          | Turn Around Time (Check)       |                                     |  |                          | Notes:      |      |                         |                 |               |           |    |    |  |                      |  |
|                                      |                            |                     |                             | Same Day                       | <input checked="" type="checkbox"/> | 72 Hours   | <input type="checkbox"/> |             |      |                         |                 |               |           |    |    |  |                      |  |
| Relinquished by:<br>                 | Date/Time:<br>5:39 4/17    | Received by:<br>    | Date/Time:<br>4-17-17 17:39 | 24 Hours                       | <input type="checkbox"/>            | Standard   | <input type="checkbox"/> |             |      |                         |                 |               |           |    |    |  |                      |  |
| Relinquished by:                     | Date/Time:                 | Received in Lab by: | Date/Time:                  | 48 Hours                       | <input type="checkbox"/>            |  | <input type="checkbox"/> |             |      |                         |                 |               |           |    |    |  |                      |  |
| Sample Integrity:                    |                            |                     |                             | Temperature Upon Receipt: 5.10 |                                     | Intact: Yes <input type="checkbox"/> No <input type="checkbox"/> |                          |             |      |                         |                 |               |           |    |    |  |                      |  |

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PDC Energy  
 1775 Sherman St. STE. 3000  
 Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
 Project Manager: Mark Longhurst

Reported:  
 04/18/17 06:27

**Sample Receipt Checklist**

S2 Work Order: 1704163-1

Client: PDC Client Project ID: Uhrich 13-29

Shipped Via: \_\_\_\_\_ Airbill #: \_\_\_\_\_  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Matrix (check all that apply):  Air  Soil/Solid  Water  Other: \_\_\_\_\_  
(Describe)

|           |     |  |  |  |  |
|-----------|-----|--|--|--|--|
| Cooler ID |     |  |  |  |  |
| Temp (°C) | 5.1 |  |  |  |  |

Thermometer ID: 61857155-K

|   | Yes                                 | No | N/A                                 | Comments (if any) |
|---|-------------------------------------|----|-------------------------------------|-------------------|
| If samples require cooling, was the temperature just above 0°C to ≤ 6°C <sup>(1)</sup> ?<br>NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun. | <input checked="" type="checkbox"/> |    |                                     | <u>under seal</u> |
| Were all samples received intact <sup>(1)</sup> ?   | <input checked="" type="checkbox"/> |    |                                     |                   |
| Was adequate sample volume provided <sup>(1)</sup> ?  | <input checked="" type="checkbox"/> |    |                                     |                   |
| If custody seals are present, are they intact <sup>(1)</sup> ?  |                                     |    | <input checked="" type="checkbox"/> |                   |
| Are short holding time analytes or samples with HTs due within 48 hours present?  | <input checked="" type="checkbox"/> |    |                                     |                   |
| Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?   | <input checked="" type="checkbox"/> |    |                                     |                   |
| Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?   | <input checked="" type="checkbox"/> |    |                                     |                   |
| Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?   | <input checked="" type="checkbox"/> |    |                                     |                   |
| Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?   | <input checked="" type="checkbox"/> |    |                                     |                   |
| For volatiles in water – is there headspace present? <b>If yes, contact client and note in narrative.</b>   |                                     |    | <input checked="" type="checkbox"/> |                   |
| Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ?<br>Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect  |                                     |    | <input checked="" type="checkbox"/> |                   |
| If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ?<br>Record the pH in Comments.  |                                     |    | <input checked="" type="checkbox"/> |                   |
| If dissolved metals are requested, were samples field filtered?   |                                     |    | <input checked="" type="checkbox"/> |                   |
| Additional Comments (if any):   |                                     |    |                                     |                   |
| <b><sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.</b>  |                                     |    |                                     |                   |

Mark Longhurst  
 Custodian Printed Name

[Signature]  
 Signature or Initials of Custodian

4-17-17 17:39  
 Date/Time

[Signature]



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

Reported:  
04/18/17 06:27

SS07@13'  
1704163-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 04/17/17 09:35

| Analyte       | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|--------|-------|
| C10-C28 (DRO) | 1600   | 50              | mg/kg | 1        | 1704182 | 04/17/17 | 04/17/17 | 8015M  |       |

Date Sampled: 04/17/17 09:35

| Analyte                | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl |        | 125 %           | 30-150 |          | "     | "        | "        | "      |       |

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 04/17/17 09:35

| Analyte                     | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Naphthalene                 | 0.39   | 0.010           | mg/kg | 1        | 1704181 | 04/17/17 | 04/18/17 | EPA 8260B |       |
| Benzene                     | 0.73   | 0.0020          | "     | "        | "       | "        | "        | "         |       |
| Toluene                     | 1.6    | 0.50            | "     | 100      | "       | "        | "        | "         |       |
| Ethylbenzene                | 3.8    | 0.50            | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)             | 16     | 1.0             | "     | "        | "       | "        | "        | "         |       |
| Gasoline Range Hydrocarbons | 1200   | 50              | "     | "        | "       | "        | 04/18/17 | "         |       |

Date Sampled: 04/17/17 09:35

| Analyte                          | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 |        | 96.4 %          | 23-173 |          | "     | "        | 04/18/17 | "      |       |
| Surrogate: Toluene-d8            |        | 98.8 %          | 20-170 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 105 %           | 21-167 |          | "     | "        | "        | "      |       |

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PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

Reported:  
04/18/17 06:27

**SS08@22'**  
**1704163-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/17/17 09:49**

| Analyte              | Result     | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method | Notes |
|----------------------|------------|-----------------|-------|----------|---------|----------|----------|--------|-------|
| <b>C10-C28 (DRO)</b> | <b>290</b> | 50              | mg/kg | 1        | 1704182 | 04/17/17 | 04/17/17 | 8015M  |       |

Date Sampled: **04/17/17 09:49**

| Analyte                       | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| <i>Surrogate: o-Terphenyl</i> |        | 109 %           | 30-150 |          | "     | "        | "        | "      |       |

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/17/17 09:49**

| Analyte                            | Result      | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|------------------------------------|-------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| <b>Naphthalene</b>                 | <b>0.28</b> | 0.010           | mg/kg | 1        | 1704181 | 04/17/17 | 04/18/17 | EPA 8260B |       |
| <b>Benzene</b>                     | <b>0.39</b> | 0.0020          | "     | "        | "       | "        | "        | "         |       |
| <b>Toluene</b>                     | <b>11</b>   | 0.50            | "     | 100      | "       | "        | "        | "         |       |
| <b>Ethylbenzene</b>                | <b>3.3</b>  | 0.50            | "     | "        | "       | "        | "        | "         |       |
| <b>Xylenes (total)</b>             | <b>25</b>   | 1.0             | "     | "        | "       | "        | "        | "         |       |
| <b>Gasoline Range Hydrocarbons</b> | <b>1000</b> | 50              | "     | "        | "       | "        | 04/18/17 | "         |       |

Date Sampled: **04/17/17 09:49**

| Analyte                                 | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| <i>Surrogate: 1,2-Dichloroethane-d4</i> |        | 95.8 %          | 23-173 |          | "     | "        | 04/18/17 | "      |       |
| <i>Surrogate: Toluene-d8</i>            |        | 108 %           | 20-170 |          | "     | "        | "        | "      |       |
| <i>Surrogate: 4-Bromofluorobenzene</i>  |        | 105 %           | 21-167 |          | "     | "        | "        | "      |       |

Summit Scientific

*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.*



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/18/17 06:27

**SS09@12'**  
**1704163-03 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/17/17 10:33**

| Analyte       | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|--------|-------|
| C10-C28 (DRO) | ND     | 50              | mg/kg | 1        | 1704182 | 04/17/17 | 04/17/17 | 8015M  |       |

Date Sampled: **04/17/17 10:33**

| Analyte                        | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: <i>o</i> -Terphenyl |        | 114 %           | 30-150 |          | "     | "        | "        | "      |       |

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/17/17 10:33**

| Analyte                     | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Naphthalene                 | ND     | 0.010           | mg/kg | 1        | 1704181 | 04/17/17 | 04/17/17 | EPA 8260B |       |
| Benzene                     | ND     | 0.0020          | "     | "        | "       | "        | "        | "         |       |
| Toluene                     | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene                | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)             | ND     | 0.010           | "     | "        | "       | "        | "        | "         |       |
| Gasoline Range Hydrocarbons | ND     | 0.50            | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/17/17 10:33**

| Analyte                          | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 |        | 102 %           | 23-173 |          | "     | "        | "        | "      |       |
| Surrogate: Toluene-d8            |        | 100 %           | 20-170 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 101 %           | 21-167 |          | "     | "        | "        | "      |       |

Summit Scientific

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PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/18/17 06:27

**SS10@22'**  
**1704163-04 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/17/17 10:38**

| Analyte       | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|--------|-------|
| C10-C28 (DRO) | ND     | 50              | mg/kg | 1        | 1704182 | 04/17/17 | 04/17/17 | 8015M  |       |

Date Sampled: **04/17/17 10:38**

| Analyte                        | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: <i>o</i> -Terphenyl |        | 112 %           | 30-150 |          | "     | "        | "        | "      |       |

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/17/17 10:38**

| Analyte                     | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Naphthalene                 | ND     | 0.010           | mg/kg | 1        | 1704181 | 04/17/17 | 04/17/17 | EPA 8260B |       |
| Benzene                     | ND     | 0.0020          | "     | "        | "       | "        | "        | "         |       |
| Toluene                     | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene                | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)             | ND     | 0.010           | "     | "        | "       | "        | "        | "         |       |
| Gasoline Range Hydrocarbons | ND     | 0.50            | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/17/17 10:38**

| Analyte                          | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 |        | 101 %           | 23-173 |          | "     | "        | "        | "      |       |
| Surrogate: Toluene-d8            |        | 98.6 %          | 20-170 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 102 %           | 21-167 |          | "     | "        | "        | "      |       |

Summit Scientific

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PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/18/17 06:27

**SS11@12'**  
**1704163-05 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/17/17 10:55**

| Analyte       | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|--------|-------|
| C10-C28 (DRO) | ND     | 50              | mg/kg | 1        | 1704182 | 04/17/17 | 04/17/17 | 8015M  |       |

Date Sampled: **04/17/17 10:55**

| Analyte                        | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: <i>o</i> -Terphenyl |        | 113 %           | 30-150 |          | "     | "        | "        | "      |       |

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/17/17 10:55**

| Analyte                            | Result      | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|------------------------------------|-------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Naphthalene                        | ND          | 0.010           | mg/kg | 1        | 1704181 | 04/17/17 | 04/17/17 | EPA 8260B |       |
| Benzene                            | ND          | 0.0020          | "     | "        | "       | "        | "        | "         |       |
| Toluene                            | ND          | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene                       | ND          | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)                    | ND          | 0.010           | "     | "        | "       | "        | "        | "         |       |
| <b>Gasoline Range Hydrocarbons</b> | <b>0.50</b> | 0.50            | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/17/17 10:55**

| Analyte                          | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 |        | 102 %           | 23-173 |          | "     | "        | "        | "      |       |
| Surrogate: Toluene-d8            |        | 99.1 %          | 20-170 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 99.2 %          | 21-167 |          | "     | "        | "        | "      |       |

Summit Scientific

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PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/18/17 06:27

**SS12@22'**  
**1704163-06 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/17/17 11:00**

| Analyte       | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|--------|-------|
| C10-C28 (DRO) | ND     | 50              | mg/kg | 1        | 1704182 | 04/17/17 | 04/17/17 | 8015M  |       |

Date Sampled: **04/17/17 11:00**

| Analyte                        | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: <i>o</i> -Terphenyl |        | 114 %           | 30-150 |          | "     | "        | "        | "      |       |

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/17/17 11:00**

| Analyte                     | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Naphthalene                 | ND     | 0.010           | mg/kg | 1        | 1704181 | 04/17/17 | 04/17/17 | EPA 8260B |       |
| Benzene                     | ND     | 0.0020          | "     | "        | "       | "        | "        | "         |       |
| Toluene                     | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene                | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)             | ND     | 0.010           | "     | "        | "       | "        | "        | "         |       |
| Gasoline Range Hydrocarbons | ND     | 0.50            | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/17/17 11:00**

| Analyte                          | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 |        | 99.0 %          | 23-173 |          | "     | "        | "        | "      |       |
| Surrogate: Toluene-d8            |        | 98.2 %          | 20-170 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 100 %           | 21-167 |          | "     | "        | "        | "      |       |

Summit Scientific

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PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/18/17 06:27

**SS13@12'**  
**1704163-07 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/17/17 11:08**

| Analyte       | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|--------|-------|
| C10-C28 (DRO) | ND     | 50              | mg/kg | 1        | 1704182 | 04/17/17 | 04/18/17 | 8015M  |       |

Date Sampled: **04/17/17 11:08**

| Analyte                        | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: <i>o</i> -Terphenyl |        | 114 %           | 30-150 |          | "     | "        | "        | "      |       |

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/17/17 11:08**

| Analyte                     | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Naphthalene                 | ND     | 0.010           | mg/kg | 1        | 1704181 | 04/17/17 | 04/17/17 | EPA 8260B |       |
| Benzene                     | ND     | 0.0020          | "     | "        | "       | "        | "        | "         |       |
| Toluene                     | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene                | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)             | ND     | 0.010           | "     | "        | "       | "        | "        | "         |       |
| Gasoline Range Hydrocarbons | ND     | 0.50            | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/17/17 11:08**

| Analyte                          | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 |        | 102 %           | 23-173 |          | "     | "        | "        | "      |       |
| Surrogate: Toluene-d8            |        | 101 %           | 20-170 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 99.0 %          | 21-167 |          | "     | "        | "        | "      |       |

Summit Scientific

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PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/18/17 06:27

**SS14@22'**  
**1704163-08 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/17/17 11:11**

| Analyte       | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|--------|-------|
| C10-C28 (DRO) | ND     | 50              | mg/kg | 1        | 1704182 | 04/17/17 | 04/18/17 | 8015M  |       |

Date Sampled: **04/17/17 11:11**

| Analyte                        | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: <i>o</i> -Terphenyl |        | 114 %           | 30-150 |          | "     | "        | "        | "      |       |

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/17/17 11:11**

| Analyte                     | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Naphthalene                 | ND     | 0.010           | mg/kg | 1        | 1704181 | 04/17/17 | 04/17/17 | EPA 8260B |       |
| Benzene                     | ND     | 0.0020          | "     | "        | "       | "        | "        | "         |       |
| Toluene                     | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene                | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)             | ND     | 0.010           | "     | "        | "       | "        | "        | "         |       |
| Gasoline Range Hydrocarbons | ND     | 0.50            | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/17/17 11:11**

| Analyte                          | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 |        | 101 %           | 23-173 |          | "     | "        | "        | "      |       |
| Surrogate: Toluene-d8            |        | 99.4 %          | 20-170 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 102 %           | 21-167 |          | "     | "        | "        | "      |       |

Summit Scientific

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PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/18/17 06:27

**SS15@12'**  
**1704163-09 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/17/17 11:20**

| Analyte       | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|--------|-------|
| C10-C28 (DRO) | ND     | 50              | mg/kg | 1        | 1704182 | 04/17/17 | 04/18/17 | 8015M  |       |

Date Sampled: **04/17/17 11:20**

| Analyte                        | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: <i>o</i> -Terphenyl |        | 112 %           | 30-150 |          | "     | "        | "        | "      |       |

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/17/17 11:20**

| Analyte                     | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Naphthalene                 | ND     | 0.010           | mg/kg | 1        | 1704181 | 04/17/17 | 04/17/17 | EPA 8260B |       |
| Benzene                     | ND     | 0.0020          | "     | "        | "       | "        | "        | "         |       |
| Toluene                     | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene                | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)             | ND     | 0.010           | "     | "        | "       | "        | "        | "         |       |
| Gasoline Range Hydrocarbons | ND     | 0.50            | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/17/17 11:20**

| Analyte                          | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 |        | 106 %           | 23-173 |          | "     | "        | "        | "      |       |
| Surrogate: Toluene-d8            |        | 100 %           | 20-170 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 102 %           | 21-167 |          | "     | "        | "        | "      |       |

Summit Scientific

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.



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/18/17 06:27

**SS16@22'**  
**1704163-10 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/17/17 11:28**

| Analyte       | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|--------|-------|
| C10-C28 (DRO) | ND     | 50              | mg/kg | 1        | 1704182 | 04/17/17 | 04/18/17 | 8015M  |       |

Date Sampled: **04/17/17 11:28**

| Analyte                        | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: <i>o</i> -Terphenyl |        | 115 %           | 30-150 |          | "     | "        | "        | "      |       |

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/17/17 11:28**

| Analyte                     | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Naphthalene                 | ND     | 0.010           | mg/kg | 1        | 1704181 | 04/17/17 | 04/17/17 | EPA 8260B |       |
| Benzene                     | ND     | 0.0020          | "     | "        | "       | "        | "        | "         |       |
| Toluene                     | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene                | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)             | ND     | 0.010           | "     | "        | "       | "        | "        | "         |       |
| Gasoline Range Hydrocarbons | ND     | 0.50            | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/17/17 11:28**

| Analyte                          | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 |        | 102 %           | 23-173 |          | "     | "        | "        | "      |       |
| Surrogate: Toluene-d8            |        | 101 %           | 20-170 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 102 %           | 21-167 |          | "     | "        | "        | "      |       |

Summit Scientific

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.



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/18/17 06:27

**SS17@12'**  
**1704163-11 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/17/17 11:32**

| Analyte       | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|--------|-------|
| C10-C28 (DRO) | ND     | 50              | mg/kg | 1        | 1704182 | 04/17/17 | 04/18/17 | 8015M  |       |

Date Sampled: **04/17/17 11:32**

| Analyte                        | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: <i>o</i> -Terphenyl |        | 116 %           | 30-150 |          | "     | "        | "        | "      |       |

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/17/17 11:32**

| Analyte                     | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Naphthalene                 | ND     | 0.010           | mg/kg | 1        | 1704181 | 04/17/17 | 04/17/17 | EPA 8260B |       |
| Benzene                     | ND     | 0.0020          | "     | "        | "       | "        | "        | "         |       |
| Toluene                     | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene                | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)             | ND     | 0.010           | "     | "        | "       | "        | "        | "         |       |
| Gasoline Range Hydrocarbons | ND     | 0.50            | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/17/17 11:32**

| Analyte                          | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 |        | 105 %           | 23-173 |          | "     | "        | "        | "      |       |
| Surrogate: Toluene-d8            |        | 100 %           | 20-170 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 100 %           | 21-167 |          | "     | "        | "        | "      |       |

Summit Scientific

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.



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/18/17 06:27

**SS18@22'**  
**1704163-12 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/17/17 11:36**

| Analyte       | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|--------|-------|
| C10-C28 (DRO) | ND     | 50              | mg/kg | 1        | 1704182 | 04/17/17 | 04/18/17 | 8015M  |       |

Date Sampled: **04/17/17 11:36**

| Analyte                        | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: <i>o</i> -Terphenyl |        | 113 %           | 30-150 |          | "     | "        | "        | "      |       |

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/17/17 11:36**

| Analyte                     | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Naphthalene                 | ND     | 0.010           | mg/kg | 1        | 1704181 | 04/17/17 | 04/18/17 | EPA 8260B |       |
| Benzene                     | ND     | 0.0020          | "     | "        | "       | "        | "        | "         |       |
| Toluene                     | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene                | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)             | ND     | 0.010           | "     | "        | "       | "        | "        | "         |       |
| Gasoline Range Hydrocarbons | ND     | 0.50            | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/17/17 11:36**

| Analyte                          | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 |        | 103 %           | 23-173 |          | "     | "        | "        | "      |       |
| Surrogate: Toluene-d8            |        | 101 %           | 20-170 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 102 %           | 21-167 |          | "     | "        | "        | "      |       |

Summit Scientific

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.



PDC Energy  
 1775 Sherman St. STE. 3000  
 Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
 Project Manager: Mark Longhurst

**Reported:**  
 04/18/17 06:27

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch 1704182 - EPA 3550A**

**Blank (1704182-BLK1)**

Prepared & Analyzed: 04/17/17

|                               |      |    |       |      |  |     |        |  |  |  |  |
|-------------------------------|------|----|-------|------|--|-----|--------|--|--|--|--|
| C10-C28 (DRO)                 | ND   | 50 | mg/kg |      |  |     |        |  |  |  |  |
| <i>Surrogate: o-Terphenyl</i> | 14.4 |    | "     | 12.5 |  | 116 | 30-150 |  |  |  |  |

**LCS (1704182-BS1)**

Prepared & Analyzed: 04/17/17

|                               |      |    |       |      |  |     |        |  |  |  |  |
|-------------------------------|------|----|-------|------|--|-----|--------|--|--|--|--|
| C10-C28 (DRO)                 | 611  | 50 | mg/kg | 499  |  | 123 | 73-134 |  |  |  |  |
| <i>Surrogate: o-Terphenyl</i> | 14.2 |    | "     | 12.5 |  | 114 | 30-150 |  |  |  |  |

**Matrix Spike (1704182-MS1)**

Source: 1704163-03

Prepared & Analyzed: 04/17/17

|                               |      |    |       |      |      |     |        |  |  |  |  |
|-------------------------------|------|----|-------|------|------|-----|--------|--|--|--|--|
| C10-C28 (DRO)                 | 538  | 50 | mg/kg | 499  | 35.9 | 101 | 50-148 |  |  |  |  |
| <i>Surrogate: o-Terphenyl</i> | 13.9 |    | "     | 12.5 |      | 111 | 30-150 |  |  |  |  |

**Matrix Spike Dup (1704182-MSD1)**

Source: 1704163-03

Prepared & Analyzed: 04/17/17

|                               |      |    |       |      |      |     |        |       |  |    |  |
|-------------------------------|------|----|-------|------|------|-----|--------|-------|--|----|--|
| C10-C28 (DRO)                 | 541  | 50 | mg/kg | 499  | 35.9 | 101 | 50-148 | 0.582 |  | 20 |  |
| <i>Surrogate: o-Terphenyl</i> | 14.0 |    | "     | 12.5 |      | 112 | 30-150 |       |  |    |  |

Summit Scientific

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PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

Reported:  
04/18/17 06:27

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

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

**Batch 1704181 - EPA 5030 Soil MS**

**Blank (1704181-BLK1)**

Prepared & Analyzed: 04/17/17

|   |               |        |          |               |  |             |               |  |  |  |
|---|---------------|--------|----------|---------------|--|-------------|---------------|--|--|--|
| Naphthalene                             | ND            | 0.010  | mg/kg    |               |  |             |               |  |  |  |
| Benzene                                 | ND            | 0.0020 | "        |               |  |             |               |  |  |  |
| Toluene                                 | ND            | 0.0050 | "        |               |  |             |               |  |  |  |
| Ethylbenzene                            | ND            | 0.0050 | "        |               |  |             |               |  |  |  |
| Xylenes (total)                         | ND            | 0.010  | "        |               |  |             |               |  |  |  |
| Gasoline Range Hydrocarbons             | ND            | 0.50   | "        |               |  |             |               |  |  |  |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>0.0387</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>96.7</i> | <i>23-173</i> |  |  |  |
| <i>Surrogate: Toluene-d8</i>            | <i>0.0410</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>103</i>  | <i>20-170</i> |  |  |  |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | <i>0.0398</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>99.4</i> | <i>21-167</i> |  |  |  |

**LCS (1704181-BS1)**

Prepared & Analyzed: 04/17/17

|   |               |        |          |               |  |             |               |  |  |  |
|---|---------------|--------|----------|---------------|--|-------------|---------------|--|--|--|
| Naphthalene                             | ND            | 0.010  | mg/kg    |               |  |             | 66-138        |  |  |  |
| Benzene                                 | 0.0971        | 0.0020 | "        | 0.100         |  | 97.1        | 58-130        |  |  |  |
| Toluene                                 | 0.106         | 0.0050 | "        | 0.100         |  | 106         | 61-134        |  |  |  |
| Ethylbenzene                            | 0.107         | 0.0050 | "        | 0.0992        |  | 108         | 74-139        |  |  |  |
| m,p-Xylene                              | 0.224         | 0.010  | "        | 0.200         |  | 112         | 73-137        |  |  |  |
| o-Xylene                                | 0.101         | 0.0050 | "        | 0.0980        |  | 103         | 73-141        |  |  |  |
| Xylenes (total)                         | 0.213         | 0.010  | "        |               |  |             | 0-200         |  |  |  |
| Gasoline Range Hydrocarbons             | 2.41          | 0.50   | "        |               |  |             | 30-150        |  |  |  |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>0.0377</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>94.4</i> | <i>23-173</i> |  |  |  |
| <i>Surrogate: Toluene-d8</i>            | <i>0.0424</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>106</i>  | <i>20-170</i> |  |  |  |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | <i>0.0390</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>97.6</i> | <i>21-167</i> |  |  |  |

**Matrix Spike (1704181-MS1)**

Source: 1704163-03

Prepared & Analyzed: 04/17/17

|   |               |        |          |               |    |             |               |  |  |  |
|---|---------------|--------|----------|---------------|----|-------------|---------------|--|--|--|
| Naphthalene                             | ND            | 0.010  | mg/kg    |               | ND |             | 10-158        |  |  |  |
| Benzene                                 | 0.107         | 0.0020 | "        | 0.100         | ND | 107         | 30-131        |  |  |  |
| Toluene                                 | 0.117         | 0.0050 | "        | 0.100         | ND | 117         | 30-134        |  |  |  |
| Ethylbenzene                            | 0.118         | 0.0050 | "        | 0.0992        | ND | 119         | 22-153        |  |  |  |
| m,p-Xylene                              | 0.248         | 0.010  | "        | 0.200         | ND | 124         | 10-159        |  |  |  |
| o-Xylene                                | 0.112         | 0.0050 | "        | 0.0980        | ND | 114         | 31-151        |  |  |  |
| Xylenes (total)                         | 0.235         | 0.010  | "        |               | ND |             | 30-160        |  |  |  |
| Gasoline Range Hydrocarbons             | 2.64          | 0.50   | "        |               | ND |             | 30-160        |  |  |  |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>0.0410</i> |        | <i>"</i> | <i>0.0400</i> |    | <i>102</i>  | <i>23-173</i> |  |  |  |
| <i>Surrogate: Toluene-d8</i>            | <i>0.0412</i> |        | <i>"</i> | <i>0.0400</i> |    | <i>103</i>  | <i>20-170</i> |  |  |  |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | <i>0.0389</i> |        | <i>"</i> | <i>0.0400</i> |    | <i>97.3</i> | <i>21-167</i> |  |  |  |

Summit Scientific

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PDC Energy  
 1775 Sherman St. STE. 3000  
 Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
 Project Manager: Mark Longhurst

**Reported:**  
 04/18/17 06:27

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

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

**Batch 1704181 - EPA 5030 Soil MS**

| <b>Matrix Spike Dup (1704181-MSD1)</b>  | <b>Source: 1704163-03</b> |        |          | <b>Prepared &amp; Analyzed: 04/17/17</b> |    |             |               |      |    |  |
|---|---------------------------|--------|----------|--|----|-------------|---------------|------|----|--|
| Naphthalene                             | ND                        | 0.010  | mg/kg    | ND                                       | ND | 110         | 10-158        |      | 42 |  |
| Benzene                                 | 0.110                     | 0.0020 | "        | 0.100                                    | ND | 110         | 30-131        | 3.05 | 34 |  |
| Toluene                                 | 0.121                     | 0.0050 | "        | 0.100                                    | ND | 121         | 30-134        | 3.03 | 30 |  |
| Ethylbenzene                            | 0.125                     | 0.0050 | "        | 0.0992                                   | ND | 126         | 22-153        | 5.67 | 24 |  |
| m,p-Xylene                              | 0.230                     | 0.010  | "        | 0.200                                    | ND | 115         | 10-159        | 7.49 | 68 |  |
| o-Xylene                                | 0.118                     | 0.0050 | "        | 0.0980                                   | ND | 120         | 31-151        | 5.67 | 38 |  |
| Xylenes (total)                         | 0.249                     | 0.010  | "        |  | ND |             | 30-160        | 5.81 | 30 |  |
| Gasoline Range Hydrocarbons             | 2.80                      | 0.50   | "        |  | ND |             | 30-160        | 5.86 | 30 |  |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>0.0401</i>             |        | <i>"</i> | <i>0.0400</i>                            |    | <i>100</i>  | <i>23-173</i> |      |    |  |
| <i>Surrogate: Toluene-d8</i>            | <i>0.0400</i>             |        | <i>"</i> | <i>0.0400</i>                            |    | <i>100</i>  | <i>20-170</i> |      |    |  |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | <i>0.0396</i>             |        | <i>"</i> | <i>0.0400</i>                            |    | <i>98.9</i> | <i>21-167</i> |      |    |  |

Summit Scientific

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PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/18/17 06:27

### 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  
RPD Relative Percent Difference

# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 19, 2017

Mark Longhurst  
PDC Energy  
1775 Sherman St. STE. 3000  
Denver, CO 80203  
RE: Uhrich 13-29

Enclosed are the results of analyses for samples received by Summit Scientific on 04/18/17 17:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury  
President



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/19/17 06:31

### ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|-----------|---------------|--------|----------------|----------------|
| SS19@12'  | 1704168-01    | Soil   | 04/18/17 10:02 | 04/18/17 17:45 |
| SS20@22'  | 1704168-02    | Soil   | 04/18/17 10:05 | 04/18/17 17:45 |

Summit Scientific

*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.*



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

Reported:  
04/19/17 06:31

# Summit Scientific 1704168

741 Corporate Circle Suite 1 ♦ Golden, Colorado 80401  
303-277-9310 ♦ 303-374-5933 Fax

Page 1 of 1

Client: PDC  
Address: \_\_\_\_\_  
City/State/Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Sampler Name: Chris Armbruster

Project Manager: Mark Longhurst  
E-Mail: Mark.Longhurst@pdce.com  
Project Name: Uhrich 13-29  
Project Number: \_\_\_\_\_

| Sample Description  | Date Sampled | Time Sampled | Number of Containers | Preservative   |                  |      |                 | Matrix   |      |                         | Analyze For:    |   |           |    |    | Special Instructions |  |
|---|--------------|--------------|----------------------|--|------------------|------|-----------------|--|------|-------------------------|-----------------|---|-----------|----|----|----------------------|--|
|   |              |              |                      | HCl  | HNO <sub>3</sub> | None | Other (Specify) | Groundwater  | Soil | Air - Canister Serial # | Other (Specify) | GBTEXN (8260)   | DRO (TPH) | EC | PH |                      |  |
| SS19@12'  | 4/18/2017    | 10:02        | 1                    |  | X                |      |                 | X  |      |                         |                 | X   | X         |    |    |                      |  |
| SS20@22'  | 4/18/2017    | 10:05        | 1                    |  | X                |      |                 | X  |      |                         |                 | X   | X         |    |    |                      |  |
|   |              |              |                      |  |                  |      |                 |  |      |                         |                 |   |           |    |    |                      |  |
|   |              |              |                      |  |                  |      |                 |  |      |                         |                 |   |           |    |    |                      |  |
|   |              |              |                      |  |                  |      |                 |  |      |                         |                 |   |           |    |    |                      |  |
|   |              |              |                      |  |                  |      |                 |  |      |                         |                 |   |           |    |    |                      |  |
|   |              |              |                      |  |                  |      |                 |  |      |                         |                 |   |           |    |    |                      |  |
| Relinquished by: <u>Chris Armbruster</u> Date/Time: <u>4/18/17 1700</u> |              |              |                      | Received by: <u>[Signature]</u> Date/Time: <u>4/18/17 1700</u> |                  |      |                 | Turn Around Time (Check)   |      |                         |                 | Notes:  |           |    |    |                      |  |
| Relinquished by: <u>[Signature]</u> Date/Time: <u>4/18/17 1720</u>      |              |              |                      | Received by: <u>[Signature]</u> Date/Time: <u>4-18-17 1720</u> |                  |      |                 | Same Day <input checked="" type="checkbox"/> 72 Hours <input type="checkbox"/> |      |                         |                 | 24 Hours <input type="checkbox"/> Standard <input type="checkbox"/> |           |    |    |                      |  |
| Relinquished by: _____ Date/Time: _____                                 |              |              |                      | Received in Lab by: _____ Date/Time: _____                     |                  |      |                 | 48 Hours <input type="checkbox"/>  |      |                         |                 | Sample Integrity: Temperature Upon Receipt: <u>4.3°C</u>            |           |    |    |                      |  |
|   |              |              |                      |  |                  |      |                 | Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    |      |                         |                 | on ice  |           |    |    |                      |  |

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PDC Energy  
 1775 Sherman St. STE. 3000  
 Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
 Project Manager: Mark Longhurst

Reported:  
 04/19/17 06:31

**Sample Receipt Checklist**

S2 Work Order: 1704168  
 Client: PDC Client Project ID: Uhrich 13-29  
 Shipped Via: P/V Airbill #: \_\_\_\_\_  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)  
 Matrix (check all that apply):      Air   ✓   Soil/Solid      Water      Other: \_\_\_\_\_  
(Describe)

|           |            |  |  |  |
|-----------|------------|--|--|--|
| Cooler ID |            |  |  |  |
| Temp (°C) | <u>4.3</u> |  |  |  |

Thermometer ID: 61857155-K

|   | Yes | No | N/A | Comments (if any) |
|---|-----|----|-----|-------------------|
| If samples require cooling, was the temperature just above 0°C to ≤ 6°C <sup>(1)</sup> ?  | ✓   |    |     |                   |
| NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun. |     |    |     |                   |
| Were all samples received intact <sup>(1)</sup> ?   | ✓   |    |     |                   |
| Was adequate sample volume provided <sup>(1)</sup> ?  | ✓   |    |     |                   |
| If custody seals are present, are they intact <sup>(1)</sup> ?  |     |    | ✓   |                   |
| Are short holding time analytes or samples with HTs due within 48 hours present?  |     |    | ✓   |                   |
| Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?   | ✓   |    |     |                   |
| Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?   | ✓   |    |     |                   |
| Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?   | ✓   |    |     |                   |
| Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?   | ✓   |    |     |                   |
| For volatiles in water – is there headspace present? <b>if yes, contact client and note in narrative.</b>                                   |     |    | ✓   |                   |
| Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ?  |     |    | ✓   |                   |
| Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect  |     |    | ✓   |                   |
| If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ?  |     |    | ✓   |                   |
| Record the pH in Comments.  |     |    | ✓   |                   |
| If dissolved metals are requested, were samples field filtered?   |     |    | ✓   |                   |
| Additional Comments (if any):   |     |    |     |                   |

<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.

Nakita  
 Custodian Printed Name

[Signature]  
 Signature or Initials of Custodian

4/18/17 1720  
 Date/Time

[Signature]



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/19/17 06:31

**SS19@12'**  
**1704168-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/18/17 10:02**

| Analyte       | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|--------|-------|
| C10-C28 (DRO) | ND     | 50              | mg/kg | 1        | 1704189 | 04/18/17 | 04/19/17 | 8015M  |       |

Date Sampled: **04/18/17 10:02**

| Analyte                        | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: <i>o</i> -Terphenyl |        | 116 %           | 30-150 |          | "     | "        | "        | "      |       |

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/18/17 10:02**

| Analyte                     | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Naphthalene                 | ND     | 0.010           | mg/kg | 1        | 1704190 | 04/18/17 | 04/18/17 | EPA 8260B |       |
| Benzene                     | ND     | 0.0020          | "     | "        | "       | "        | "        | "         |       |
| Toluene                     | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene                | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)             | ND     | 0.010           | "     | "        | "       | "        | "        | "         |       |
| Gasoline Range Hydrocarbons | ND     | 0.50            | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/18/17 10:02**

| Analyte                          | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 |        | 104 %           | 23-173 |          | "     | "        | "        | "      |       |
| Surrogate: Toluene-d8            |        | 99.3 %          | 20-170 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 83.9 %          | 21-167 |          | "     | "        | "        | "      |       |

Summit Scientific

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.



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/19/17 06:31

**SS20@22'**  
**1704168-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/18/17 10:05**

| Analyte       | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|--------|-------|
| C10-C28 (DRO) | ND     | 50              | mg/kg | 1        | 1704189 | 04/18/17 | 04/19/17 | 8015M  |       |

Date Sampled: **04/18/17 10:05**

| Analyte                        | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: <i>o</i> -Terphenyl |        | 114 %           | 30-150 |          | "     | "        | "        | "      |       |

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/18/17 10:05**

| Analyte                     | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Naphthalene                 | ND     | 0.010           | mg/kg | 1        | 1704190 | 04/18/17 | 04/18/17 | EPA 8260B |       |
| Benzene                     | ND     | 0.0020          | "     | "        | "       | "        | "        | "         |       |
| Toluene                     | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene                | ND     | 0.0050          | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)             | ND     | 0.010           | "     | "        | "       | "        | "        | "         |       |
| Gasoline Range Hydrocarbons | ND     | 0.50            | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **04/18/17 10:05**

| Analyte                          | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 |        | 99.2 %          | 23-173 |          | "     | "        | "        | "      |       |
| Surrogate: Toluene-d8            |        | 104 %           | 20-170 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 82.7 %          | 21-167 |          | "     | "        | "        | "      |       |

Summit Scientific

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PDC Energy  
 1775 Sherman St. STE. 3000  
 Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
 Project Manager: Mark Longhurst

**Reported:**  
 04/19/17 06:31

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch 1704189 - EPA 3550A**

|  |      |    |       |                               |      |                               |        |       |  |    |  |
|--|------|----|-------|-------------------------------|------|-------------------------------|--------|-------|--|----|--|
| <b>Blank (1704189-BLK1)</b>            |      |    |       | Prepared & Analyzed: 04/18/17 |      |                               |        |       |  |    |  |
| C10-C28 (DRO)                          | ND   | 50 | mg/kg |                               |      |                               |        |       |  |    |  |
| <i>Surrogate: o-Terphenyl</i>          | 14.6 |    | "     | 12.5                          |      | 116                           | 30-150 |       |  |    |  |
| <b>LCS (1704189-BS1)</b>               |      |    |       | Prepared & Analyzed: 04/18/17 |      |                               |        |       |  |    |  |
| C10-C28 (DRO)                          | 565  | 50 | mg/kg | 499                           |      | 113                           | 73-134 |       |  |    |  |
| <i>Surrogate: o-Terphenyl</i>          | 15.4 |    | "     | 12.5                          |      | 123                           | 30-150 |       |  |    |  |
| <b>Matrix Spike (1704189-MS1)</b>      |      |    |       | <b>Source: 1704168-01</b>     |      | Prepared & Analyzed: 04/18/17 |        |       |  |    |  |
| C10-C28 (DRO)                          | 532  | 50 | mg/kg | 499                           | 22.3 | 102                           | 50-148 |       |  |    |  |
| <i>Surrogate: o-Terphenyl</i>          | 14.1 |    | "     | 12.5                          |      | 113                           | 30-150 |       |  |    |  |
| <b>Matrix Spike Dup (1704189-MSD1)</b> |      |    |       | <b>Source: 1704168-01</b>     |      | Prepared & Analyzed: 04/18/17 |        |       |  |    |  |
| C10-C28 (DRO)                          | 530  | 50 | mg/kg | 499                           | 22.3 | 102                           | 50-148 | 0.509 |  | 20 |  |
| <i>Surrogate: o-Terphenyl</i>          | 14.2 |    | "     | 12.5                          |      | 114                           | 30-150 |       |  |    |  |

Summit Scientific

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PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

Reported:  
04/19/17 06:31

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

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

**Batch 1704190 - EPA 5030 Soil MS**

**Blank (1704190-BLK1)**

Prepared & Analyzed: 04/18/17

|   |               |        |          |               |  |             |               |  |  |  |
|---|---------------|--------|----------|---------------|--|-------------|---------------|--|--|--|
| Naphthalene                             | ND            | 0.010  | mg/kg    |               |  |             |               |  |  |  |
| Benzene                                 | ND            | 0.0020 | "        |               |  |             |               |  |  |  |
| Toluene                                 | ND            | 0.0050 | "        |               |  |             |               |  |  |  |
| Ethylbenzene                            | ND            | 0.0050 | "        |               |  |             |               |  |  |  |
| Xylenes (total)                         | ND            | 0.010  | "        |               |  |             |               |  |  |  |
| Gasoline Range Hydrocarbons             | ND            | 0.50   | "        |               |  |             |               |  |  |  |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>0.0412</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>103</i>  | <i>23-173</i> |  |  |  |
| <i>Surrogate: Toluene-d8</i>            | <i>0.0404</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>101</i>  | <i>20-170</i> |  |  |  |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | <i>0.0338</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>84.5</i> | <i>21-167</i> |  |  |  |

**LCS (1704190-BS1)**

Prepared & Analyzed: 04/18/17

|   |               |        |          |               |  |             |               |  |  |  |
|---|---------------|--------|----------|---------------|--|-------------|---------------|--|--|--|
| Naphthalene                             | ND            | 0.010  | mg/kg    |               |  |             | 66-138        |  |  |  |
| Benzene                                 | 0.0821        | 0.0020 | "        | 0.100         |  | 82.1        | 58-130        |  |  |  |
| Toluene                                 | 0.104         | 0.0050 | "        | 0.100         |  | 104         | 61-134        |  |  |  |
| Ethylbenzene                            | 0.119         | 0.0050 | "        | 0.0992        |  | 120         | 74-139        |  |  |  |
| m,p-Xylene                              | 0.257         | 0.010  | "        | 0.200         |  | 129         | 73-137        |  |  |  |
| o-Xylene                                | 0.111         | 0.0050 | "        | 0.0980        |  | 114         | 73-141        |  |  |  |
| Xylenes (total)                         | 0.369         | 0.010  | "        |               |  |             | 0-200         |  |  |  |
| Gasoline Range Hydrocarbons             | 2.71          | 0.50   | "        |               |  |             | 30-150        |  |  |  |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>0.0368</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>92.0</i> | <i>23-173</i> |  |  |  |
| <i>Surrogate: Toluene-d8</i>            | <i>0.0389</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>97.3</i> | <i>20-170</i> |  |  |  |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | <i>0.0370</i> |        | <i>"</i> | <i>0.0400</i> |  | <i>92.4</i> | <i>21-167</i> |  |  |  |

**Matrix Spike (1704190-MS1)**

Source: 1704168-01

Prepared & Analyzed: 04/18/17

|   |               |        |          |               |    |             |               |  |  |  |
|---|---------------|--------|----------|---------------|----|-------------|---------------|--|--|--|
| Naphthalene                             | ND            | 0.010  | mg/kg    |               | ND |             | 10-158        |  |  |  |
| Benzene                                 | 0.0863        | 0.0020 | "        | 0.100         | ND | 86.3        | 30-131        |  |  |  |
| Toluene                                 | 0.101         | 0.0050 | "        | 0.100         | ND | 101         | 30-134        |  |  |  |
| Ethylbenzene                            | 0.112         | 0.0050 | "        | 0.0992        | ND | 113         | 22-153        |  |  |  |
| m,p-Xylene                              | 0.246         | 0.010  | "        | 0.200         | ND | 123         | 10-159        |  |  |  |
| o-Xylene                                | 0.109         | 0.0050 | "        | 0.0980        | ND | 111         | 31-151        |  |  |  |
| Xylenes (total)                         | 0.355         | 0.010  | "        |               | ND |             | 30-160        |  |  |  |
| Gasoline Range Hydrocarbons             | 2.72          | 0.50   | "        |               | ND |             | 30-160        |  |  |  |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>0.0428</i> |        | <i>"</i> | <i>0.0400</i> |    | <i>107</i>  | <i>23-173</i> |  |  |  |
| <i>Surrogate: Toluene-d8</i>            | <i>0.0372</i> |        | <i>"</i> | <i>0.0400</i> |    | <i>92.9</i> | <i>20-170</i> |  |  |  |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | <i>0.0365</i> |        | <i>"</i> | <i>0.0400</i> |    | <i>91.2</i> | <i>21-167</i> |  |  |  |

Summit Scientific

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PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/19/17 06:31

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

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

**Batch 1704190 - EPA 5030 Soil MS**

| <b>Matrix Spike Dup (1704190-MSD1)</b>  | <b>Source: 1704168-01</b> |        |          | <b>Prepared &amp; Analyzed: 04/18/17</b> |    |             |               |       |  |    |
|---|---------------------------|--------|----------|--|----|-------------|---------------|-------|--|----|
| Naphthalene                             | ND                        | 0.010  | mg/kg    |  | ND |             | 10-158        |       |  | 42 |
| Benzene                                 | 0.0840                    | 0.0020 | "        | 0.100                                    | ND | 84.0        | 30-131        | 2.68  |  | 34 |
| Toluene                                 | 0.0994                    | 0.0050 | "        | 0.100                                    | ND | 99.4        | 30-134        | 1.62  |  | 30 |
| Ethylbenzene                            | 0.115                     | 0.0050 | "        | 0.0992                                   | ND | 116         | 22-153        | 2.50  |  | 24 |
| m,p-Xylene                              | 0.248                     | 0.010  | "        | 0.200                                    | ND | 124         | 10-159        | 0.997 |  | 68 |
| o-Xylene                                | 0.111                     | 0.0050 | "        | 0.0980                                   | ND | 113         | 31-151        | 1.61  |  | 38 |
| Xylenes (total)                         | 0.359                     | 0.010  | "        |  | ND |             | 30-160        | 1.19  |  | 30 |
| Gasoline Range Hydrocarbons             | 2.76                      | 0.50   | "        |  | ND |             | 30-160        | 1.66  |  | 30 |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>0.0434</i>             |        | <i>"</i> | <i>0.0400</i>                            |    | <i>109</i>  | <i>23-173</i> |       |  |    |
| <i>Surrogate: Toluene-d8</i>            | <i>0.0387</i>             |        | <i>"</i> | <i>0.0400</i>                            |    | <i>96.8</i> | <i>20-170</i> |       |  |    |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | <i>0.0368</i>             |        | <i>"</i> | <i>0.0400</i>                            |    | <i>92.0</i> | <i>21-167</i> |       |  |    |

Summit Scientific

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PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/19/17 06:31

### 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  
RPD Relative Percent Difference

# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

May 02, 2017

Mark Longhurst  
PDC Energy  
1775 Sherman St. STE. 3000  
Denver, CO 80203  
RE: Uhrich 13-29

Enclosed are the results of analyses for samples received by Summit Scientific on 05/01/17 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', written in a cursive style.

Paul Shrewsbury  
President



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/17 06:49

**ANALYTICAL REPORT FOR SAMPLES**

| Sample ID | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|-----------|---------------|--------|----------------|----------------|
| GW01      | 1705005-01    | Water  | 05/01/17 12:15 | 05/01/17 17:00 |

---

Summit Scientific

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PDC Energy  
 1775 Sherman St. STE. 3000  
 Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
 Project Manager: Mark Longhurst

Reported:  
 05/02/17 06:49

**Sample Receipt Checklist**

S2 Work Order: 1705005

Client: PDC

Client Project ID: Uhrich 13-29

Shipped Via: PIU

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: \_\_\_\_\_

Matrix (check all that apply):  Air  Soil/Solid  Water  Other: \_\_\_\_\_  
 (Describe)

|           |            |  |  |  |  |
|-----------|------------|--|--|--|--|
| Cooler ID |            |  |  |  |  |
| Temp (°C) | <u>1.8</u> |  |  |  |  |

Thermometer ID: 61857155-K

|   | Yes                                 | No                                  | N/A                                 | Comments (if any) |
|---|-------------------------------------|-------------------------------------|-------------------------------------|-------------------|
| If samples require cooling, was the temperature just above 0°C to ≤ 6°C <sup>(1)</sup> ?  | <input checked="" type="checkbox"/> |                                     |                                     |                   |
| NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun. |                                     |                                     |                                     |                   |
| Were all samples received intact <sup>(1)</sup> ?   | <input checked="" type="checkbox"/> |                                     |                                     |                   |
| Was adequate sample volume provided <sup>(1)</sup> ?  | <input checked="" type="checkbox"/> |                                     |                                     |                   |
| If custody seals are present, are they intact <sup>(1)</sup> ?  |                                     |                                     | <input checked="" type="checkbox"/> |                   |
| Are short holding time analytes or samples with HTs due within 48 hours present?  |                                     |                                     | <input checked="" type="checkbox"/> |                   |
| Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?   | <input checked="" type="checkbox"/> |                                     |                                     |                   |
| Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?   | <input checked="" type="checkbox"/> |                                     |                                     |                   |
| Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?   | <input checked="" type="checkbox"/> |                                     |                                     |                   |
| Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?   | <input checked="" type="checkbox"/> |                                     |                                     |                   |
| For volatiles in water – is there headspace present? <b>If yes, contact client and note in narrative.</b>                                   |                                     | <input checked="" type="checkbox"/> |                                     |                   |
| Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ?  | <input checked="" type="checkbox"/> |                                     |                                     | HCl               |
| Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect  |                                     |                                     |                                     |                   |
| If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ?  |                                     |                                     | <input checked="" type="checkbox"/> |                   |
| Record the pH in Comments.  |                                     |                                     |                                     |                   |
| If dissolved metals are requested, were samples field filtered?   |                                     |                                     | <input checked="" type="checkbox"/> |                   |
| Additional Comments (if any):   |                                     |                                     |                                     |                   |

<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.

Nakita  
 Custodian Printed Name

[Signature]  
 Signature or Initials of Custodian

5/1/17 1700  
 Date/Time

[Signature]



PDC Energy  
 1775 Sherman St. STE. 3000  
 Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
 Project Manager: Mark Longhurst

**Reported:**  
 05/02/17 06:49

**GW01**  
**1705005-01 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/01/17 12:15**

| Analyte                | Result     | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|------------------------|------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| <b>Benzene</b>         | <b>3.2</b> | 1.0             | ug/l  | 1        | 1705008 | 05/01/17 | 05/01/17 | EPA 8260B |       |
| <b>Toluene</b>         | <b>1.8</b> | 1.0             | "     | "        | "       | "        | "        | "         |       |
| Ethylbenzene           | ND         | 1.0             | "     | "        | "       | "        | "        | "         |       |
| <b>Xylenes (total)</b> | <b>4.3</b> | 2.0             | "     | "        | "       | "        | "        | "         |       |

Date Sampled: **05/01/17 12:15**

| Analyte                          | Result | Reporting Limit | Units  | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 |        | 105 %           | 37-154 |          | "     | "        | "        | "      |       |
| Surrogate: Toluene-d8            |        | 92.0 %          | 45-149 |          | "     | "        | "        | "      |       |
| Surrogate: 4-Bromofluorobenzene  |        | 102 %           | 45-146 |          | "     | "        | "        | "      |       |

Summit Scientific

*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.*



PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

Reported:  
05/02/17 06:49

### Volatile Organic Compounds by EPA Method 8260B - Quality Control

#### Summit Scientific

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

#### Batch 1705008 - EPA 5030 Water MS

##### Blank (1705008-BLK1)

Prepared & Analyzed: 05/01/17

|                                  |      |     |      |      |  |      |        |  |  |  |
|----------------------------------|------|-----|------|------|--|------|--------|--|--|--|
| Benzene                          | ND   | 1.0 | ug/l |      |  |      |        |  |  |  |
| Toluene                          | ND   | 1.0 | "    |      |  |      |        |  |  |  |
| Ethylbenzene                     | ND   | 1.0 | "    |      |  |      |        |  |  |  |
| Xylenes (total)                  | ND   | 2.0 | "    |      |  |      |        |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4 | 12.5 |     | "    | 13.3 |  | 93.5 | 37-154 |  |  |  |
| Surrogate: Toluene-d8            | 12.3 |     | "    | 13.3 |  | 92.0 | 45-149 |  |  |  |
| Surrogate: 4-Bromofluorobenzene  | 13.6 |     | "    | 13.3 |  | 102  | 45-146 |  |  |  |

##### LCS (1705008-BS1)

Prepared & Analyzed: 05/01/17

|                                  |      |     |      |      |  |      |        |  |  |  |
|----------------------------------|------|-----|------|------|--|------|--------|--|--|--|
| Benzene                          | 32.0 | 1.0 | ug/l | 33.3 |  | 95.9 | 51-132 |  |  |  |
| Toluene                          | 32.4 | 1.0 | "    | 33.3 |  | 97.3 | 51-138 |  |  |  |
| Ethylbenzene                     | 32.9 | 1.0 | "    | 33.1 |  | 99.4 | 58-146 |  |  |  |
| m,p-Xylene                       | 60.5 | 2.0 | "    | 66.5 |  | 90.9 | 57-144 |  |  |  |
| o-Xylene                         | 30.8 | 1.0 | "    | 32.7 |  | 94.2 | 53-146 |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4 | 12.8 |     | "    | 13.3 |  | 95.9 | 37-154 |  |  |  |
| Surrogate: Toluene-d8            | 13.7 |     | "    | 13.3 |  | 103  | 45-149 |  |  |  |
| Surrogate: 4-Bromofluorobenzene  | 13.2 |     | "    | 13.3 |  | 99.3 | 45-146 |  |  |  |

##### Matrix Spike (1705008-MS1)

Source: 1704252-01

Prepared & Analyzed: 05/01/17

|                                  |      |     |      |      |    |      |        |  |  |  |
|----------------------------------|------|-----|------|------|----|------|--------|--|--|--|
| Benzene                          | 34.9 | 1.0 | ug/l | 33.3 | ND | 105  | 34-141 |  |  |  |
| Toluene                          | 35.9 | 1.0 | "    | 33.3 | ND | 108  | 27-151 |  |  |  |
| Ethylbenzene                     | 37.8 | 1.0 | "    | 33.1 | ND | 114  | 29-160 |  |  |  |
| m,p-Xylene                       | 69.6 | 2.0 | "    | 66.5 | ND | 105  | 20-166 |  |  |  |
| o-Xylene                         | 35.6 | 1.0 | "    | 32.7 | ND | 109  | 33-159 |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4 | 13.5 |     | "    | 13.3 |    | 101  | 37-154 |  |  |  |
| Surrogate: Toluene-d8            | 13.0 |     | "    | 13.3 |    | 97.2 | 45-149 |  |  |  |
| Surrogate: 4-Bromofluorobenzene  | 12.9 |     | "    | 13.3 |    | 96.9 | 45-146 |  |  |  |

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PDC Energy  
 1775 Sherman St. STE. 3000  
 Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
 Project Manager: Mark Longhurst

**Reported:**  
 05/02/17 06:49

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

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

**Batch 1705008 - EPA 5030 Water MS**

| <b>Matrix Spike Dup (1705008-MSD1)</b>  | <b>Source: 1704252-01</b> |     |          | <b>Prepared &amp; Analyzed: 05/01/17</b> |    |             |               |      |    |  |
|---|---------------------------|-----|----------|--|----|-------------|---------------|------|----|--|
| Benzene                                 | 36.1                      | 1.0 | ug/l     | 33.3                                     | ND | 108         | 34-141        | 3.30 | 32 |  |
| Toluene                                 | 37.2                      | 1.0 | "        | 33.3                                     | ND | 112         | 27-151        | 3.59 | 25 |  |
| Ethylbenzene                            | 40.2                      | 1.0 | "        | 33.1                                     | ND | 122         | 29-160        | 6.10 | 50 |  |
| m,p-Xylene                              | 74.4                      | 2.0 | "        | 66.5                                     | ND | 112         | 20-166        | 6.72 | 36 |  |
| o-Xylene                                | 38.4                      | 1.0 | "        | 32.7                                     | ND | 117         | 33-159        | 7.57 | 26 |  |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>13.8</i>               |     | <i>"</i> | <i>13.3</i>                              |    | <i>103</i>  | <i>37-154</i> |      |    |  |
| <i>Surrogate: Toluene-d8</i>            | <i>12.5</i>               |     | <i>"</i> | <i>13.3</i>                              |    | <i>93.8</i> | <i>45-149</i> |      |    |  |
| <i>Surrogate: 4-Bromofluorobenzene</i>  | <i>12.8</i>               |     | <i>"</i> | <i>13.3</i>                              |    | <i>95.7</i> | <i>45-146</i> |      |    |  |

Summit Scientific

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PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Uhrich 13-29

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/17 06:49

### 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  
RPD Relative Percent Difference