

**TABLE 1
FORMER ACHZIGER 14-4 TANK BATTERY
SOIL ANALYTICAL RESULTS SUMMARY TABLE**

| Sample ID | Date Sampled | Depth | Benzene (mg/kg) | Toluene (mg/kg) | Ethylbenzene (mg/kg) | Total Xylenes (mg/kg) | Naphthalene (mg/kg) | TPH ⁽⁴⁾ (mg/kg) |
|---|--------------|-------------|-----------------|-----------------|----------------------|-----------------------|---------------------|----------------------------|
| Residential SSL ^(1,2) | | | 1.2 | 490 | 5.8 | 58 | 2 | 500 |
| Protection of Groundwater SSL ^(1,2,3) | | | 0.0026 | 0.69 | 0.78 | 9.9 | 0.0038 | 500 |
| AST01 @ 0-6" | 2/22/2021 | 0-6 in. bgs | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.0038 | <50 |
| SEP01-FL @ 4' | 2/22/2021 | 4 ft. bgs | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.0038 | <50 |
| SEP01-DL @ 6' | 2/22/2021 | 6 ft. bgs | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.0038 | <50 |
| PWV01-B @ 3.5' | 2/22/2021 | 3.5 ft. bgs | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.0038 | <50 |
| PWV01-S @ 2' | 2/22/2021 | 2 ft. bgs | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.0038 | <50 |
| WDL01 @ 7' | 2/22/2021 | 7 ft. bgs | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.0038 | 0.65 |

Notes:

1. Compounds referenced from the COGCC 2 CCR 404-1, Table 915-1, effective January 15, 2021.
2. Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
3. SSLs are applicable if a pathway for communication with groundwater is present.
4. Value calculated by adding TVPH-GRO, TEPH-DRO, and TEPH-ORO concentrations.

COGCC = Colorado Oil and Gas Conservation Commission

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

TVPH-GRO = Total volatile petroleum hydrocarbons - gasoline range organics

TEPH-DRO = Total extractable petroleum hydrocarbons - diesel range organics

TEPH-ORO = Total extractable petroleum hydrocarbons - oil range organics

mg/kg = Milligrams per kilogram

in. = Inches

bgs = Below ground surface

ft. = Feet

TABLE 2
FORMER ACHZIGER 14-4 TANK BATTERY
SOIL ANALYTICAL RESULTS SUMMARY TABLE
SOIL SUITABILITY

| Sample ID | Date Sampled | Depth | pH (units) | EC (mmhos/cm) | SAR (units) | Boron (mg/L) |
|---|--------------|-----------|---------------|------------------|----------------|-----------------|
| Soil Suitability for Reclamation Standard ⁽¹⁾ | | | 6-8.3 | <4 | <6 | 2 |
| PWV01-S @ 2' | 2/22/2021 | 2 ft. bgs | 8.16 | 0.389 | 1.00 | 0.204 |

Notes:

1. Compounds referenced from the COGCC 2 CCR 404-1, Table 915-1, effective January 15, 2021.

COGCC = Colorado Oil and Gas Conservation Commission

EC = Electrical conductivity

SAR = Sodium adsorption ratio

mmhos/cm = Millimhos per centimeter

mg/L = Milligram per liter

ft. = Feet

bgs = Below ground surface

TABLE 3
FORMER ACHZIGER 14-4 TANK BATTERY
FIELD DATA SUMMARY TABLE

| Sample ID | Date Sampled | Depth | GPS Data ⁽¹⁾ | | PDOP Value | VOC Concentration ⁽²⁾ (ppm) |
|----------------|--------------|-------------|-------------------------|-------------|------------|---|
| | | | Latitude | Longitude | | |
| AST01 @ 0-6" | 2/22/2021 | 0-6 in. bgs | 40.426534 | -104.563379 | 1.0 | 0.7 |
| SEP01-FL @ 4' | 2/22/2021 | 4 ft. bgs | 40.426321 | -104.563449 | 1.2 | 0.0 |
| SEP01-DL @ 6' | 2/22/2021 | 6 ft. bgs | 40.426347 | -104.563411 | 1.2 | 0.0 |
| PWV01-B @ 3.5' | 2/22/2021 | 3.5 ft. bgs | 40.426530 | -104.563337 | 1.0 | 2.1 |
| PWV01-N @ 2' | 2/22/2021 | 2 ft. bgs | 40.426553 | -104.563336 | 1.0 | 0.7 |
| PWV01-W @ 2' | 2/22/2021 | 2 ft. bgs | 40.426522 | -104.563361 | 1.0 | 0.4 |
| PWV01-S @ 2' | 2/22/2021 | 2 ft. bgs | 40.426507 | -104.563329 | 1.0 | 1.1 |
| PWV01-E @ 2' | 2/22/2021 | 2 ft. bgs | 40.426531 | -104.563308 | 1.0 | 0.3 |
| WDL01 @ 7' | 2/22/2021 | 7 ft. bgs | 40.426514 | -104.563335 | 1.0 | 16.2 |
| MH01 @ 0-6" | 2/22/2021 | 0-6 in. bgs | 40.426370 | -104.563431 | 1.0 | 0.3 |
| ECD01 @ 0-6" | 2/22/2021 | 0-6 in. bgs | 40.426342 | -104.563304 | 1.0 | 0.2 |
| BKG01 @ 2.5' | 2/22/2021 | 2.5 ft. bgs | NC | NC | NC | 0.6 |

Notes:

1. Global Positioning System (GPS) data is provided in decimal degrees using World Geodetic System (WGS) 84 UTM Zone 13 North.

2. Volatile organic compound (VOC) concentrations are measured in the field using a photoionization detector (PID).

PDOP = Position Dilution of Precision

ppm = Parts per million

in. = Inches

bgs = Below ground surface

ft. = Feet

NC = Data not collected

Attachment A

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

February 23, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Achziger 14-4

Work Order #2102271

Enclosed are the results of analyses for samples received by Summit Scientific on 02/22/21 18:00. 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: Achziger 14-4

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
02/23/21 06:37

ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|-----------|---------------|--------|----------------|----------------|
| WDL01@7' | 2102271-01 | Soil | 02/22/21 10:34 | 02/22/21 18:00 |

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.

Summit Scientific

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310

| | | | |
|-----------------|-----------------------|------------------|-------------------------|
| Client: | PDC / Tasman | Project Manager: | Mark Longhurst |
| Address: | 6855 W 119th Ave | E-Mail: | mark.longhurst@PDCE.com |
| City/State/Zip: | Broomfield/ CO/ 80020 | | |
| Phone: | 303-487-1228 | Project Name: | Achziger 14-4 |
| Sampler Name: | Kevin Fletcher | Project Number: | |

| ID | Sample Description | Date Sampled | Time Sampled | # of containers | Preservative | | | | Matrix | | | Analysis Requested | | | | | | | Special Instructions | | |
|----|--------------------|--------------|--------------|-----------------|--------------|------|------|-------|--------|------|----------------|--------------------|-------------------------------|---------------------------------|-------------|-------------|-----------|-----------|----------------------|--------------|--------------------------------|
| | | | | | HCl | HNO3 | None | Other | Water | Soil | Air-Canister # | Other | GBTEXN - 8260B ⁹¹⁵ | TPH - (C6 - C36) ⁹¹⁵ | pH, EC, SAR | Boron - HWS | VOC - 915 | PAH - 915 | | Metals - 915 | |
| 1 | WD01@7' | 2/22/21 | 1034 | 2 | | | X | | | X | | | X | X | | | | | | | pH, EC, SAR by saturated paste |
| 2 | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | |

| | | | | | |
|---------------------------------------|----------------------------------|-----------------------------------|----------------------------------|---|---------------|
| Relinquished by: Kevin Fletcher | Date/Time: 2/22/21 1530 | Received by: Tasman's Lock Box | Date/Time: 2/22/21 1530 | Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours 24 hours <input type="checkbox"/> Standard 48 hours <input type="checkbox"/> Sample Integrity: Temperature Upon Receipt: 4.3 Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No | Notes: |
| Relinquished by: Tasman's Lock Box | Date/Time: 02/22/2021 1730 | Received by: | Date/Time: 02/22/2021 1730 | | |
| Relinquished by: | Date/Time: | Received by: | Date/Time: | | |

Sample Receipt Checklist

S2 Work Order 2102271

Client: POC/TASMAN Client Project ID: ACHZIGER 14-4

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other _____ Airbill #: _____

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

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

Thermometer ID: 61857155-K

| | Yes | No | N/A | Comments (if any) |
|---|-------------------------------------|--------------------------|-------------------------------------|-------------------|
| If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Were all samples received intact ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Was adequate sample volume provided ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| If custody seals are present, are they intact ⁽¹⁾ ? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Are samples with holding times due within 48 hours sample due within 48 hours present? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| For volatiles in water – is there headspace present? If yes, contact client and note in narrative. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| If dissolved metals are requested, were samples field filtered? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Additional Comments (if any): | | | | |
| (1) If NO, then contact the client before proceeding with analysis and note in case narrative. | | | | |

BB
Custodian Printed Name or Initials

[Signature]
Signature of Custodian

02/22/2021
Date/Time



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

Project: Achziger 14-4

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/23/21 06:37

WDL01@7'
2102271-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/22/21 10:34**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------------------|-------------|-------------|--|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| Benzene | ND | 0.0020 | | mg/kg | 1 | BEB0327 | 02/22/21 | 02/22/21 | EPA 8260B | |
| Toluene | ND | 0.0050 | | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.0050 | | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.010 | | " | " | " | " | " | " | |
| Naphthalene | ND | 0.0038 | | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | 0.65 | 0.50 | | " | " | " | " | " | " | |

Date Sampled: **02/22/21 10:34**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|--------|-----------|--|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | | |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | | 116 % | | 23-173 | | " | " | " | " | |
| <i>Surrogate: Toluene-d8</i> | | 89.9 % | | 20-170 | | " | " | " | " | |
| <i>Surrogate: 4-Bromofluorobenzene</i> | | 93.8 % | | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/22/21 10:34**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------|--|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| C10-C28 (DRO) | ND | 50 | | mg/kg | 1 | BEB0328 | 02/22/21 | 02/22/21 | EPA 8015M | |
| C28-C36 (ORO) | ND | 50 | | " | " | " | " | " | " | |

Date Sampled: **02/22/21 10:34**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-------------------------------|--------|-----------|--|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | | |
| <i>Surrogate: o-Terphenyl</i> | | 92.4 % | | 30-150 | | " | " | " | " | |

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: Achziger 14-4

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/23/21 06:37

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BEB0327 - EPA 5030 Soil MS

Blank (BEB0327-BLK1)

Prepared: 02/22/21 Analyzed: 02/23/21

| | | | | | | | | | | |
|----------------------------------|--------|--------|-------|--------|--|------|--------|--|--|--|
| Benzene | ND | 0.0020 | mg/kg | | | | | | | |
| Toluene | ND | 0.0050 | " | | | | | | | |
| Ethylbenzene | ND | 0.0050 | " | | | | | | | |
| Xylenes (total) | ND | 0.010 | " | | | | | | | |
| Naphthalene | ND | 0.0038 | " | | | | | | | |
| Gasoline Range Hydrocarbons | ND | 0.50 | " | | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0410 | | " | 0.0400 | | 103 | 23-173 | | | |
| Surrogate: Toluene-d8 | 0.0415 | | " | 0.0400 | | 104 | 20-170 | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0370 | | " | 0.0400 | | 92.6 | 21-167 | | | |

LCS (BEB0327-BS1)

Prepared: 02/22/21 Analyzed: 02/23/21

| | | | | | | | | | | |
|----------------------------------|--------|--------|-------|--------|--|------|--------|--|--|--|
| Benzene | 0.0928 | 0.0020 | mg/kg | 0.100 | | 92.8 | 70-130 | | | |
| Toluene | 0.106 | 0.0050 | " | 0.100 | | 106 | 70-130 | | | |
| Ethylbenzene | 0.106 | 0.0050 | " | 0.100 | | 106 | 70-130 | | | |
| m,p-Xylene | 0.210 | 0.010 | " | 0.200 | | 105 | 70-130 | | | |
| o-Xylene | 0.101 | 0.0050 | " | 0.100 | | 101 | 70-130 | | | |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0397 | | " | 0.0400 | | 99.2 | 23-173 | | | |
| Surrogate: Toluene-d8 | 0.0403 | | " | 0.0400 | | 101 | 20-170 | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0360 | | " | 0.0400 | | 89.9 | 21-167 | | | |

Matrix Spike (BEB0327-MS1)

Source: 2102268-01

Prepared: 02/22/21 Analyzed: 02/23/21

| | | | | | | | | | | |
|----------------------------------|--------|--------|-------|--------|----|------|--------|--|--|--|
| Benzene | 0.0921 | 0.0020 | mg/kg | 0.100 | ND | 92.1 | 70-130 | | | |
| Toluene | 0.103 | 0.0050 | " | 0.100 | ND | 103 | 70-130 | | | |
| Ethylbenzene | 0.105 | 0.0050 | " | 0.100 | ND | 105 | 70-130 | | | |
| m,p-Xylene | 0.208 | 0.010 | " | 0.200 | ND | 104 | 70-130 | | | |
| o-Xylene | 0.101 | 0.0050 | " | 0.100 | ND | 101 | 70-130 | | | |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0398 | | " | 0.0400 | | 99.5 | 23-173 | | | |
| Surrogate: Toluene-d8 | 0.0394 | | " | 0.0400 | | 98.5 | 20-170 | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0370 | | " | 0.0400 | | 92.4 | 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: Achziger 14-4

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 02/23/21 06:37

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

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

Batch BEB0327 - EPA 5030 Soil MS

| Matrix Spike Dup (BEB0327-MSD1) | Source: 2102268-01 | | | Prepared: 02/22/21 Analyzed: 02/23/21 | | | | | | |
|----------------------------------|--------------------|--------|-------|---------------------------------------|----|------|--------|-------|----|--|
| Benzene | 0.0919 | 0.0020 | mg/kg | 0.100 | ND | 91.9 | 70-130 | 0.261 | 30 | |
| Toluene | 0.105 | 0.0050 | " | 0.100 | ND | 105 | 70-130 | 2.00 | 30 | |
| Ethylbenzene | 0.106 | 0.0050 | " | 0.100 | ND | 106 | 70-130 | 1.25 | 30 | |
| m,p-Xylene | 0.210 | 0.010 | " | 0.200 | ND | 105 | 70-130 | 0.975 | 30 | |
| o-Xylene | 0.104 | 0.0050 | " | 0.100 | ND | 104 | 70-130 | 2.83 | 30 | |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0413 | | " | 0.0400 | | 103 | 23-173 | | | |
| Surrogate: Toluene-d8 | 0.0399 | | " | 0.0400 | | 99.8 | 20-170 | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0371 | | " | 0.0400 | | 92.8 | 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: Achziger 14-4

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 02/23/21 06:37

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 BEB0328 - EPA 3550A

Blank (BEB0328-BLK1)

Prepared: 02/22/21 Analyzed: 02/23/21

| | | | | | | | | | | |
|---------------|----|----|-------|--|--|--|--|--|--|--|
| C10-C28 (DRO) | ND | 50 | mg/kg | | | | | | | |
| C28-C36 (ORO) | ND | 50 | " | | | | | | | |

LCS (BEB0328-BS1)

Prepared: 02/22/21 Analyzed: 02/23/21

| | | | | | | | | | | |
|---------------|-----|----|-------|-----|------|--------|--|--|--|--|
| C10-C28 (DRO) | 420 | 50 | mg/kg | 500 | 84.0 | 70-130 | | | | |
|---------------|-----|----|-------|-----|------|--------|--|--|--|--|

Matrix Spike (BEB0328-MS1)

Source: 2102268-01

Prepared: 02/22/21 Analyzed: 02/23/21

| | | | | | | | | | | |
|---------------|-----|----|-------|-----|------|------|--------|--|--|--|
| C10-C28 (DRO) | 418 | 50 | mg/kg | 500 | 14.5 | 80.6 | 70-130 | | | |
|---------------|-----|----|-------|-----|------|------|--------|--|--|--|

Matrix Spike Dup (BEB0328-MSD1)

Source: 2102268-01

Prepared: 02/22/21 Analyzed: 02/23/21

| | | | | | | | | | | |
|---------------|-----|----|-------|-----|------|------|--------|-------|----|--|
| C10-C28 (DRO) | 416 | 50 | mg/kg | 500 | 14.5 | 80.3 | 70-130 | 0.317 | 20 | |
|---------------|-----|----|-------|-----|------|------|--------|-------|----|--|

Summit Scientific

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

Project: Achziger 14-4

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/23/21 06:37

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

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

March 18, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Achziger 14-4

Work Order #2102287

Enclosed are the results of analyses for samples received by Summit Scientific on 02/22/21 17:30. 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: Achziger 14-4

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
03/18/21 14:36

ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|--------------|---------------|--------|----------------|----------------|
| AST01@0-6" | 2102287-01 | Soil | 02/22/21 09:30 | 02/22/21 17:30 |
| PWV01-B@3.5' | 2102287-02 | Soil | 02/22/21 09:54 | 02/22/21 17:30 |
| PWV01-S@2' | 2102287-03 | Soil | 02/22/21 10:01 | 02/22/21 17:30 |
| SEP01-FL@4' | 2102287-04 | Soil | 02/22/21 11:15 | 02/22/21 17:30 |
| SEP01-DL@6' | 2102287-05 | Soil | 02/22/21 11:16 | 02/22/21 17:30 |

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.

Summit Scientific

S₂

2012287

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310

Page 1 of 1

Client: PDC / Tasman Project Manager: Mark Longhurst
 Address: 6855 W 119th Ave E-Mail: mark.longhurst@PDCE.com
 City/State/Zip: Broomfield/ CO/ 80020
 Phone: 303-487-1228 Project Name: Achziger 14-4
 Sampler Name: Kevin Fletcher Project Number:

| ID | Sample Description | Date Sampled | Time Sampled | # of containers | Preservative | | | | Matrix | | | Analysis Requested | | | | | | | Special Instructions | | |
|----|--------------------|--------------|--------------|-----------------|--------------|------------------|------|-------|--------|------|----------------|--------------------|-------------------------------|---------------------------------|----------------------------|----------------------------|-----------|-----------|----------------------|--------------|--|
| | | | | | HCl | HNO ₃ | None | Other | Water | Soil | Air-Canister # | Other | GBTEXN - 8260B ⁹¹⁵ | TPH - (C6 - C36) ⁹¹⁵ | pH, EC, SAR ⁹¹⁵ | Boron - HWS ⁹¹⁵ | VOC - 915 | PAH - 915 | | Metals - 915 | |
| 1 | ASTO1@0-6" | 2/22/21 | 930 | 2 | | | X | | | X | | | X | X | | | | | | | pH, EC, SAR by saturated paste Hold |
| 2 | PWV01-B@3.5' | ↓ | 954 | 2 | | | X | | | X | | | X | X | | | | | | | |
| 3 | PWV01-S@2' | ↓ | 1001 | 4 | | | X | | | X | | | X | X | X | X | | | | | |
| 4 | SEPO1-FL@4' | ↓ | 1115 | 2 | | | X | | | X | | | X | X | | | | | | | |
| 5 | SEPO1-DL@6' | ↓ | 1116 | 2 | | | X | | | X | | | X | X | | | | | | | |
| 6 | BKGO1@2.5' | ↓ | 1336 | 4 | | | X | | | X | | | | | | | | | | X | |
| 7 | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | |

| | | | |
|--|---|--|--------|
| Relinquished by: Kevin Fletcher Date/Time: 2/22/21 1530 | Received by: Tasman's Lock Box Date/Time: 2/22/21 1530 | Turn Around Time (Check) Same Day ___ 72 hours ___ 24 hours ___ Standard <input checked="" type="checkbox"/> 48 hours ___ | Notes: |
| Relinquished by: Tasman's Lock Box Date/Time: 02/22/2021 1730 | Received by: [Signature] Date/Time: 02/22/2021 1730 | Sample Integrity: Temperature Upon Receipt: 4.8 | |
| Relinquished by: | Received by: | Samples Intact: <input checked="" type="checkbox"/> Yes No | |

2102287

Sample Receipt Checklist

S2 Work Order _____

Client: FDC/TABMAN Client Project ID: ACHZIGER K-4

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other _____ Airbill #: _____

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

| | |
|-----------|-----|
| Temp (°C) | 4.3 |
|-----------|-----|

Thermometer ID: 61857155-K

| | Yes | No | N/A | Comments (if any) |
|---|-------------------------------------|-------------------------------------|-------------------------------------|-------------------|
| If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Were all samples received intact ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Was adequate sample volume provided ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| If custody seals are present, are they intact ⁽¹⁾ ? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Are samples with holding times due within 48 hours sample due within 48 hours present? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| For volatiles in water – is there headspace present? If yes, contact client and note in narrative. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| If dissolved metals are requested, were samples field filtered? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Additional Comments (if any): | | | | |
| | | | | |
| ⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative. | | | | |

TGB
Custodian Printed Name or Initials

[Signature]
Signature of Custodian

02/22/2021
Date/Time



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

Project: Achziger 14-4

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
03/18/21 14:36

AST01@0-6"
2102287-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/22/21 09:30**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| Benzene | ND | 0.0020 | mg/kg | 1 | BEB0375 | 02/24/21 | 02/25/21 | EPA 8260B | |
| Toluene | ND | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.010 | " | " | " | " | " | " | |
| Naphthalene | ND | 0.0038 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 0.50 | " | " | " | " | " | " | |

Date Sampled: **02/22/21 09:30**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | Units | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 113 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 91.4 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 94.7 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/22/21 09:30**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | BEB0376 | 02/24/21 | 02/25/21 | EPA 8015M | |
| C28-C36 (ORO) | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **02/22/21 09:30**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | Units | | | | | | |
| Surrogate: o-Terphenyl | | 95.0 % | 30-150 | | " | " | " | " | |

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: Achziger 14-4

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
03/18/21 14:36

PWV01-B@3.5'
2102287-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/22/21 09:54**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| Benzene | ND | 0.0020 | mg/kg | 1 | BEB0375 | 02/24/21 | 02/25/21 | EPA 8260B | |
| Toluene | ND | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.010 | " | " | " | " | " | " | |
| Naphthalene | ND | 0.0038 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 0.50 | " | " | " | " | " | " | |

Date Sampled: **02/22/21 09:54**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | Units | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 108 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 92.9 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 97.4 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/22/21 09:54**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | BEB0376 | 02/24/21 | 02/25/21 | EPA 8015M | |
| C28-C36 (ORO) | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **02/22/21 09:54**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | Units | | | | | | |
| Surrogate: o-Terphenyl | | 95.0 % | 30-150 | | " | " | " | " | |

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: Achziger 14-4

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
03/18/21 14:36

PWV01-S@2'
2102287-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/22/21 10:01**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Benzene | ND | 0.0020 | mg/kg | 1 | BEB0375 | 02/24/21 | 02/25/21 | EPA 8260B | |
| Toluene | ND | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.010 | " | " | " | " | " | " | |
| Naphthalene | ND | 0.0038 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 0.50 | " | " | " | " | " | " | |

Date Sampled: **02/22/21 10:01**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: 1,2-Dichloroethane-d4 | | 130 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 98.2 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 98.8 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/22/21 10:01**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | BEB0376 | 02/24/21 | 02/25/21 | EPA 8015M | |
| C28-C36 (ORO) | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **02/22/21 10:01**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------------|--------|----------|-------|----------|----------|--------|-------|
| Surrogate: o-Terphenyl | | 93.7 % | 30-150 | | " | " | " | " | |

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/22/21 10:01**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------|--------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Boron | 0.204 | 0.0100 | mg/L | 1 | BEB0383 | 02/25/21 | 02/26/21 | EPA 6020B | |

Summit Scientific

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

Project: Achziger 14-4

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
03/18/21 14:36

PWV01-S@2'
2102287-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/22/21 10:01**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|--------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 49.6 | 0.0549 | mg/L dry | 1 | BEB0363 | 02/24/21 | 02/25/21 | EPA 6020B | |
| Magnesium | 4.39 | 0.0549 | " | " | " | " | 02/26/21 | " | |
| Sodium | 27.4 | 0.0549 | " | " | " | " | 02/25/21 | " | |

Calculated Analysis

Date Sampled: **02/22/21 10:01**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-------------------------|--------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 1.00 | 0.100 | units | 1 | BEB0407 | 02/26/21 | 02/26/21 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/22/21 10:01**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------|--------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| % Solids | 91.0 | | % | 1 | BEB0356 | 02/24/21 | 02/24/21 | Calculation | |

Specific Conductance by EPA Method 120.1

Date Sampled: **02/22/21 10:01**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------------------|--------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.536 | 0.0100 | mmhos/cm | 1 | BEB0357 | 02/24/21 | 02/24/21 | EPA 120.1 | |

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/22/21 10:01**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------------------|--------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.389 | 0.0100 | mmhos/cm | 1 | BEB0391 | 02/25/21 | 02/25/21 | EPA 120.1 | |

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: Achziger 14-4

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
 03/18/21 14:36

PWV01-S@2'
2102287-03 (Soil)

Summit Scientific

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/22/21 10:01**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|-------------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| pH | 8.16 | | pH Units | 1 | BEB0392 | 02/25/21 | 02/25/21 | EPA 9045D | |

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: Achziger 14-4

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
03/18/21 14:36

SEP01-FL@4'
2102287-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/22/21 11:15**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| Benzene | ND | 0.0020 | mg/kg | 1 | BEB0375 | 02/24/21 | 02/25/21 | EPA 8260B | |
| Toluene | ND | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.010 | " | " | " | " | " | " | |
| Naphthalene | ND | 0.0038 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 0.50 | " | " | " | " | " | " | |

Date Sampled: **02/22/21 11:15**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | Units | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 117 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 92.0 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 94.4 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/22/21 11:15**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | BEB0376 | 02/24/21 | 02/25/21 | EPA 8015M | |
| C28-C36 (ORO) | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **02/22/21 11:15**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | Units | | | | | | |
| Surrogate: o-Terphenyl | | 95.5 % | 30-150 | | " | " | " | " | |

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: Achziger 14-4

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
03/18/21 14:36

SEP01-DL@6'
2102287-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/22/21 11:16**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| Benzene | ND | 0.0020 | mg/kg | 1 | BEB0375 | 02/24/21 | 02/25/21 | EPA 8260B | |
| Toluene | ND | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.010 | " | " | " | " | " | " | |
| Naphthalene | ND | 0.0038 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 0.50 | " | " | " | " | " | " | |

Date Sampled: **02/22/21 11:16**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | Units | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 112 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 88.3 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 91.5 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/22/21 11:16**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | Units | | | | | | |
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | BEB0376 | 02/24/21 | 02/25/21 | EPA 8015M | |
| C28-C36 (ORO) | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **02/22/21 11:16**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | Units | | | | | | |
| Surrogate: o-Terphenyl | | 93.1 % | 30-150 | | " | " | " | " | |

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: Achziger 14-4

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
03/18/21 14:36

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 BEB0375 - EPA 5030 Soil MS

Blank (BEB0375-BLK1)

Prepared & Analyzed: 02/24/21

| | | | | | | | | | | |
|----------------------------------|--------|--------|-------|--------|--|------|--------|--|--|--|
| Benzene | ND | 0.0020 | mg/kg | | | | | | | |
| Toluene | ND | 0.0050 | " | | | | | | | |
| Ethylbenzene | ND | 0.0050 | " | | | | | | | |
| Xylenes (total) | ND | 0.010 | " | | | | | | | |
| Naphthalene | ND | 0.0038 | " | | | | | | | |
| Gasoline Range Hydrocarbons | ND | 0.50 | " | | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0322 | | " | 0.0400 | | 80.4 | 23-173 | | | |
| Surrogate: Toluene-d8 | 0.0443 | | " | 0.0400 | | 111 | 20-170 | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0408 | | " | 0.0400 | | 102 | 21-167 | | | |

LCS (BEB0375-BS1)

Prepared & Analyzed: 02/24/21

| | | | | | | | | | | |
|----------------------------------|--------|--------|-------|--------|--|------|--------|--|--|--|
| Benzene | 0.0770 | 0.0020 | mg/kg | 0.100 | | 77.0 | 70-130 | | | |
| Toluene | 0.0813 | 0.0050 | " | 0.100 | | 81.3 | 70-130 | | | |
| Ethylbenzene | 0.0948 | 0.0050 | " | 0.100 | | 94.8 | 70-130 | | | |
| m,p-Xylene | 0.181 | 0.010 | " | 0.200 | | 90.4 | 70-130 | | | |
| o-Xylene | 0.0905 | 0.0050 | " | 0.100 | | 90.5 | 70-130 | | | |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0282 | | " | 0.0400 | | 70.4 | 23-173 | | | |
| Surrogate: Toluene-d8 | 0.0376 | | " | 0.0400 | | 93.9 | 20-170 | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0375 | | " | 0.0400 | | 93.8 | 21-167 | | | |

Matrix Spike (BEB0375-MS1)

Source: 2102214-01

Prepared: 02/24/21 Analyzed: 02/25/21

| | | | | | | | | | | |
|----------------------------------|--------|--------|-------|--------|----|------|--------|--|--|--|
| Benzene | 0.0850 | 0.0020 | mg/kg | 0.100 | ND | 85.0 | 70-130 | | | |
| Toluene | 0.0753 | 0.0050 | " | 0.100 | ND | 75.3 | 70-130 | | | |
| Ethylbenzene | 0.0929 | 0.0050 | " | 0.100 | ND | 92.9 | 70-130 | | | |
| m,p-Xylene | 0.176 | 0.010 | " | 0.200 | ND | 87.9 | 70-130 | | | |
| o-Xylene | 0.0866 | 0.0050 | " | 0.100 | ND | 86.6 | 70-130 | | | |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0369 | | " | 0.0400 | | 92.2 | 23-173 | | | |
| Surrogate: Toluene-d8 | 0.0338 | | " | 0.0400 | | 84.5 | 20-170 | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0380 | | " | 0.0400 | | 94.9 | 21-167 | | | |

Summit Scientific

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

Project: Achziger 14-4

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 03/18/21 14:36

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 BEB0375 - EPA 5030 Soil MS

| Matrix Spike Dup (BEB0375-MSD1) | Source: 2102214-01 | | | Prepared: 02/24/21 Analyzed: 02/25/21 | | | | | | |
|--|---------------------------|--------|-------|--|----|------|--------|------|----|--|
| Benzene | 0.0870 | 0.0020 | mg/kg | 0.100 | ND | 87.0 | 70-130 | 2.27 | 30 | |
| Toluene | 0.0753 | 0.0050 | " | 0.100 | ND | 75.3 | 70-130 | 0.00 | 30 | |
| Ethylbenzene | 0.0948 | 0.0050 | " | 0.100 | ND | 94.8 | 70-130 | 2.01 | 30 | |
| m,p-Xylene | 0.179 | 0.010 | " | 0.200 | ND | 89.6 | 70-130 | 1.93 | 30 | |
| o-Xylene | 0.0889 | 0.0050 | " | 0.100 | ND | 88.9 | 70-130 | 2.56 | 30 | |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0370 | | " | 0.0400 | | 92.6 | 23-173 | | | |
| Surrogate: Toluene-d8 | 0.0347 | | " | 0.0400 | | 86.8 | 20-170 | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0370 | | " | 0.0400 | | 92.6 | 21-167 | | | |

Summit Scientific

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

Project: Achziger 14-4

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 03/18/21 14:36

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 BEB0376 - EPA 3550A

Blank (BEB0376-BLK1)

Prepared: 02/24/21 Analyzed: 02/25/21

| | | | | | | | | | | |
|---------------|----|----|-------|--|--|--|--|--|--|--|
| C10-C28 (DRO) | ND | 50 | mg/kg | | | | | | | |
| C28-C36 (ORO) | ND | 50 | " | | | | | | | |

LCS (BEB0376-BS1)

Prepared: 02/24/21 Analyzed: 02/25/21

| | | | | | | | | | | |
|---------------|-----|----|-------|-----|------|--------|--|--|--|--|
| C10-C28 (DRO) | 436 | 50 | mg/kg | 500 | 87.2 | 70-130 | | | | |
|---------------|-----|----|-------|-----|------|--------|--|--|--|--|

Matrix Spike (BEB0376-MS1)

Source: 2102214-01

Prepared: 02/24/21 Analyzed: 02/25/21

| | | | | | | | | | | |
|---------------|-----|----|-------|-----|------|------|--------|--|--|--|
| C10-C28 (DRO) | 512 | 50 | mg/kg | 500 | 14.6 | 99.5 | 70-130 | | | |
|---------------|-----|----|-------|-----|------|------|--------|--|--|--|

Matrix Spike Dup (BEB0376-MSD1)

Source: 2102214-01

Prepared: 02/24/21 Analyzed: 02/25/21

| | | | | | | | | | | |
|---------------|-----|----|-------|-----|------|------|--------|------|----|--|
| C10-C28 (DRO) | 478 | 50 | mg/kg | 500 | 14.6 | 92.7 | 70-130 | 6.85 | 20 | |
|---------------|-----|----|-------|-----|------|------|--------|------|----|--|

Summit Scientific

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

Project: Achziger 14-4

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 03/18/21 14:36

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

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

Batch BEB0383 - EPA 3050B

Blank (BEB0383-BLK1)

Prepared & Analyzed: 02/25/21

Boron ND 0.0100 mg/L

LCS (BEB0383-BS1)

Prepared & Analyzed: 02/25/21

Boron 4.88 0.0100 mg/L 5.00 97.6 80-120

Duplicate (BEB0383-DUP1)

Source: 2102176-03

Prepared: 02/25/21 Analyzed: 02/26/21

Boron 1.51 0.0100 mg/L 1.66 9.20 20

Matrix Spike (BEB0383-MS1)

Source: 2102176-03

Prepared: 02/25/21 Analyzed: 02/26/21

Boron 6.26 0.0100 mg/L 5.00 1.66 92.2 75-125

Matrix Spike Dup (BEB0383-MSD1)

Source: 2102176-03

Prepared: 02/25/21 Analyzed: 02/26/21

Boron 6.26 0.0100 mg/L 5.00 1.66 92.1 75-125 0.0211 25

Summit Scientific

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

Project: Achziger 14-4

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 03/18/21 14:36

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control
Summit Scientific

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

Batch BEB0363 - General Preparation

Blank (BEB0363-BLK1)

Prepared: 02/24/21 Analyzed: 02/25/21

| | | | | | | | | | | |
|-----------|----|--------|----------|--|--|--|--|--|--|--|
| Calcium | ND | 0.0500 | mg/L wet | | | | | | | |
| Magnesium | ND | 0.0500 | " | | | | | | | |
| Sodium | ND | 0.0500 | " | | | | | | | |

LCS (BEB0363-BS1)

Prepared: 02/24/21 Analyzed: 02/25/21

| | | | | | | | | | | |
|-----------|------|--------|----------|------|-----|--------|--|--|--|--|
| Calcium | 5.16 | 0.0500 | mg/L wet | 5.00 | 103 | 70-130 | | | | |
| Magnesium | 5.30 | 0.0500 | " | 5.00 | 106 | 70-130 | | | | |
| Sodium | 5.15 | 0.0500 | " | 5.00 | 103 | 70-130 | | | | |

Summit Scientific

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

Project: Achziger 14-4

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
 03/18/21 14:36

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

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

Batch BEB0356 - General Preparation

Duplicate (BEB0356-DUP1)

Source: 2101305-01

Prepared & Analyzed: 02/24/21

| | | | | | | | | | | | |
|----------|------|--|---|--|------|--|--|-------|--|----|--|
| % Solids | 83.6 | | % | | 83.4 | | | 0.234 | | 20 | |
|----------|------|--|---|--|------|--|--|-------|--|----|--|

Summit Scientific

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

Project: Achziger 14-4

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
 03/18/21 14:36

Specific Conductance by EPA Method 120.1 - Quality Control

Summit Scientific

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

Batch BEB0357 - General Preparation

Blank (BEB0357-BLK1)

Prepared & Analyzed: 02/24/21

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BEB0357-BS1)

Prepared & Analyzed: 02/24/21

Specific Conductance (EC) 0.741 0.0100 mmhos/cm 0.750 98.7 90-110

Duplicate (BEB0357-DUP1)

Source: 2102287-03

Prepared & Analyzed: 02/24/21

Specific Conductance (EC) 0.538 0.0100 mmhos/cm 0.536 0.279 20

Summit Scientific

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

Project: Achziger 14-4

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 03/18/21 14:36

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control

Summit Scientific

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

Batch BEB0391 - General Preparation

Blank (BEB0391-BLK1)

Prepared & Analyzed: 02/25/21

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BEB0391-BS1)

Prepared & Analyzed: 02/25/21

Specific Conductance (EC) 0.152 0.0100 mmhos/cm 0.150 101 90-110

Duplicate (BEB0391-DUP1)

Source: 2102266-01

Prepared & Analyzed: 02/25/21

Specific Conductance (EC) 2.48 0.0100 mmhos/cm 2.43 1.96 20

Summit Scientific

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

Project: Achziger 14-4

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
 03/18/21 14:36

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control

Summit Scientific

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

Batch BEB0392 - General Preparation

LCS (BEB0392-BS1)

Prepared & Analyzed: 02/25/21

| | | | | | |
|----|------|----------|------|------|--------|
| pH | 9.20 | pH Units | 9.21 | 99.9 | 95-105 |
|----|------|----------|------|------|--------|

Duplicate (BEB0392-DUP1)

Source: 2102266-01

Prepared & Analyzed: 02/25/21

| | | | | | |
|----|------|----------|------|-------|----|
| pH | 8.17 | pH Units | 8.16 | 0.122 | 20 |
|----|------|----------|------|-------|----|

Summit Scientific

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

Project: Achziger 14-4
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
03/18/21 14:36

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