

**TABLE 1**  
**FORMER WARNER 6-14 TANK BATTERY**  
**SOIL ANALYTICAL RESULTS SUMMARY TABLE**  
**PRODUCED WATER VESSEL REMOVAL**

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)	pH (units)	EC (mmhos/cm)
COGCC Standards for Soil (mg/kg) <sup>(1)</sup>			0.17	85	100	175	23	500	6-9	<4
SS01 @ 5'	4/22/2019	5	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	10.2	0.427
SS02 @ 3'	4/22/2019	3	NA	NA	NA	NA	NA	NA	9.25	0.276
SS03 @ 3'	4/22/2019	3	NA	NA	NA	NA	NA	NA	9.20	0.240
SS04 @ 3'	4/22/2019	3	NA	NA	NA	NA	NA	NA	10.4	0.468
SS05 @ 3'	4/22/2019	3	NA	NA	NA	NA	NA	NA	9.34	0.278

**Notes:**

1. Standards for soil are taken from 2 CCR 404-1, Table 910-1, effective May 1, 2018.

2. 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

EC = Electrical conductivity

mmhos/cm = Millimhos per centimeter

NA = Constituent not analyzed

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

**TABLE 2**  
**FORMER WARNER 6-14 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 @ 7'	4/24/2019	7	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS02 @ 10'	4/24/2019	10	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS03 @ 10'	4/24/2019	10	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS04 @ 7'	4/25/2019	7	<0.0020	<0.0050	0.012	<0.010	0.053	13
SS05 @ 7'	4/26/2019	7	0.0091	<0.0050	0.030	<0.010	0.013	62.8
SS06 @ 7'	4/29/2019	7	<0.0020	<0.0050	<0.0050	<0.010	<0.010	890
SS07 @ 9'	4/29/2019	9	<0.0020	<0.0050	<0.0050	<0.010	<0.010	61.4
SS08 @ 9'	4/29/2019	9	<0.0020	<0.0050	<0.0050	<0.010	<0.010	4.5
SS09 @ 9'	4/30/2019	9	<0.0020	<0.0050	<0.0050	<0.010	<0.010	5.0
SS10 @ 7'	4/30/2019	7	<0.0020	<0.0050	<0.0050	<0.010	<0.010	0.54
SS11 @ 9'	4/30/2019	9	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS12 @ 12'	4/30/2019	12	<0.0020	<0.0050	0.020	0.036	0.011	1.3
SS13 @ 7'	5/2/2019	7	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS14 @ 9'	5/2/2019	9	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS15 @ 12'	5/3/2019	12	<0.0020	<0.0050	<0.0050	<0.010	<0.010	3.0
SS16 @ 7'	5/3/2019	7	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS17 @ 9'	5/3/2019	9	0.013	<0.0050	0.11	1.3	0.093	130
SS18 @ 7'	5/3/2019	7	<0.0020	<0.0050	<0.0050	<0.010	<0.010	2.3
SS19 @ 9'	5/3/2019	9	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS20 @ 7'	5/6/2019	7	<0.0020	<0.0050	<0.0050	<0.010	<0.010	5.3
SS21 @ 9'	5/6/2019	9	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS22 @ 12'	5/6/2019	12	0.0061	<0.0050	0.059	1.2	0.028	34
SS23 @ 7'	5/13/2019	7	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS24 @ 9'	5/13/2019	9	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS25 @ 12'	5/13/2019	12	<0.0020	<0.0050	<0.0050	0.015	<0.010	<50
SS26 @ 7'	5/13/2019	7	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS27 @ 9'	5/13/2019	9	<0.0020	<0.0050	0.036	0.16	0.040	202
SS28 @ 12'	5/14/2019	12	<0.0020	<0.0050	<0.0050	<0.010	<0.010	1.4
SS29 @ 7'	5/16/2019	7	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS30 @ 10'	5/16/2019	10	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS31 @ 17'	5/16/2019	17	0.038	0.027	0.056	0.53	0.046	139
SS32 @ 11'	5/17/2019	11	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS33 @ 18.5'	5/17/2019	18.5	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS34 @ 17'	5/17/2019	17	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS35 @ 11'	5/17/2019	11	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS36 @ 17'	5/17/2019	17	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS37 @ 18.5'	5/17/2019	18.5	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS38 @ 11'	5/30/2019	11	<0.0020	<0.0050	<0.0050	<0.010	0.11	133
SS39 @ 11'	5/31/2019	11	<0.0020	<0.0050	<0.0050	0.014	0.013	82.7
SS40 @ 17'	5/31/2019	17	<0.0020	<0.0050	0.11	0.12	0.037	101.9
SS41 @ 18'	5/31/2019	18	0.0052	<0.0050	0.022	0.049	<0.010	0.88
SS42 @ 11'	6/3/2019	11	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS43 @ 17'	6/3/2019	17	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS44 @ 18'	6/4/2019	18	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS45 @ 11'	6/4/2019	11	<0.0020	<0.0050	<0.0050	<0.010	<0.010	91
SS46 @ 17'	6/4/2019	17	<0.0020	<0.0050	0.017	0.012	<0.010	5.1

**TABLE 2**  
**FORMER WARNER 6-14 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>
SS47 @ 11'	6/4/2019	11	<0.0020	<0.0050	<0.0050	<0.010	<0.010	2.1
SS48 @ 17'	6/4/2019	17	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS49 @ 7'	6/4/2019	7	<0.0020	<0.0050	0.15	<0.010	<0.010	274
SS50 @ 9'	6/4/2019	9	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS51 @ 7'	6/5/2019	7	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS52 @ 9'	6/5/2019	9	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS53 @ 12'	6/5/2019	12	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS54 @ 7'	6/5/2019	7	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS55 @ 9'	6/5/2019	9	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS56 @ 12'	6/5/2019	12	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50

**Notes:**

1. Standards for soil are taken from 2 CCR 404-1, Table 910-1, effective May 1, 2018.

2. 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

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mg/kg = Milligrams per kilogram

bgs = Below ground surface

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

## **ATTACHMENT A**



# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 10, 2019

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Warner 6-14

Enclosed are the results of analyses for samples received by Summit Scientific on 04/22/19 17:50. 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', with a stylized, cursive script.

Paul Shrewsbury

President



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

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
05/10/19 09:18

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@5'	1904304-01	Soil	04/22/19 09:50	04/22/19 17:50
SS02@3'	1904304-02	Soil	04/22/19 09:52	04/22/19 17:50
SS03@3'	1904304-03	Soil	04/22/19 09:56	04/22/19 17:50
SS04@3'	1904304-04	Soil	04/22/19 09:58	04/22/19 17:50
SS05@3'	1904304-05	Soil	04/22/19 10:00	04/22/19 17:50


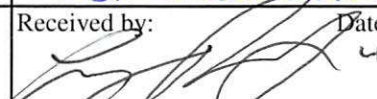
Summit Scientific

*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

Page 1 of

Project Manager:	Mark Longhurst
E-Mail:	mark.longhurst@pdce.com
Project Name:	Warner 6-14
Project Number:	

				Preservative				Matrix				Analyze For:								Special Instructions
Sample Description	Date Sampled	Time Sampled	Number of Containers	HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	GBTEXN (8260)	TPH - DRO	EC/pH	Hold					
SS01 @ 5'	4/22/2019	9:50	1			X			X			X	X	X						
SS02 @ 3'	4/22/2019	9:52	1												X					
SS03 @ 3'	4/22/2019	9:56	1												X					
SS04 @ 3'	4/22/2019	9:58	1												X					
SS05 @ 3'	4/22/2019	10:00	1												X					
Relinquished by:  Date/Time: 4/22/19 11:00				Received by: Tasman Box 4/22/19 11:00				Turn Around Time (Check)				Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 Hours <input type="checkbox"/>								
Relinquished by: Tasman Box 4/22/19 Date/Time: 1750				Received by:  Date/Time: 4.22.19 1750				Sample Integrity:												
Relinquished by: Date/Time:				Received in Lab by: Date/Time:				Temperature Upon Receipt: 2.5												
								Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>												

# Sample Receipt Checklist

S2 Work Order 1904304

Client: PDC Client Project ID: Worner

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

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

Temp (°C)	<u>2.5</u>
-----------	------------

Thermometer ID: 61857155-K

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

Additional Comments (if any):

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

CP  
Custodian Printed Name or Initials

[Signature]  
Signature of Custodian

4.22.19 1840  
Date/Time



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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/10/19 09:18

**SS01@5'**  
**1904304-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/22/19 09:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1904356	04/23/19	04/23/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/22/19 09:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		97.7 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.6 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/22/19 09:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1904355	04/23/19	04/23/19	EPA 8015M	

Date Sampled: **04/22/19 09:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		108 %	30-150		"	"	"	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/22/19 09:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
pH	10.2		pH Units	1	1904373	04/24/19	04/24/19	EPA 9045D	

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
05/10/19 09:18

**SS01@5'**  
**1904304-01 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

**Specific Conductance by EPA Method 120.1**

Date Sampled: **04/22/19 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	<b>0.427</b>	0.0100		mmhos/cm	1	1904372	04/24/19	04/24/19	EPA 120.1	

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

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
05/10/19 09:18

**SS02@3'**  
**1904304-02 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/22/19 09:52**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>pH</b>	<b>9.25</b>			pH Units	1	1904427	04/26/19	04/26/19	EPA 9045D	

**Specific Conductance by EPA Method 120.1**

Date Sampled: **04/22/19 09:52**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Specific Conductance (EC)</b>	<b>0.276</b>	0.0100		mmhos/cm	1	1904429	04/26/19	04/26/19	EPA 120.1	

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

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
05/10/19 09:18

**SS03@3'**  
**1904304-03 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/22/19 09:56**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>pH</b>	<b>9.20</b>			pH Units	1	1904427	04/26/19	04/26/19	EPA 9045D	

**Specific Conductance by EPA Method 120.1**

Date Sampled: **04/22/19 09:56**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Specific Conductance (EC)</b>	<b>0.240</b>	0.0100		mmhos/cm	1	1904429	04/26/19	04/26/19	EPA 120.1	

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

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
05/10/19 09:18

**SS04@3'**  
**1904304-04 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/22/19 09:58**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>pH</b>	<b>10.4</b>			pH Units	1	1904427	04/26/19	04/26/19	EPA 9045D	

**Specific Conductance by EPA Method 120.1**

Date Sampled: **04/22/19 09:58**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Specific Conductance (EC)</b>	<b>0.468</b>	0.0100		mmhos/cm	1	1904429	04/26/19	04/26/19	EPA 120.1	

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
05/10/19 09:18

**SS05@3'**  
**1904304-05 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/22/19 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>pH</b>	<b>9.34</b>			pH Units	1	1904427	04/26/19	04/26/19	EPA 9045D	

**Specific Conductance by EPA Method 120.1**

Date Sampled: **04/22/19 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Specific Conductance (EC)</b>	<b>0.278</b>	0.0100		mmhos/cm	1	1904429	04/26/19	04/26/19	EPA 120.1	

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/10/19 09:18

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

### Summit Scientific

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

#### Batch 1904356 - EPA 5030 Soil MS

##### Blank (1904356-BLK1)

Prepared & Analyzed: 04/23/19

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Naphthalene	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0385		"	0.0400		96.2	23-173			
Surrogate: Toluene-d8	0.0392		"	0.0400		98.0	20-170			
Surrogate: 4-Bromofluorobenzene	0.0373		"	0.0400		93.3	21-167			

##### LCS (1904356-BS1)

Prepared & Analyzed: 04/23/19

Benzene	0.209	0.0020	mg/kg	0.200		104	70-130			
Toluene	0.212	0.0050	"	0.200		106	70-130			
Ethylbenzene	0.236	0.0050	"	0.200		118	70-130			
m,p-Xylene	0.454	0.010	"	0.400		113	70-130			
o-Xylene	0.222	0.0050	"	0.200		111	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0393		"	0.0400		98.3	23-173			
Surrogate: Toluene-d8	0.0380		"	0.0400		95.0	20-170			
Surrogate: 4-Bromofluorobenzene	0.0380		"	0.0400		95.0	21-167			

##### Matrix Spike (1904356-MS1)

Source: 1904293-01

Prepared & Analyzed: 04/23/19

Benzene	0.197	0.0020	mg/kg	0.200	ND	98.4	70-130			
Toluene	0.191	0.0050	"	0.200	ND	95.3	70-130			
Ethylbenzene	0.198	0.0050	"	0.200	ND	98.9	70-130			
m,p-Xylene	0.380	0.010	"	0.400	ND	95.0	70-130			
o-Xylene	0.187	0.0050	"	0.200	ND	93.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0428		"	0.0400		107	23-173			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0380		"	0.0400		94.9	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/10/19 09:18

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

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

**Batch 1904356 - EPA 5030 Soil MS**

Matrix Spike Dup (1904356-MSD1)		Source: 1904293-01			Prepared & Analyzed: 04/23/19					
Benzene	0.202	0.0020	mg/kg	0.200	ND	101	70-130	2.33	30	
Toluene	0.201	0.0050	"	0.200	ND	101	70-130	5.42	30	
Ethylbenzene	0.219	0.0050	"	0.200	ND	109	70-130	10.0	30	
m,p-Xylene	0.421	0.010	"	0.400	ND	105	70-130	10.2	30	
o-Xylene	0.212	0.0050	"	0.200	ND	106	70-130	12.4	30	
Surrogate: 1,2-Dichloroethane-d4	0.0401		"	0.0400		100	23-173			
Surrogate: Toluene-d8	0.0385		"	0.0400		96.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0393		"	0.0400		98.3	21-167			

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/10/19 09:18

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

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

**Batch 1904355 - EPA 3550A**

**Blank (1904355-BLK1)**

Prepared & Analyzed: 04/23/19

C10-C28 (DRO) ND 50 mg/kg

**LCS (1904355-BS1)**

Prepared & Analyzed: 04/23/19

C10-C28 (DRO) 455 50 mg/kg 500 90.9 70-130

**Matrix Spike (1904355-MS1)**

**Source: 1904293-01**

Prepared & Analyzed: 04/23/19

C10-C28 (DRO) 426 50 mg/kg 500 11.0 82.9 70-130

**Matrix Spike Dup (1904355-MSD1)**

**Source: 1904293-01**

Prepared & Analyzed: 04/23/19

C10-C28 (DRO) 421 50 mg/kg 500 11.0 82.1 70-130 1.01 20

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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/10/19 09:18

**Physical Parameters by APHA/ASTM/EPA Methods - Quality Control**  
**Summit Scientific**

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

**Batch 1904373 - General Preparation**

**LCS (1904373-BS1)**

Prepared & Analyzed: 04/24/19

pH	9.37		pH Units	9.23	102	95-105
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**Duplicate (1904373-DUP1)**

**Source: 1904285-01**

Prepared & Analyzed: 04/24/19

pH	7.87		pH Units	7.81	0.765	20
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**Batch 1904427 - General Preparation**

**LCS (1904427-BS1)**

Prepared & Analyzed: 04/26/19

pH	9.39		pH Units	9.23	102	95-105
----	------	--	----------	------	-----	--------

**Duplicate (1904427-DUP1)**

**Source: 1904304-02**

Prepared & Analyzed: 04/26/19

pH	9.33		pH Units	9.25	0.861	20
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Summit Scientific

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/10/19 09:18

**Specific Conductance by EPA Method 120.1 - Quality Control**  
**Summit Scientific**

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

**Batch 1904372 - General Preparation**

**Blank (1904372-BLK1)**

Prepared & Analyzed: 04/24/19

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (1904372-BS1)**

Prepared & Analyzed: 04/24/19

Specific Conductance (EC) 0.742 0.0100 mmhos/cm 90-110

**Duplicate (1904372-DUP1)**

**Source: 1904285-01**

Prepared & Analyzed: 04/24/19

Specific Conductance (EC) 3.88 0.0100 mmhos/cm 3.92 0.897 20

**Batch 1904429 - General Preparation**

**Blank (1904429-BLK1)**

Prepared & Analyzed: 04/26/19

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (1904429-BS1)**

Prepared & Analyzed: 04/26/19

Specific Conductance (EC) 0.740 0.0100 mmhos/cm 0.750 98.6 90-110

**Duplicate (1904429-DUP1)**

**Source: 1904304-02**

Prepared & Analyzed: 04/26/19

Specific Conductance (EC) 0.267 0.0100 mmhos/cm 0.276 3.44 20

Summit Scientific

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PDC Energy

1775 Sherman St. STE. 3000

Denver CO, 80203

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**

05/10/19 09:18

### 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

April 25, 2019

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Warner 6-14

Enclosed are the results of analyses for samples received by Summit Scientific on 04/24/19 18:01. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink on a light blue background. The signature is written in a cursive style and reads "Muri Premier".

Muri Premier For Paul Shrewsbury

President



PDC Energy

1775 Sherman St. STE. 3000

Denver CO, 80203

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**

04/25/19 18:17

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@7'	1904329-01	Soil	04/24/19 11:29	04/24/19 18:01
SS02@10'	1904329-02	Soil	04/24/19 11:35	04/24/19 18:01
SS03@10'	1904329-03	Soil	04/24/19 12:59	04/24/19 18:01

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

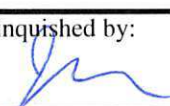
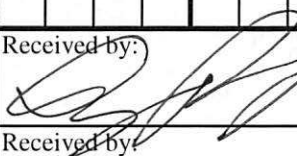
1904329

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: Jake McCarver

Project Manager: Mark Longhurst  
E-Mail: Mark.Longhurst@pdce.com  
Project Name: Warner 6-14  
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)	TPH - DRO											
SS01 @ 7'	4/24/2019	11:29	1			X			X					X	X									
SS02 @ 10'	4/24/2019	11:35	1			X			X					X	X									
SS03 @ 10'	4/24/2019	12:59	1			X			X					X	X									
Relinquished by:  Date/Time: <u>4/24/19</u> <u>4:09</u> <u>1730</u>				Received by:  Date/Time: <u>4-24-19</u> <u>1730</u>				Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input type="checkbox"/> 48 Hours <input type="checkbox"/>																
Relinquished by: _____ Date/Time: _____				Received by: _____ Date/Time: _____				Sample Integrity: Temperature Upon Receipt: <u>9.4</u> Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																
Relinquished by: _____ Date/Time: _____				Received in Lab by: _____ Date/Time: _____																				

# Sample Receipt Checklist

S2 Work Order 1904329

Client: PDC Client Project ID: Warner 6-14

Shipped Via: ☐ H.D./P.U./FedEx/UPS/USPS/Other P.U. Airbill #: \_\_\_\_\_

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

Temp (°C)	<u>9.4</u>
-----------	------------

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C <sup>(1)</sup> ? 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 <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact <sup>(1)</sup> ?	<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"/>	<u>RUSH</u>
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	<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) <sup>(1)</sup> ? 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 <sup>(1)</sup> ? 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):				
<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.				

CP  
Custodian Printed Name or Initials

[Signature]  
Signature of Custodian

4.24.19 1830  
Date/Time



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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/25/19 18:17

**SS01@7'**  
**1904329-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/24/19 11:29**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1904393	04/24/19	04/24/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/24/19 11:29**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		122 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.0 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/24/19 11:29**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	1904396	04/24/19	04/24/19	EPA 8015M	

Date Sampled: **04/24/19 11:29**

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

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/25/19 18:17

**SS02@10'**  
**1904329-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/24/19 11:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1904393	04/24/19	04/24/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/24/19 11:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		128 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/24/19 11:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1904396	04/24/19	04/24/19	EPA 8015M	

Date Sampled: **04/24/19 11:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		104 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
04/25/19 18:17

**SS03@10'**  
**1904329-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/24/19 12:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1904393	04/24/19	04/24/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/24/19 12:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		130 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.0 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/24/19 12:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1904396	04/24/19	04/24/19	EPA 8015M	

Date Sampled: **04/24/19 12:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		102 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/25/19 18:17

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

### Summit Scientific

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

#### Batch 1904393 - EPA 5030 Soil MS

##### Blank (1904393-BLK1)

Prepared: 04/24/19 Analyzed: 04/25/19

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Naphthalene	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0477		"	0.0400		119	23-173			
Surrogate: Toluene-d8	0.0392		"	0.0400		97.9	20-170			
Surrogate: 4-Bromofluorobenzene	0.0393		"	0.0400		98.3	21-167			

##### LCS (1904393-BS1)

Prepared: 04/24/19 Analyzed: 04/25/19

Benzene	0.0783	0.0020	mg/kg	0.100		78.3	70-130			
Toluene	0.0898	0.0050	"	0.100		89.8	70-130			
Ethylbenzene	0.103	0.0050	"	0.100		103	70-130			
m,p-Xylene	0.195	0.010	"	0.200		97.5	70-130			
o-Xylene	0.0961	0.0050	"	0.100		96.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0511		"	0.0400		128	23-173			
Surrogate: Toluene-d8	0.0402		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0412		"	0.0400		103	21-167			

##### Matrix Spike (1904393-MS1)

Source: 1904326-02

Prepared: 04/24/19 Analyzed: 04/25/19

Benzene	0.0800	0.0020	mg/kg	0.100	ND	80.0	70-130			
Toluene	0.0914	0.0050	"	0.100	ND	91.4	70-130			
Ethylbenzene	0.105	0.0050	"	0.100	ND	105	70-130			
m,p-Xylene	0.196	0.010	"	0.200	ND	98.1	70-130			
o-Xylene	0.0968	0.0050	"	0.100	ND	96.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0526		"	0.0400		131	23-173			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0406		"	0.0400		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: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
04/25/19 18:17

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

### Summit Scientific

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

#### Batch 1904393 - EPA 5030 Soil MS

Matrix Spike Dup (1904393-MSD1)		Source: 1904326-02			Prepared: 04/24/19		Analyzed: 04/25/19			
Benzene	0.0792	0.0020	mg/kg	0.100	ND	79.2	70-130	0.980	30	
Toluene	0.0910	0.0050	"	0.100	ND	91.0	70-130	0.395	30	
Ethylbenzene	0.103	0.0050	"	0.100	ND	103	70-130	1.47	30	
m,p-Xylene	0.195	0.010	"	0.200	ND	97.5	70-130	0.659	30	
o-Xylene	0.0961	0.0050	"	0.100	ND	96.1	70-130	0.653	30	
<hr/>										
Surrogate: 1,2-Dichloroethane-d4	0.0509		"	0.0400		127	23-173			
Surrogate: Toluene-d8	0.0391		"	0.0400		97.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/25/19 18:17

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

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

**Batch 1904396 - EPA 3550A**

**Blank (1904396-BLK1)**

Prepared: 04/24/19 Analyzed: 04/25/19

C10-C28 (DRO) ND 50 mg/kg

**LCS (1904396-BS1)**

Prepared: 04/24/19 Analyzed: 04/25/19

C10-C28 (DRO) 559 50 mg/kg 500 112 70-130

**Matrix Spike (1904396-MS1)**

**Source: 1904326-02**

Prepared: 04/24/19 Analyzed: 04/25/19

C10-C28 (DRO) 505 50 mg/kg 500 17.9 97.5 70-130

**Matrix Spike Dup (1904396-MSD1)**

**Source: 1904326-02**

Prepared: 04/24/19 Analyzed: 04/25/19

C10-C28 (DRO) 554 50 mg/kg 500 17.9 107 70-130 9.13 20

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: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**

04/25/19 18:17

### 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

April 26, 2019

Mark Longhurst

PDC Energy

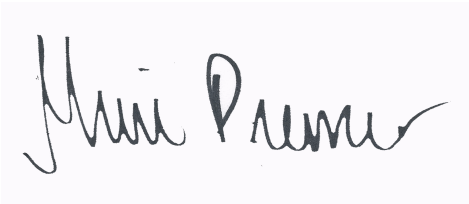
1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Warner 6-14

Enclosed are the results of analyses for samples received by Summit Scientific on 04/25/19 18:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink on a light blue background. The signature is cursive and reads "Muri Premier".

Muri Premier For Paul Shrewsbury

President



PDC Energy

1775 Sherman St. STE. 3000

Denver CO, 80203

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**

04/26/19 11:37

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS04@7'	1904345-01	Soil	04/25/19 11:35	04/25/19 18:10

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.*

# Summit Scientific

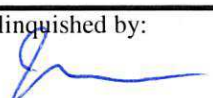
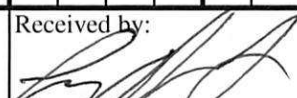
1904345

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: Jake McCarver

Project Manager: Mark Longhurst  
E-Mail: Mark.Longhurst@pdce.com  
Project Name: Warner 6-14  
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)	TPH - DRO															
SS04 @ 7'	4/25/2019	11:35	1			X			X				X	X														
Relinquished by:  4:04 PM 4/25/19				Date/Time: 4/25/19 1810				Received by: 				Date/Time: 4.25.19 1810				Turn Around Time (Check)												
Relinquished by: _____				Date/Time: _____				Received by: _____				Date/Time: _____				Same Day <input checked="" type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input type="checkbox"/> 48 Hours <input type="checkbox"/>												
Relinquished by: _____				Date/Time: _____				Received in Lab by: _____				Date/Time: _____				Sample Integrity: Temperature Upon Receipt: <u>4.2</u> Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>												

# Sample Receipt Checklist

S2 Work Order 190845

Client: PDC Client Project ID: Warner 6-14

Shipped Via: ☐ H.D./P.U./FedEx/UPS/USPS/Other P-U Airbill #: \_\_\_\_\_

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

Temp (°C)	<u>4.2</u>
-----------	------------

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C <sup>(1)</sup> ? 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 <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact <sup>(1)</sup> ?	<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"/>	<u>RUSH</u>
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	<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) <sup>(1)</sup> ? 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 <sup>(1)</sup> ? 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):				

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

CP  
Custodian Printed Name or Initials

[Signature]  
Signature of Custodian

4.25.19 1855  
Date/Time



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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/26/19 11:37

**SS04@7'**  
**1904345-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/25/19 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1904414	04/25/19	04/26/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.012</b>	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>0.053</b>	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>13</b>	0.50	"	"	"	"	"	"	

Date Sampled: **04/25/19 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		131 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		128 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/25/19 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1904413	04/25/19	04/25/19	EPA 8015M	

Date Sampled: **04/25/19 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		118 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/26/19 11:37

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

### Summit Scientific

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

#### Batch 1904414 - EPA 5030 Soil MS

##### Blank (1904414-BLK1)

Prepared: 04/25/19 Analyzed: 04/26/19

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Naphthalene	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0478		"	0.0400		120	23-173			
Surrogate: Toluene-d8	0.0387		"	0.0400		96.7	20-170			
Surrogate: 4-Bromofluorobenzene	0.0407		"	0.0400		102	21-167			

##### LCS (1904414-BS1)

Prepared: 04/25/19 Analyzed: 04/26/19

Benzene	0.0805	0.0020	mg/kg	0.100		80.5	70-130			
Toluene	0.0919	0.0050	"	0.100		91.9	70-130			
Ethylbenzene	0.105	0.0050	"	0.100		105	70-130			
m,p-Xylene	0.200	0.010	"	0.200		99.9	70-130			
o-Xylene	0.0974	0.0050	"	0.100		97.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0496		"	0.0400		124	23-173			
Surrogate: Toluene-d8	0.0393		"	0.0400		98.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0403		"	0.0400		101	21-167			

##### Matrix Spike (1904414-MS1)

Source: 1904343-02

Prepared: 04/25/19 Analyzed: 04/26/19

Benzene	0.0798	0.0020	mg/kg	0.100	ND	79.8	70-130			
Toluene	0.0920	0.0050	"	0.100	ND	92.0	70-130			
Ethylbenzene	0.106	0.0050	"	0.100	ND	106	70-130			
m,p-Xylene	0.200	0.010	"	0.200	ND	99.8	70-130			
o-Xylene	0.0965	0.0050	"	0.100	ND	96.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0481		"	0.0400		120	23-173			
Surrogate: Toluene-d8	0.0391		"	0.0400		97.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0400		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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/26/19 11:37

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

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

**Batch 1904414 - EPA 5030 Soil MS**

Matrix Spike Dup (1904414-MSD1)		Source: 1904343-02			Prepared: 04/25/19 Analyzed: 04/26/19					
Benzene	0.0784	0.0020	mg/kg	0.100	ND	78.4	70-130	1.75	30	
Toluene	0.0916	0.0050	"	0.100	ND	91.6	70-130	0.392	30	
Ethylbenzene	0.107	0.0050	"	0.100	ND	107	70-130	1.16	30	
m,p-Xylene	0.203	0.010	"	0.200	ND	101	70-130	1.60	30	
o-Xylene	0.0983	0.0050	"	0.100	ND	98.3	70-130	1.85	30	
Surrogate: 1,2-Dichloroethane-d4	0.0470		"	0.0400		118	23-173			
Surrogate: Toluene-d8	0.0384		"	0.0400		95.9	20-170			
Surrogate: 4-Bromofluorobenzene	0.0406		"	0.0400		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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/26/19 11:37

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

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

**Batch 1904413 - EPA 3550A**

**Blank (1904413-BLK1)**

Prepared & Analyzed: 04/25/19

C10-C28 (DRO) ND 50 mg/kg

**LCS (1904413-BS1)**

Prepared & Analyzed: 04/25/19

C10-C28 (DRO) 525 50 mg/kg 500 105 70-130

**Matrix Spike (1904413-MS1)**

**Source: 1904343-02**

Prepared & Analyzed: 04/25/19

C10-C28 (DRO) 567 50 mg/kg 500 39.9 105 70-130

**Matrix Spike Dup (1904413-MSD1)**

**Source: 1904343-02**

Prepared & Analyzed: 04/25/19

C10-C28 (DRO) 551 50 mg/kg 500 39.9 102 70-130 2.81 20

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: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**

04/26/19 11:37

### 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

April 29, 2019

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Warner 6-14

Enclosed are the results of analyses for samples received by Summit Scientific on 04/26/19 18:22. 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', with a stylized, cursive script.

Paul Shrewsbury

President



PDC Energy

1775 Sherman St. STE. 3000

Denver CO, 80203

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**

04/29/19 06:29

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS05@7'	1904364-01	Soil	04/26/19 13:27	04/26/19 18:22

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.*

1 904364

Page 1 of 1

Project Manager:	Mark Longhurst
E-Mail:	Mark.Longhurst@pdce.com
Project Name:	Warner 6-14
Project Number:	

[illegible]

# Sample Receipt Checklist

S2 Work Order 1904364

Client: PDC Client Project ID: Warner 6-14

Shipped Via: ☐ H.D. ☐ P.U. ☐ FedEx ☐ UPS ☐ USPS ☒ Other R-U Airbill #: \_\_\_\_\_

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

Temp (°C) 6.0

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C <sup>(1)</sup> ? 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 <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact <sup>(1)</sup> ?	<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"/>	<u>RUS r1</u>
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	<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) <sup>(1)</sup> ? 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 <sup>(1)</sup> ? 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):

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

Custodian Printed Name or Initials CP

Signature of Custodian [Signature]

4.26.19 1840  
Date/Time





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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/29/19 06:29

**SS05@7'**  
**1904364-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/26/19 13:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>0.0091</b>	0.0020	mg/kg	1	1904431	04/26/19	04/26/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.030</b>	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>0.013</b>	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>3.8</b>	0.50	"	"	"	"	"	"	

Date Sampled: **04/26/19 13:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		121 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		120 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/26/19 13:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>59</b>	50	mg/kg	1	1904421	04/26/19	04/27/19	EPA 8015M	

Date Sampled: **04/26/19 13:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		96.7 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/29/19 06:29

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

### Summit Scientific

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

#### Batch 1904431 - EPA 5030 Soil MS

##### Blank (1904431-BLK1)

Prepared & Analyzed: 04/26/19

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Naphthalene	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0477		"	0.0400		119	23-173			
Surrogate: Toluene-d8	0.0395		"	0.0400		98.7	20-170			
Surrogate: 4-Bromofluorobenzene	0.0389		"	0.0400		97.3	21-167			

##### LCS (1904431-BS1)

Prepared & Analyzed: 04/26/19

Benzene	0.0818	0.0020	mg/kg	0.100		81.8	70-130			
Toluene	0.0938	0.0050	"	0.100		93.8	70-130			
Ethylbenzene	0.106	0.0050	"	0.100		106	70-130			
m,p-Xylene	0.200	0.010	"	0.200		100	70-130			
o-Xylene	0.0988	0.0050	"	0.100		98.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0513		"	0.0400		128	23-173			
Surrogate: Toluene-d8	0.0401		"	0.0400		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0416		"	0.0400		104	21-167			

##### Matrix Spike (1904431-MS1)

Source: 1904362-01

Prepared & Analyzed: 04/26/19

Benzene	0.0803	0.0020	mg/kg	0.100	ND	80.3	70-130			
Toluene	0.0931	0.0050	"	0.100	ND	93.1	70-130			
Ethylbenzene	0.105	0.0050	"	0.100	ND	105	70-130			
m,p-Xylene	0.197	0.010	"	0.200	ND	98.3	70-130			
o-Xylene	0.0989	0.0050	"	0.100	ND	98.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0507		"	0.0400		127	23-173			
Surrogate: Toluene-d8	0.0397		"	0.0400		99.3	20-170			
Surrogate: 4-Bromofluorobenzene	0.0411		"	0.0400		103	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: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
04/29/19 06:29

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

### Summit Scientific

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

#### Batch 1904431 - EPA 5030 Soil MS

Matrix Spike Dup (1904431-MSD1)		Source: 1904362-01			Prepared & Analyzed: 04/26/19					
Benzene	0.0807	0.0020	mg/kg	0.100	ND	80.7	70-130	0.522	30	
Toluene	0.0940	0.0050	"	0.100	ND	94.0	70-130	0.962	30	
Ethylbenzene	0.104	0.0050	"	0.100	ND	104	70-130	0.745	30	
m,p-Xylene	0.197	0.010	"	0.200	ND	98.6	70-130	0.366	30	
o-Xylene	0.0977	0.0050	"	0.100	ND	97.7	70-130	1.16	30	
Surrogate: 1,2-Dichloroethane-d4	0.0511		"	0.0400		128	23-173			
Surrogate: Toluene-d8	0.0404		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0395		"	0.0400		98.8	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/29/19 06:29

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

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

**Batch 1904421 - EPA 3550A**

**Blank (1904421-BLK1)**

Prepared & Analyzed: 04/26/19

C10-C28 (DRO) ND 50 mg/kg

**LCS (1904421-BS1)**

Prepared & Analyzed: 04/26/19

C10-C28 (DRO) 483 50 mg/kg 500 96.6 70-130

**Matrix Spike (1904421-MS1)**

**Source: 1904358-01**

Prepared & Analyzed: 04/26/19

C10-C28 (DRO) 426 50 mg/kg 500 25.9 80.0 70-130

**Matrix Spike Dup (1904421-MSD1)**

**Source: 1904358-01**

Prepared & Analyzed: 04/26/19

C10-C28 (DRO) 426 50 mg/kg 500 25.9 80.1 70-130 0.167 20

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: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**

04/29/19 06:29

### 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

April 30, 2019

Mark Longhurst

PDC Energy

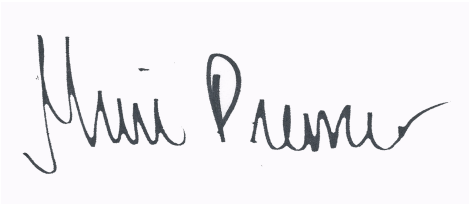
1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Warner 6-14

Enclosed are the results of analyses for samples received by Summit Scientific on 04/29/19 17:41. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink on a light blue background. The signature is written in a cursive style and reads "Muri Premier".

Muri Premier For Paul Shrewsbury

President



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

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
04/30/19 16:44

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS06@7'	1904384-01	Soil	04/29/19 11:43	04/29/19 17:41
SS07@9'	1904384-02	Soil	04/29/19 12:55	04/29/19 17:41
SS08@9'	1904384-03	Soil	04/29/19 13:08	04/29/19 17:41

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



1904384

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: Jake McCarver

Project Manager: Mark Longhurst  
E-Mail: Mark.Longhurst@pdce.com  
Project Name: Warner 6-14  
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)	TPH - DRO											
SS06 @ 7'	4/29/2019	11:43	1			X			X					X	X									
SS07 @ 9'	4/29/2019	12:55	1			X			X					X	X									
SS08 @ 9'	4/29/2019	1:08	1			X			X					X	X									
Relinquished by:  Date/Time: <u>4/29/19 3:46</u>				Received by:  Date/Time: <u>4-29-16 15:46</u>				Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input type="checkbox"/> 48 Hours <input type="checkbox"/>																
Relinquished by: _____ Date/Time: _____				Received by: _____ Date/Time: _____				Sample Integrity: Temperature Upon Receipt: <u>1.7</u> Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																
Relinquished by: _____ Date/Time: _____				Received in Lab by: _____ Date/Time: _____																				



# Sample Receipt Checklist

S2 Work Order 1904384

Client: PDC Client Project ID: WARNER 6-14

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

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

Temp (°C)	<u>1.7</u>
-----------	------------

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C <sup>(1)</sup> ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<u>X</u>			
Were all samples received intact <sup>(1)</sup> ?	<u>X</u>			
Was adequate sample volume provided <sup>(1)</sup> ?	<u>X</u>			
If custody seals are present, are they intact <sup>(1)</sup> ?			<u>X</u>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<u>X</u>			<u>SAME DAY TAT</u>
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	<u>X</u>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<u>X</u>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<u>X</u>			
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	<u>X</u>			
For volatiles in water – is there headspace present? <b>If yes, contact client and note in narrative.</b>			<u>X</u>	
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			<u>X</u>	
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ? Record the pH in Comments.			<u>X</u>	
If dissolved metals are requested, were samples field filtered?			<u>X</u>	

Additional Comments (if any):

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

Muri  
Custodian Printed Name or Initials

[Signature] 4-29-19  
Signature of Custodian

17:45  
Date/Time



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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/30/19 16:44

**SS06@7'**  
**1904384-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/29/19 11:43**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1904447	04/29/19	04/29/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>430</b>	50	"	100	"	"	"	"	

Date Sampled: **04/29/19 11:43**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		125 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		110 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/29/19 11:43**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>C10-C28 (DRO)</b>	<b>460</b>	50	mg/kg	1	1904448	04/29/19	04/29/19	EPA 8015M	

Date Sampled: **04/29/19 11:43**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		95.7 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/30/19 16:44

**SS07@9'**  
**1904384-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/29/19 12:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1904447	04/29/19	04/30/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>7.4</b>	0.50	"	"	"	"	"	"	

Date Sampled: **04/29/19 12:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		125 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		113 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/29/19 12:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>C10-C28 (DRO)</b>	<b>54</b>	50	mg/kg	1	1904448	04/29/19	04/29/19	EPA 8015M	

Date Sampled: **04/29/19 12:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		86.6 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/30/19 16:44

**SS08@9'**  
**1904384-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/29/19 13:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1904447	04/29/19	04/30/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>4.5</b>	0.50	"	"	"	"	"	"	

Date Sampled: **04/29/19 13:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		123 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/29/19 13:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1904448	04/29/19	04/29/19	EPA 8015M	

Date Sampled: **04/29/19 13:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		92.9 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/30/19 16:44

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

### Summit Scientific

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

#### Batch 1904447 - EPA 5030 Soil MS

##### Blank (1904447-BLK1)

Prepared: 04/29/19 Analyzed: 04/30/19

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Naphthalene	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0466		"	0.0400		117	23-173			
Surrogate: Toluene-d8	0.0395		"	0.0400		98.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0408		"	0.0400		102	21-167			

##### LCS (1904447-BS1)

Prepared: 04/29/19 Analyzed: 04/30/19

Benzene	0.0800	0.0020	mg/kg	0.100		80.0	70-130			
Toluene	0.0921	0.0050	"	0.100		92.1	70-130			
Ethylbenzene	0.107	0.0050	"	0.100		107	70-130			
m,p-Xylene	0.205	0.010	"	0.200		103	70-130			
o-Xylene	0.0991	0.0050	"	0.100		99.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0482		"	0.0400		120	23-173			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	21-167			

##### Matrix Spike (1904447-MS1)

Source: 1904386-04

Prepared: 04/29/19 Analyzed: 04/30/19

Benzene	0.0819	0.0020	mg/kg	0.100	ND	81.9	70-130			
Toluene	0.0934	0.0050	"	0.100	ND	93.4	70-130			
Ethylbenzene	0.107	0.0050	"	0.100	ND	107	70-130			
m,p-Xylene	0.208	0.010	"	0.200	ND	104	70-130			
o-Xylene	0.0991	0.0050	"	0.100	ND	99.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0488		"	0.0400		122	23-173			
Surrogate: Toluene-d8	0.0397		"	0.0400		99.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0409		"	0.0400		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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/30/19 16:44

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

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

**Batch 1904447 - EPA 5030 Soil MS**

Matrix Spike Dup (1904447-MSD1)		Source: 1904386-04			Prepared: 04/29/19 Analyzed: 04/30/19					
Benzene	0.0814	0.0020	mg/kg	0.100	ND	81.4	70-130	0.662	30	
Toluene	0.0929	0.0050	"	0.100	ND	92.9	70-130	0.483	30	
Ethylbenzene	0.107	0.0050	"	0.100	ND	107	70-130	0.00	30	
m,p-Xylene	0.204	0.010	"	0.200	ND	102	70-130	1.91	30	
o-Xylene	0.0998	0.0050	"	0.100	ND	99.8	70-130	0.634	30	
Surrogate: 1,2-Dichloroethane-d4		0.0489	"	0.0400		122	23-173			
Surrogate: Toluene-d8		0.0402	"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene		0.0409	"	0.0400		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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/30/19 16:44

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

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

**Batch 1904448 - EPA 3550A**

**Blank (1904448-BLK1)**

Prepared: 04/29/19 Analyzed: 04/30/19

C10-C28 (DRO) ND 50 mg/kg

**LCS (1904448-BS1)**

Prepared: 04/29/19 Analyzed: 04/30/19

C10-C28 (DRO) 515 50 mg/kg 500 103 70-130

**Matrix Spike (1904448-MS1)**

**Source: 1904386-01**

Prepared: 04/29/19 Analyzed: 04/30/19

C10-C28 (DRO) 6780 50 mg/kg 500 8050 NR 70-130 QM-4X

**Matrix Spike Dup (1904448-MSD1)**

**Source: 1904386-01**

Prepared: 04/29/19 Analyzed: 04/30/19

C10-C28 (DRO) 6790 50 mg/kg 500 8050 NR 70-130 0.122 20 QM-4X

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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/30/19 16:44

### Notes and Definitions

QM-4X	The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
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

May 01, 2019

Mark Longhurst

PDC Energy

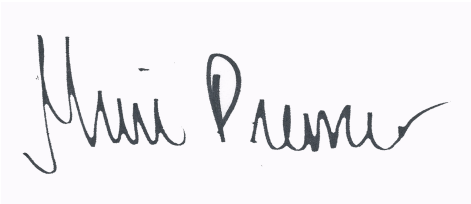
1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Warner 6-14

Enclosed are the results of analyses for samples received by Summit Scientific on 04/30/19 18:07. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink on a light blue background. The signature is written in a cursive style and reads "Muri Premier".

Muri Premier For Paul Shrewsbury

President



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

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
05/01/19 18:23

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS09@9'	1904407-01	Soil	04/30/19 11:38	04/30/19 18:07
SS10@7'	1904407-02	Soil	04/30/19 11:45	04/30/19 18:07
SS11@9'	1904407-03	Soil	04/30/19 11:52	04/30/19 18:07
SS12@12'	1904407-04	Soil	04/30/19 14:49	04/30/19 18:07

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

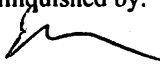
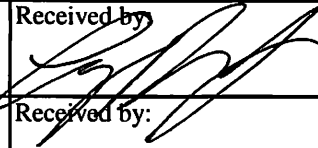
1904407

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: Jake McCarver

Project Manager: Mark Longhurst  
E-Mail: Mark.Longhurst@pdce.com  
Project Name: Warner 6-14  
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)	TPH - DRO												
SS09 @ 9'	4/30/2019	11:38	1			X			X					X	X										
SS10 @ 7'	4/30/2019	11:45	1			X			X					X	X										
SS11 @ 9'	4/30/2019	11:52	1			X			X					X	X										
SS12 @ 12'	4/30/2019	2:49	1			X			X					X	X										
Relinquished by:  Date/Time: <u>4/30/19</u> <u>4:16</u> <u>1830</u>				Received by:  Date/Time: <u>4-30-19</u> <u>1830</u>				Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input type="checkbox"/> 48 Hours <input type="checkbox"/>																	
Relinquished by: _____ Date/Time: _____				Received by: _____ Date/Time: _____				Sample Integrity: Temperature Upon Receipt: <u>4.4</u> Intact: Yes <input type="checkbox"/> No <input type="checkbox"/>																	
Relinquished by: _____ Date/Time: _____				Received in Lab by: _____ Date/Time: _____																					

# Sample Receipt Checklist

S2 Work Order 1904407

Client: PDC Client Project ID: Warner 6-14

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

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

Temp (°C)	<u>4.4</u>
-----------	------------

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C <sup>(1)</sup> ? NOTE: If samples are delivered the same day of sampling, this requirement is met 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 samples with holding times due within 48 hours sample due within 48 hours present?	/			RUSH
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? If yes, contact client and note in narrative.			/	
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.				

UP  
Custodian Printed Name or Initials

[Signature]  
Signature of Custodian

4.30.19 1840  
Date/Time



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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/01/19 18:23

**SS09@9'**  
**1904407-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/30/19 11:38**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1904469	04/30/19	04/30/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>5.0</b>	0.50	"	"	"	"	"	"	

Date Sampled: **04/30/19 11:38**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		120 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/30/19 11:38**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	1904470	04/30/19	04/30/19	EPA 8015M	

Date Sampled: **04/30/19 11:38**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		118 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/01/19 18:23

**SS10@7'**  
**1904407-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/30/19 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1904469	04/30/19	04/30/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>0.54</b>	0.50	"	"	"	"	"	"	

Date Sampled: **04/30/19 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		122 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/30/19 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1904470	04/30/19	04/30/19	EPA 8015M	

Date Sampled: **04/30/19 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		112 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/01/19 18:23

**SS11@9'**  
**1904407-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/30/19 11:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1904469	04/30/19	04/30/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/30/19 11:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		119 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/30/19 11:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1904470	04/30/19	04/30/19	EPA 8015M	

Date Sampled: **04/30/19 11:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		113 %	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: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
05/01/19 18:23

**SS12@12'**  
**1904407-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/30/19 14:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1904469	04/30/19	05/01/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	<b>0.020</b>	0.0050	"	"	"	"	"	"	
Xylenes (total)	<b>0.036</b>	0.010	"	"	"	"	"	"	
Naphthalene	<b>0.011</b>	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	<b>1.3</b>	0.50	"	"	"	"	"	"	

Date Sampled: **04/30/19 14:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		124 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/30/19 14:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1904470	04/30/19	05/01/19	EPA 8015M	

Date Sampled: **04/30/19 14:49**

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

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/01/19 18:23

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

### Summit Scientific

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

#### Batch 1904469 - EPA 5030 Soil MS

##### Blank (1904469-BLK1)

Prepared: 04/30/19 Analyzed: 05/01/19

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Naphthalene	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0502		"	0.0400		126	23-173			
Surrogate: Toluene-d8	0.0412		"	0.0400		103	20-170			
Surrogate: 4-Bromofluorobenzene	0.0450		"	0.0400		113	21-167			

##### LCS (1904469-BS1)

Prepared: 04/30/19 Analyzed: 05/01/19

Benzene	0.0747	0.0020	mg/kg	0.100		74.7	70-130			
Toluene	0.0920	0.0050	"	0.100		92.0	70-130			
Ethylbenzene	0.0968	0.0050	"	0.100		96.8	70-130			
m,p-Xylene	0.192	0.010	"	0.200		96.2	70-130			
o-Xylene	0.0946	0.0050	"	0.100		94.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0462		"	0.0400		115	23-173			
Surrogate: Toluene-d8	0.0414		"	0.0400		104	20-170			
Surrogate: 4-Bromofluorobenzene	0.0439		"	0.0400		110	21-167			

##### Matrix Spike (1904469-MS1)

Source: 1904400-01

Prepared: 04/30/19 Analyzed: 05/01/19

Benzene	0.0798	0.0020	mg/kg	0.100	ND	79.8	70-130			
Toluene	0.0959	0.0050	"	0.100	ND	95.9	70-130			
Ethylbenzene	0.0944	0.0050	"	0.100	ND	94.4	70-130			
m,p-Xylene	0.186	0.010	"	0.200	ND	93.2	70-130			
o-Xylene	0.0910	0.0050	"	0.100	ND	91.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0506		"	0.0400		126	23-173			
Surrogate: Toluene-d8	0.0416		"	0.0400		104	20-170			
Surrogate: 4-Bromofluorobenzene	0.0431		"	0.0400		108	21-167			

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/01/19 18:23

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

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

**Batch 1904469 - EPA 5030 Soil MS**

Matrix Spike Dup (1904469-MSD1)		Source: 1904400-01			Prepared: 04/30/19 Analyzed: 05/01/19					
Benzene	0.0729	0.0020	mg/kg	0.100	ND	72.9	70-130	9.12	30	
Toluene	0.0874	0.0050	"	0.100	ND	87.4	70-130	9.30	30	
Ethylbenzene	0.0870	0.0050	"	0.100	ND	87.0	70-130	8.24	30	
m,p-Xylene	0.169	0.010	"	0.200	ND	84.6	70-130	9.67	30	
o-Xylene	0.0844	0.0050	"	0.100	ND	84.4	70-130	7.53	30	
Surrogate: 1,2-Dichloroethane-d4	0.0471		"	0.0400		118	23-173			
Surrogate: Toluene-d8	0.0411		"	0.0400		103	20-170			
Surrogate: 4-Bromofluorobenzene	0.0434		"	0.0400		109	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/01/19 18:23

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

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

**Batch 1904470 - EPA 3550A**

**Blank (1904470-BLK1)**

Prepared: 04/30/19 Analyzed: 05/01/19

C10-C28 (DRO) ND 50 mg/kg

**LCS (1904470-BS1)**

Prepared: 04/30/19 Analyzed: 05/01/19

C10-C28 (DRO) 519 50 mg/kg 500 104 70-130

**Matrix Spike (1904470-MS1)**

**Source: 1904397-03**

Prepared: 04/30/19 Analyzed: 05/01/19

C10-C28 (DRO) 636 50 mg/kg 500 57.8 116 70-130

**Matrix Spike Dup (1904470-MSD1)**

**Source: 1904397-03**

Prepared: 04/30/19 Analyzed: 05/01/19

C10-C28 (DRO) 666 50 mg/kg 500 57.8 122 70-130 4.66 20

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: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**

05/01/19 18:23

### 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

May 05, 2019

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Warner 6-14

Enclosed are the results of analyses for samples received by Summit Scientific on 05/02/19 18:16. 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', with a stylized, cursive script.

Paul Shrewsbury

President



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

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
05/05/19 11:52

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS13@7'	1905022-01	Soil	05/02/19 10:51	05/02/19 18:16
SS14@9'	1905022-02	Soil	05/02/19 10:56	05/02/19 18:16

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

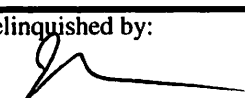
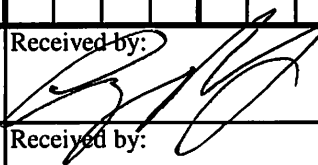
1905022

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: Jake McCarver

Project Manager: Mark Longhurst  
E-Mail: Mark.Longhurst@pdce.com  
Project Name: Warner 6-14  
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)	TPH - DRO													
SS13 @ 7'	5/2/2019	10:51	1			X			X				X	X												
SS14 @ 9'	5/2/2019	10:56	1			X			X				X	X												
Relinquished by:  5/2/19 Date/Time: 3:48 PM 1830				Received by:  Date/Time: 5.2.19 1830				Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input type="checkbox"/> 48 Hours <input type="checkbox"/>																		
Relinquished by: _____ Date/Time: _____				Received by: _____ Date/Time: _____				Sample Integrity: Temperature Upon Receipt: <u>7.9</u> Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																		
Relinquished by: _____ Date/Time: _____				Received in Lab by: _____ Date/Time: _____																						

# Sample Receipt Checklist

S2 Work Order 1905022

Client: PDC Client Project ID: Warner 6-14

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

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

Temp (°C)	<u>7.9</u>
-----------	------------

Thermometer ID: 61857155-K

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

Additional Comments (if any):

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

CP  
Custodian Printed Name or Initials

[Signature]  
Signature of Custodian

5.2.19 1840  
Date/Time





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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/05/19 11:52

**SS13@7'**  
**1905022-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/02/19 10:51**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1905039	05/02/19	05/02/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/02/19 10:51**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		122 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/02/19 10:51**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	1905030	05/02/19	05/02/19	EPA 8015M	

Date Sampled: **05/02/19 10:51**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		94.7 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/05/19 11:52

**SS14@9'**  
**1905022-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/02/19 10:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1905039	05/02/19	05/02/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/02/19 10:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		126 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.9 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/02/19 10:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1905030	05/02/19	05/02/19	EPA 8015M	

Date Sampled: **05/02/19 10:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		88.8 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/05/19 11:52

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

### Summit Scientific

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

#### Batch 1905039 - EPA 5030 Soil MS

##### Blank (1905039-BLK1)

Prepared: 05/02/19 Analyzed: 05/03/19

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Naphthalene	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0460		"	0.0400		115	23-173			
Surrogate: Toluene-d8	0.0391		"	0.0400		97.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	21-167			

##### LCS (1905039-BS1)

Prepared: 05/02/19 Analyzed: 05/03/19

Benzene	0.0797	0.0020	mg/kg	0.100		79.7	70-130			
Toluene	0.0909	0.0050	"	0.100		90.9	70-130			
Ethylbenzene	0.105	0.0050	"	0.100		105	70-130			
m,p-Xylene	0.201	0.010	"	0.200		100	70-130			
o-Xylene	0.0985	0.0050	"	0.100		98.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0470		"	0.0400		118	23-173			
Surrogate: Toluene-d8	0.0404		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0411		"	0.0400		103	21-167			

##### Matrix Spike (1905039-MS1)

Source: 1905021-01

Prepared: 05/02/19 Analyzed: 05/03/19

Benzene	0.0790	0.0020	mg/kg	0.100	ND	79.0	70-130			
Toluene	0.0917	0.0050	"	0.100	ND	91.7	70-130			
Ethylbenzene	0.107	0.0050	"	0.100	ND	107	70-130			
m,p-Xylene	0.201	0.010	"	0.200	ND	101	70-130			
o-Xylene	0.0989	0.0050	"	0.100	ND	98.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0474		"	0.0400		118	23-173			
Surrogate: Toluene-d8	0.0389		"	0.0400		97.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0398		"	0.0400		99.4	21-167			

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
05/05/19 11:52

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

### Summit Scientific

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

#### Batch 1905039 - EPA 5030 Soil MS

Matrix Spike Dup (1905039-MSD1)		Source: 1905021-01			Prepared: 05/02/19 Analyzed: 05/03/19					
Benzene	0.0808	0.0020	mg/kg	0.100	ND	80.8	70-130	2.18	30	
Toluene	0.0921	0.0050	"	0.100	ND	92.1	70-130	0.457	30	
Ethylbenzene	0.107	0.0050	"	0.100	ND	107	70-130	0.813	30	
m,p-Xylene	0.203	0.010	"	0.200	ND	102	70-130	0.978	30	
o-Xylene	0.100	0.0050	"	0.100	ND	100	70-130	1.53	30	
Surrogate: 1,2-Dichloroethane-d4	0.0478		"	0.0400		119	23-173			
Surrogate: Toluene-d8	0.0395		"	0.0400		98.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0410		"	0.0400		102	21-167			

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/05/19 11:52

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

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

**Batch 1905030 - EPA 3550A**

**Blank (1905030-BLK1)**

Prepared & Analyzed: 05/02/19

C10-C28 (DRO) ND 50 mg/kg

**LCS (1905030-BS1)**

Prepared & Analyzed: 05/02/19

C10-C28 (DRO) 473 50 mg/kg 500 94.7 70-130

**Matrix Spike (1905030-MS1)**

**Source: 1905019-01**

Prepared: 05/02/19 Analyzed: 05/03/19

C10-C28 (DRO) 460 50 mg/kg 500 21.8 87.6 70-130

**Matrix Spike Dup (1905030-MSD1)**

**Source: 1905019-01**

Prepared: 05/02/19 Analyzed: 05/03/19

C10-C28 (DRO) 457 50 mg/kg 500 21.8 87.1 70-130 0.551 20

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/05/19 11:52

### 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

May 05, 2019

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Warner 6-14

Enclosed are the results of analyses for samples received by Summit Scientific on 05/03/19 18:16. 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', with a stylized, cursive script.

Paul Shrewsbury

President



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

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
05/05/19 11:00

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS15@12'	1905046-01	Soil	05/03/19 09:03	05/03/19 18:16
SS16@7'	1905046-02	Soil	05/03/19 12:09	05/03/19 18:16
SS17@9'	1905046-03	Soil	05/03/19 12:16	05/03/19 18:16
SS18@7'	1905046-04	Soil	05/03/19 13:51	05/03/19 18:16
SS19@9'	1905046-05	Soil	05/03/19 13:59	05/03/19 18:16

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

1905046

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: Jake McCarver

Project Manager: Mark Longhurst  
E-Mail: Mark.Longhurst@pdce.com  
Project Name: Warner 6-14  
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)	TPH - DRO														
SS15 @ 12'	5/3/2019	9:03	1			X			X					X	X												
SS16 @ 7'	5/3/2019	12:09	1			X			X					X	X												
SS17 @ 9'	5/3/2019	12:16	1			X			X					X	X												
SS18 @ 7'	5/3/2019	1:51	1			X			X					X	X												
SS19 @ 9'	5/3/2019	1:59	1			X			X					X	X												
Relinquished by: <u>[Signature]</u> Date/Time: <u>5/3/19 3:57 PM 1750</u>				Received by: <u>[Signature]</u> Date/Time: <u>5.3.19 1750</u>				Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input type="checkbox"/> 48 Hours <input type="checkbox"/>																			
Relinquished by: _____ Date/Time: _____				Received by: _____ Date/Time: _____				Sample Integrity: Temperature Upon Receipt: <u>4.3</u> Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																			
Relinquished by: _____ Date/Time: _____				Received in Lab by: _____ Date/Time: _____																							

# Sample Receipt Checklist

S2 Work Order 1905046

Client: PDC Client Project ID: Warner 6-14

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other P.U. 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 <sup>(1)</sup> ?				
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"/>			
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 samples with holding times due within 48 hours sample due within 48 hours present?	<input checked="" type="checkbox"/>			<u>RUSH</u>
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> ?				
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.				
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.

Custodian Printed Name or Initials

Signature of Custodian

5-3-19 1820  
Date/Time



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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/05/19 11:00

**SS15@12'**  
**1905046-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/03/19 09:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1905057	05/03/19	05/04/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>3.0</b>	<b>0.50</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	

Date Sampled: **05/03/19 09:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		122 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/03/19 09:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1905059	05/03/19	05/04/19	EPA 8015M	

Date Sampled: **05/03/19 09:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		91.7 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/05/19 11:00

**SS16@7'**  
**1905046-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/03/19 12:09**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1905057	05/03/19	05/04/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/03/19 12:09**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		122 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/03/19 12:09**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1905059	05/03/19	05/04/19	EPA 8015M	

Date Sampled: **05/03/19 12:09**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		99.7 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/05/19 11:00

**SS17@9'**  
**1905046-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/03/19 12:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>0.013</b>	0.0020	mg/kg	1	1905057	05/03/19	05/04/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.11</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>1.3</b>	0.010	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>0.093</b>	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>55</b>	0.50	"	"	"	"	"	"	

Date Sampled: **05/03/19 12:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		131 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		149 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/03/19 12:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>75</b>	50	mg/kg	1	1905059	05/03/19	05/04/19	EPA 8015M	

Date Sampled: **05/03/19 12:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		93.0 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
05/05/19 11:00

**SS18@7'**  
**1905046-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/03/19 13:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1905057	05/03/19	05/04/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>2.3</b>	0.50	"	"	"	"	"	"	

Date Sampled: **05/03/19 13:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		120 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/03/19 13:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1905059	05/03/19	05/04/19	EPA 8015M	

Date Sampled: **05/03/19 13:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		94.4 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/05/19 11:00

**SS19@9'**  
**1905046-05 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/03/19 13:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1905057	05/03/19	05/04/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/03/19 13:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		128 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/03/19 13:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1905059	05/03/19	05/04/19	EPA 8015M	

Date Sampled: **05/03/19 13:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		105 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/05/19 11:00

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

### Summit Scientific

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

#### Batch 1905057 - EPA 5030 Soil MS

##### Blank (1905057-BLK1)

Prepared: 05/03/19 Analyzed: 05/04/19

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Naphthalene	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0457		"	0.0400		114	23-173			
Surrogate: Toluene-d8	0.0389		"	0.0400		97.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0397		"	0.0400		99.3	21-167			

##### LCS (1905057-BS1)

Prepared: 05/03/19 Analyzed: 05/04/19

Benzene	0.0796	0.0020	mg/kg	0.100		79.6	70-130			
Toluene	0.0918	0.0050	"	0.100		91.8	70-130			
Ethylbenzene	0.104	0.0050	"	0.100		104	70-130			
m,p-Xylene	0.196	0.010	"	0.200		98.0	70-130			
o-Xylene	0.0975	0.0050	"	0.100		97.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0485		"	0.0400		121	23-173			
Surrogate: Toluene-d8	0.0394		"	0.0400		98.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0417		"	0.0400		104	21-167			

##### Matrix Spike (1905057-MS1)

Source: 1905047-01

Prepared: 05/03/19 Analyzed: 05/04/19

Benzene	0.0809	0.0020	mg/kg	0.100	ND	80.9	70-130			
Toluene	0.0927	0.0050	"	0.100	ND	92.7	70-130			
Ethylbenzene	0.106	0.0050	"	0.100	ND	106	70-130			
m,p-Xylene	0.202	0.010	"	0.200	ND	101	70-130			
o-Xylene	0.0987	0.0050	"	0.100	ND	98.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0485		"	0.0400		121	23-173			
Surrogate: Toluene-d8	0.0400		"	0.0400		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0415		"	0.0400		104	21-167			

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/05/19 11:00

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

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

**Batch 1905057 - EPA 5030 Soil MS**

Matrix Spike Dup (1905057-MSD1)		Source: 1905047-01			Prepared: 05/03/19 Analyzed: 05/04/19					
Benzene	0.0820	0.0020	mg/kg	0.100	ND	82.0	70-130	1.29	30	
Toluene	0.0944	0.0050	"	0.100	ND	94.4	70-130	1.76	30	
Ethylbenzene	0.104	0.0050	"	0.100	ND	104	70-130	1.60	30	
m,p-Xylene	0.195	0.010	"	0.200	ND	97.4	70-130	3.85	30	
o-Xylene	0.0968	0.0050	"	0.100	ND	96.8	70-130	1.93	30	
Surrogate: 1,2-Dichloroethane-d4	0.0508		"	0.0400		127	23-173			
Surrogate: Toluene-d8	0.0400		"	0.0400		99.9	20-170			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/05/19 11:00

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

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

**Batch 1905059 - EPA 3550A**

**Blank (1905059-BLK1)**

Prepared & Analyzed: 05/03/19

C10-C28 (DRO) ND 50 mg/kg

**LCS (1905059-BS1)**

Prepared & Analyzed: 05/03/19

C10-C28 (DRO) 494 50 mg/kg 500 98.8 70-130

**Matrix Spike (1905059-MS1)**

Source: 1905047-01

Prepared & Analyzed: 05/03/19

C10-C28 (DRO) 473 50 mg/kg 500 25.4 89.6 70-130

**Matrix Spike Dup (1905059-MSD1)**

Source: 1905047-01

Prepared: 05/03/19 Analyzed: 05/04/19

C10-C28 (DRO) 507 50 mg/kg 500 25.4 96.4 70-130 6.96 20

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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/05/19 11:00

### 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

May 07, 2019

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Warner 6-14

Enclosed are the results of analyses for samples received by Summit Scientific on 05/06/19 17:57. 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', with a stylized, cursive script.

Paul Shrewsbury

President



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

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
05/07/19 06:02

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS20@7'	1905063-01	Soil	05/06/19 09:07	05/06/19 17:57
SS21@9'	1905063-02	Soil	05/06/19 09:12	05/06/19 17:57
SS22@12'	1905063-03	Soil	05/06/19 09:17	05/06/19 17:57

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

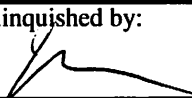

1908063

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: Jake McCarver

Project Manager: Mark Longhurst  
E-Mail: Mark.Longhurst@pdce.com  
Project Name: Warner 6-14  
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)	TPH - DRO												
SS20 @ 7'	5/6/2019	9:07	1			X			X				X	X											
SS21 @ 9'	5/6/2019	9:12	1			X			X				X	X											
SS22 @ 12'	5/6/2019	9:17	1			X			X				X	X											
Relinquished by:  Date/Time: <u>5/6/19</u> <u>4:12</u> <u>1730</u>				Received by:  Date/Time: <u>5-6-19</u> <u>1730</u>				Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input type="checkbox"/> 48 Hours <input type="checkbox"/>																	
Relinquished by: _____ Date/Time: _____				Received by: _____ Date/Time: _____				Sample Integrity: Temperature Upon Receipt: <u>12.0</u> Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																	
Relinquished by: _____ Date/Time: _____				Received in Lab by: _____ Date/Time: _____																					

# Sample Receipt Checklist

S2 Work Order 1905063

Client: PDC Client Project ID: Warner 6-14

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

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

Temp (°C)	12.6
-----------	------

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.				
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact <sup>(1)</sup> ?	<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"/>	RUSH
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	<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) <sup>(1)</sup> ?	<input type="checkbox"/>	<input type="checkbox"/>	<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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<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.				

UP  
Custodian Printed Name or Initials

[Signature]  
Signature of Custodian

5.6.19 1810  
Date/Time



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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/07/19 06:02

**SS20@7'**  
**1905063-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/06/19 09:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1905084	05/06/19	05/07/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>5.3</b>	<b>0.50</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	

Date Sampled: **05/06/19 09:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		124 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/06/19 09:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1905086	05/06/19	05/07/19	EPA 8015M	

Date Sampled: **05/06/19 09:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		99.8 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/07/19 06:02

**SS21@9'**  
**1905063-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/06/19 09:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1905084	05/06/19	05/07/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/06/19 09:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		126 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.7 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/06/19 09:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1905086	05/06/19	05/07/19	EPA 8015M	

Date Sampled: **05/06/19 09:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		108 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/07/19 06:02

**SS22@12'**  
**1905063-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/06/19 09:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Benzene</b>	<b>0.0061</b>	0.0020		mg/kg	1	1905084	05/06/19	05/07/19	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.059</b>	0.0050		"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>1.2</b>	0.010		"	"	"	"	"	"	
<b>Naphthalene</b>	<b>0.028</b>	0.010		"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>34</b>	0.50		"	"	"	"	"	"	

Date Sampled: **05/06/19 09:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		126 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		96.7 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		133 %		21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/06/19 09:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	1905086	05/06/19	05/07/19	EPA 8015M	

Date Sampled: **05/06/19 09:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl		100 %		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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/07/19 06:02

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

### Summit Scientific

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

#### Batch 1905084 - EPA 5030 Soil MS

##### Blank (1905084-BLK1)

Prepared: 05/06/19 Analyzed: 05/07/19

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Naphthalene	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0473		"	0.0400		118	23-173			
Surrogate: Toluene-d8	0.0396		"	0.0400		99.0	20-170			
Surrogate: 4-Bromofluorobenzene	0.0406		"	0.0400		101	21-167			

##### LCS (1905084-BS1)

Prepared: 05/06/19 Analyzed: 05/07/19

Benzene	0.0806	0.0020	mg/kg	0.100		80.6	70-130			
Toluene	0.0922	0.0050	"	0.100		92.2	70-130			
Ethylbenzene	0.108	0.0050	"	0.100		108	70-130			
m,p-Xylene	0.203	0.010	"	0.200		101	70-130			
o-Xylene	0.0984	0.0050	"	0.100		98.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0458		"	0.0400		114	23-173			
Surrogate: Toluene-d8	0.0394		"	0.0400		98.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0402		"	0.0400		101	21-167			

##### Matrix Spike (1905084-MS1)

Source: 1905060-01

Prepared: 05/06/19 Analyzed: 05/07/19

Benzene	0.0808	0.0020	mg/kg	0.100	ND	80.8	70-130			
Toluene	0.0920	0.0050	"	0.100	ND	92.0	70-130			
Ethylbenzene	0.107	0.0050	"	0.100	ND	107	70-130			
m,p-Xylene	0.202	0.010	"	0.200	ND	101	70-130			
o-Xylene	0.0987	0.0050	"	0.100	ND	98.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0489		"	0.0400		122	23-173			
Surrogate: Toluene-d8	0.0390		"	0.0400		97.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0406		"	0.0400		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: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
05/07/19 06:02

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

### Summit Scientific

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

#### Batch 1905084 - EPA 5030 Soil MS

Matrix Spike Dup (1905084-MSD1)		Source: 1905060-01			Prepared: 05/06/19 Analyzed: 05/07/19					
Benzene	0.0801	0.0020	mg/kg	0.100	ND	80.1	70-130	0.895	30	
Toluene	0.0931	0.0050	"	0.100	ND	93.1	70-130	1.20	30	
Ethylbenzene	0.105	0.0050	"	0.100	ND	105	70-130	2.18	30	
m,p-Xylene	0.197	0.010	"	0.200	ND	98.5	70-130	2.56	30	
o-Xylene	0.0990	0.0050	"	0.100	ND	99.0	70-130	0.364	30	
Surrogate: 1,2-Dichloroethane-d4	0.0490		"	0.0400		122	23-173			
Surrogate: Toluene-d8	0.0393		"	0.0400		98.3	20-170			
Surrogate: 4-Bromofluorobenzene	0.0393		"	0.0400		98.2	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/07/19 06:02

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

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

**Batch 1905086 - EPA 3550A**

**Blank (1905086-BLK1)**

Prepared: 05/06/19 Analyzed: 05/07/19

C10-C28 (DRO) ND 50 mg/kg

**LCS (1905086-BS1)**

Prepared: 05/06/19 Analyzed: 05/07/19

C10-C28 (DRO) 475 50 mg/kg 500 95.1 70-130

**Matrix Spike (1905086-MS1)**

**Source: 1905060-01**

Prepared: 05/06/19 Analyzed: 05/07/19

C10-C28 (DRO) 477 50 mg/kg 500 ND 95.3 70-130

**Matrix Spike Dup (1905086-MSD1)**

**Source: 1905060-01**

Prepared: 05/06/19 Analyzed: 05/07/19

C10-C28 (DRO) 484 50 mg/kg 500 ND 96.8 70-130 1.50 20

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: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**

05/07/19 06:02

### 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

May 14, 2019

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Warner 6-14

Work Order # 1905136

Enclosed are the results of analyses for samples received by Summit Scientific on 05/13/19 16:40. 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', with a stylized, cursive script.

Paul Shrewsbury

President



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

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
05/14/19 07:04

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS23@7'	1905136-01	Soil	05/13/19 10:02	05/13/19 16:40
SS24@9'	1905136-02	Soil	05/13/19 10:06	05/13/19 16:40
SS25@12'	1905136-03	Soil	05/13/19 12:37	05/13/19 16:40
SS26@7'	1905136-04	Soil	05/13/19 14:25	05/13/19 16:40
SS27@9'	1905136-05	Soil	05/13/19 14:28	05/13/19 16:40

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

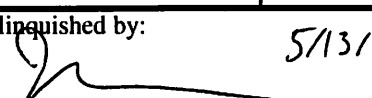
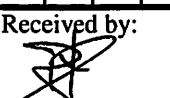
1905136

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: Jake McCarver

Project Manager: Mark Longhurst  
E-Mail: Mark.Longhurst@pdce.com  
Project Name: Warner 6-14  
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)	TPH - DRO													
SS23 @ 7'	5/13/2019	10:02	1			X			X					X	X											
SS24 @ 9'	5/13/2019	10:06	1			X			X					X	X											
SS25 @ 12'	5/13/2019	12:37	1			X			X					X	X											
SS26 @ 7'	5/13/2019	2:25	1			X			X					X	X											
SS27 @ 9'	5/13/2019	2:28	1			X			X					X	X											
Relinquished by:  Date/Time: <u>5/13/19</u> <u>7:00</u>				Received by:  Date/Time: <u>5/13/19</u> <u>16:40</u>				Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input type="checkbox"/> 48 Hours <input type="checkbox"/>																		
Relinquished by: _____ Date/Time: _____				Received by: _____ Date/Time: _____				Sample Integrity: <u>1.3</u>																		
Relinquished by: _____ Date/Time: _____				Received in Lab by: _____ Date/Time: _____				Temperature Upon Receipt: Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																		

# Sample Receipt Checklist

S2 Work Order 1905136

Client: PDA Client Project ID: WARNER G-14

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

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

Temp (°C)	
-----------	--

Thermometer ID: 61857155-K

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

Additional Comments (if any):

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

RZ  
Custodian Printed Name or Initials

[Signature]  
Signature of Custodian

5-13-19  
Date/Time 17:00



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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/14/19 07:04

**SS23@7'**  
**1905136-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/13/19 10:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1905180	05/13/19	05/14/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/13/19 10:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/13/19 10:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	1905182	05/13/19	05/13/19	EPA 8015M	

Date Sampled: **05/13/19 10:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		87.1 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/14/19 07:04

**SS24@9'**  
**1905136-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/13/19 10:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1905180	05/13/19	05/14/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/13/19 10:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/13/19 10:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1905182	05/13/19	05/14/19	EPA 8015M	

Date Sampled: **05/13/19 10:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		89.0 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/14/19 07:04

**SS25@12'**  
**1905136-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/13/19 12:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1905180	05/13/19	05/14/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.015</b>	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/13/19 12:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/13/19 12:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1905182	05/13/19	05/14/19	EPA 8015M	

Date Sampled: **05/13/19 12:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		89.0 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/14/19 07:04

**SS26@7'**  
**1905136-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/13/19 14:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1905180	05/13/19	05/14/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/13/19 14:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/13/19 14:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1905182	05/13/19	05/14/19	EPA 8015M	

Date Sampled: **05/13/19 14:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		97.7 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/14/19 07:04

**SS27@9'**  
**1905136-05 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/13/19 14:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1905180	05/13/19	05/14/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	<b>0.036</b>	0.0050	"	"	"	"	"	"	
Xylenes (total)	<b>0.16</b>	0.010	"	"	"	"	"	"	
Naphthalene	<b>0.040</b>	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	<b>12</b>	0.50	"	"	"	"	"	"	

Date Sampled: **05/13/19 14:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		120 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/13/19 14:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	<b>190</b>	50	mg/kg	1	1905182	05/13/19	05/14/19	EPA 8015M	

Date Sampled: **05/13/19 14:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		92.8 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/14/19 07:04

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

### Summit Scientific

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

#### Batch 1905180 - EPA 5030 Soil MS

##### Blank (1905180-BLK1)

Prepared & Analyzed: 05/13/19

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Naphthalene	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0398		"	0.0400		99.6	23-173			
Surrogate: Toluene-d8	0.0411		"	0.0400		103	20-170			
Surrogate: 4-Bromofluorobenzene	0.0395		"	0.0400		98.8	21-167			

##### LCS (1905180-BS1)

Prepared & Analyzed: 05/13/19

Benzene	0.183	0.0020	mg/kg	0.150		122	70-130			
Toluene	0.182	0.0050	"	0.150		122	70-130			
Ethylbenzene	0.187	0.0050	"	0.150		125	70-130			
m,p-Xylene	0.353	0.010	"	0.300		118	70-130			
o-Xylene	0.189	0.0050	"	0.150		126	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0405		"	0.0400		101	23-173			
Surrogate: Toluene-d8	0.0409		"	0.0400		102	20-170			
Surrogate: 4-Bromofluorobenzene	0.0395		"	0.0400		98.8	21-167			

##### Matrix Spike (1905180-MS1)

Source: 1905135-01

Prepared & Analyzed: 05/13/19

Benzene	0.288	0.0020	mg/kg	0.300	0.00432	94.5	70-130			
Toluene	0.298	0.0050	"	0.300	ND	99.5	70-130			
Ethylbenzene	0.377	0.0050	"	0.300	0.106	90.6	70-130			
m,p-Xylene	0.741	0.010	"	0.600	1.27	NR	70-130			
o-Xylene	0.314	0.0050	"	0.300	ND	105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0419		"	0.0400		105	23-173			
Surrogate: Toluene-d8	0.0403		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0417		"	0.0400		104	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: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
05/14/19 07:04

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

### Summit Scientific

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

#### Batch 1905180 - EPA 5030 Soil MS

Matrix Spike Dup (1905180-MSD1)	Source: 1905135-01			Prepared & Analyzed: 05/13/19						
Benzene	0.315	0.0020	mg/kg	0.300	0.00432	103	70-130	8.97	30	
Toluene	0.315	0.0050	"	0.300	ND	105	70-130	5.38	30	
Ethylbenzene	0.308	0.0050	"	0.300	0.106	67.6	70-130	20.1	30	
m,p-Xylene	0.748	0.010	"	0.600	1.27	NR	70-130	1.03	30	
o-Xylene	0.334	0.0050	"	0.300	ND	111	70-130	6.08	30	
Surrogate: 1,2-Dichloroethane-d4	0.0445		"	0.0400		111	23-173			
Surrogate: Toluene-d8	0.0388		"	0.0400		97.0	20-170			
Surrogate: 4-Bromofluorobenzene	0.0390		"	0.0400		97.4	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/14/19 07:04

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

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

**Batch 1905182 - EPA 3550A**

**Blank (1905182-BLK1)**

Prepared: 05/13/19 Analyzed: 05/14/19

C10-C28 (DRO) ND 50 mg/kg

**LCS (1905182-BS1)**

Prepared: 05/13/19 Analyzed: 05/14/19

C10-C28 (DRO) 414 50 mg/kg 500 82.8 70-130

**Matrix Spike (1905182-MS1)**

**Source: 1905135-01**

Prepared: 05/13/19 Analyzed: 05/14/19

C10-C28 (DRO) 420 50 mg/kg 500 23.1 79.4 70-130

**Matrix Spike Dup (1905182-MSD1)**

**Source: 1905135-01**

Prepared: 05/13/19 Analyzed: 05/14/19

C10-C28 (DRO) 427 50 mg/kg 500 23.1 80.7 70-130 1.59 20

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: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**

05/14/19 07:04

### 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

May 15, 2019

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Warner 6-14

Work Order # 1905145

Enclosed are the results of analyses for samples received by Summit Scientific on 05/14/19 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 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury

President



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

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
05/15/19 06:53

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS28@12'	1905145-01	Soil	05/14/19 09:10	05/14/19 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.*

1905145

Page 1 of 1

Project Manager:	Mark Longhurst
E-Mail:	Mark.Longhurst@pdce.com
Project Name:	Warner 6-14
Project Number:	

[www.s2scientific.com](http://www.s2scientific.com)

# Sample Receipt Checklist

S2 Work Order 190 S14S

Client: PDC Client Project ID: Warner 6-14

Shipped Via: H.D. (P.U.) / FedEx/UPS/USPS/Other \_\_\_\_\_ Airbill #: \_\_\_\_\_

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

Temp (°C)	<u>-2.7</u>
-----------	-------------

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C <sup>(1)</sup> ?				
NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<u>X</u>			
Were all samples received intact <sup>(1)</sup> ?	<u>X</u>			
Was adequate sample volume provided <sup>(1)</sup> ?	<u>X</u>			
If custody seals are present, are they intact <sup>(1)</sup> ?			<u>X</u>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<u>X</u>			<u>SAME DAY TAT</u>
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	<u>X</u>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<u>X</u>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<u>X</u>			
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	<u>X</u>			
For volatiles in water – is there headspace present? <b>If yes, contact client and note in narrative.</b>			<u>X</u>	
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			<u>X</u>	
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ?			<u>X</u>	
Record the pH in Comments.			<u>X</u>	
If dissolved metals are requested, were samples field filtered?			<u>X</u>	

Additional Comments (if any):

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

JE  
Custodian Printed Name or Initials

[Signature]  
Signature of Custodian

5-14-19 18:10  
Date/Time



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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/15/19 06:53

**SS28@12'**  
**1905145-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/14/19 09:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1905192	05/14/19	05/14/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>1.4</b>	<b>0.50</b>	"	"	"	"	"	"	

Date Sampled: **05/14/19 09:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		123 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		112 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/14/19 09:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1905193	05/14/19	05/14/19	EPA 8015M	

Date Sampled: **05/14/19 09:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		91.8 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/15/19 06:53

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

### Summit Scientific

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

#### Batch 1905192 - EPA 5030 Soil MS

##### Blank (1905192-BLK1)

Prepared & Analyzed: 05/14/19

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Naphthalene	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0422		"	0.0400		106	23-173			
Surrogate: Toluene-d8	0.0399		"	0.0400		99.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0413		"	0.0400		103	21-167			

##### LCS (1905192-BS1)

Prepared & Analyzed: 05/14/19

Benzene	0.0875	0.0020	mg/kg	0.100		87.5	70-130			
Toluene	0.0973	0.0050	"	0.100		97.3	70-130			
Ethylbenzene	0.109	0.0050	"	0.100		109	70-130			
m,p-Xylene	0.207	0.010	"	0.200		104	70-130			
o-Xylene	0.101	0.0050	"	0.100		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0418		"	0.0400		104	23-173			
Surrogate: Toluene-d8	0.0401		"	0.0400		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0410		"	0.0400		102	21-167			

##### Matrix Spike (1905192-MS1)

Source: 1905145-01

Prepared & Analyzed: 05/14/19

Benzene	0.0861	0.0020	mg/kg	0.100	ND	86.1	70-130			
Toluene	0.0944	0.0050	"	0.100	ND	94.4	70-130			
Ethylbenzene	0.107	0.0050	"	0.100	ND	107	70-130			
m,p-Xylene	0.207	0.010	"	0.200	ND	104	70-130			
o-Xylene	0.100	0.0050	"	0.100	ND	100	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0480		"	0.0400		120	23-173			
Surrogate: Toluene-d8	0.0397		"	0.0400		99.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0419		"	0.0400		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: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
05/15/19 06:53

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

### Summit Scientific

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

#### Batch 1905192 - EPA 5030 Soil MS

Matrix Spike Dup (1905192-MSD1)		Source: 1905145-01			Prepared & Analyzed: 05/14/19					
Benzene	0.0870	0.0020	mg/kg	0.100	ND	87.0	70-130	0.971	30	
Toluene	0.0984	0.0050	"	0.100	ND	98.4	70-130	4.20	30	
Ethylbenzene	0.105	0.0050	"	0.100	ND	105	70-130	1.84	30	
m,p-Xylene	0.209	0.010	"	0.200	ND	104	70-130	0.562	30	
o-Xylene	0.100	0.0050	"	0.100	ND	100	70-130	0.269	30	
<hr/>										
Surrogate: 1,2-Dichloroethane-d4	0.0490		"	0.0400		122	23-173			
Surrogate: Toluene-d8	0.0413		"	0.0400		103	20-170			
Surrogate: 4-Bromofluorobenzene	0.0426		"	0.0400		107	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/15/19 06:53

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

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

**Batch 1905193 - EPA 3550A**

**Blank (1905193-BLK1)**

Prepared & Analyzed: 05/14/19

C10-C28 (DRO) ND 50 mg/kg

**LCS (1905193-BS1)**

Prepared & Analyzed: 05/14/19

C10-C28 (DRO) 522 50 mg/kg 500 104 70-130

**Matrix Spike (1905193-MS1)**

**Source: 1905144-01**

Prepared & Analyzed: 05/14/19

C10-C28 (DRO) 601 50 mg/kg 500 26.7 115 70-130

**Matrix Spike Dup (1905193-MSD1)**

**Source: 1905144-01**

Prepared & Analyzed: 05/14/19

C10-C28 (DRO) 577 50 mg/kg 500 26.7 110 70-130 4.07 20

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: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**

05/15/19 06:53

### 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

May 17, 2019

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Warner 6-14

Work Order # 1905185

Enclosed are the results of analyses for samples received by Summit Scientific on 05/16/19 17:49. 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', with a stylized, cursive script.

Paul Shrewsbury

President



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

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
05/17/19 06:18

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS29@7'	1905185-01	Soil	05/16/19 12:36	05/16/19 17:49
SS30@10'	1905185-02	Soil	05/16/19 12:41	05/16/19 17:49
SS31@17'	1905185-03	Soil	05/16/19 14:36	05/16/19 17:49

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

S<sub>2</sub>

1905185

4653 Table Mountain Drive ♦ Golden, Colorado 80403  
303-277-9310 ♦ 303-374-5933 (f)

Page / of /

Client: PDC Energy

Project Manager: Mark Longhurst

Address:

E-Mail: Mark.Longhurst@pdce.com

City/State/Zip:

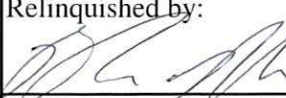
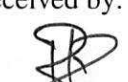
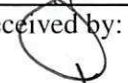
Phone:

Project Name: Warner G-14

Sampler Name: Brock Nelson

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions	
					HCl	HNO <sub>3</sub>	None	Other	Water	Soil	Air-Canister #	Other	BTEXN	TPH-GP0	TPH-DB0							
1	SS29@7'	5/16/19	1236	1			✓			✓				✓	✓	✓						
2	SS30@10'		1241	1			✓			✓				✓	✓	✓						
3	SS31@17'		1436	1			✓			✓				✓	✓	✓						
4																						
5																						
6																						
7																						
8																						
9																						
10																						

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time	(Check)	Notes:
	5/16/19 1546	Tasmin Lock Box	5/16/19 1546	Same Day	<input checked="" type="checkbox"/> 72 hours	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours	Standard	
LOCKBOX	5/16/19 17:49		5/16/19 17:49	48 hours		
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:	Temperature Upon Receipt:	
					2.8	
				Samples Intact:	Yes No	

# Sample Receipt Checklist

S2 Work Order 1905185

Client: PDC Energy Client Project ID: WARNER 6-14

Shipped Via: H.D. (P.U.) FedEx/UPS/USPS/Other \_\_\_\_\_ Airbill #: \_\_\_\_\_

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

Temp (°C)	<u>2.8</u>
-----------	------------

Thermometer ID: 61857155-K

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

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

RZ  
Custodian Printed Name or Initials

[Signature]  
Signature of Custodian

05-16-19 18:00  
Date/Time





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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/17/19 06:18

**SS29@7'**  
**1905185-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/16/19 12:36**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1905232	05/16/19	05/16/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/16/19 12:36**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		107 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/16/19 12:36**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	1905233	05/16/19	05/16/19	EPA 8015M	

Date Sampled: **05/16/19 12:36**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		96.5 %	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: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
05/17/19 06:18

**SS30@10'**  
**1905185-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/16/19 12:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1905232	05/16/19	05/16/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/16/19 12:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/16/19 12:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1905233	05/16/19	05/16/19	EPA 8015M	

Date Sampled: **05/16/19 12:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		106 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/17/19 06:18

**SS31@17'**  
**1905185-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/16/19 14:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>Benzene</b>	<b>0.038</b>	0.0020	mg/kg	1	1905232	05/16/19	05/16/19	EPA 8260B	
<b>Toluene</b>	<b>0.027</b>	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.056</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.53</b>	0.010	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>0.046</b>	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>19</b>	0.50	"	"	"	"	"	"	

Date Sampled: **05/16/19 14:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<i>Surrogate: 1,2-Dichloroethane-d4</i>		112 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		99.7 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		123 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/16/19 14:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>C10-C28 (DRO)</b>	<b>120</b>	50	mg/kg	1	1905233	05/16/19	05/17/19	EPA 8015M	

Date Sampled: **05/16/19 14:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<i>Surrogate: o-Terphenyl</i>		102 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/17/19 06:18

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

### Summit Scientific

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

#### Batch 1905232 - EPA 5030 Soil MS

##### Blank (1905232-BLK1)

Prepared & Analyzed: 05/16/19

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Naphthalene	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0451		"	0.0400		113	23-173			
Surrogate: Toluene-d8	0.0446		"	0.0400		112	20-170			
Surrogate: 4-Bromofluorobenzene	0.0407		"	0.0400		102	21-167			

##### LCS (1905232-BS1)

Prepared & Analyzed: 05/16/19

Benzene	0.127	0.0020	mg/kg	0.150		84.5	70-130			
Toluene	0.132	0.0050	"	0.150		88.2	70-130			
Ethylbenzene	0.138	0.0050	"	0.150		91.9	70-130			
m,p-Xylene	0.277	0.010	"	0.300		92.2	70-130			
o-Xylene	0.132	0.0050	"	0.150		87.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0407		"	0.0400		102	23-173			
Surrogate: Toluene-d8	0.0405		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0393		"	0.0400		98.2	21-167			

##### Matrix Spike (1905232-MS1)

Source: 1905181-01

Prepared & Analyzed: 05/16/19

Benzene	0.130	0.0020	mg/kg	0.150	ND	86.9	70-130			
Toluene	0.133	0.0050	"	0.150	ND	88.9	70-130			
Ethylbenzene	0.142	0.0050	"	0.150	ND	94.9	70-130			
m,p-Xylene	0.279	0.010	"	0.300	ND	93.1	70-130			
o-Xylene	0.136	0.0050	"	0.150	ND	90.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0411		"	0.0400		103	23-173			
Surrogate: Toluene-d8	0.0400		"	0.0400		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0397		"	0.0400		99.2	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: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
05/17/19 06:18

## 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 1905232 - EPA 5030 Soil MS

Matrix Spike Dup (1905232-MSD1)		Source: 1905181-01			Prepared & Analyzed: 05/16/19					
Benzene	0.131	0.0020	mg/kg	0.150	ND	87.3	70-130	0.505	30	
Toluene	0.136	0.0050	"	0.150	ND	91.0	70-130	2.31	30	
Ethylbenzene	0.142	0.0050	"	0.150	ND	95.0	70-130	0.0842	30	
m,p-Xylene	0.282	0.010	"	0.300	ND	94.1	70-130	1.04	30	
o-Xylene	0.135	0.0050	"	0.150	ND	90.3	70-130	0.243	30	
Surrogate: 1,2-Dichloroethane-d4	0.0415		"	0.0400		104	23-173			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.5	20-170			
Surrogate: 4-Bromofluorobenzene	0.0386		"	0.0400		96.4	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/17/19 06:18

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

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

**Batch 1905233 - EPA 3550A**

**Blank (1905233-BLK1)**

Prepared & Analyzed: 05/16/19

C10-C28 (DRO) ND 50 mg/kg

**LCS (1905233-BS1)**

Prepared & Analyzed: 05/16/19

C10-C28 (DRO) 506 50 mg/kg 500 101 70-130

**Matrix Spike (1905233-MS1)**

**Source: 1905181-01**

Prepared & Analyzed: 05/16/19

C10-C28 (DRO) 479 50 mg/kg 500 23.9 91.0 70-130

**Matrix Spike Dup (1905233-MSD1)**

**Source: 1905181-01**

Prepared: 05/16/19 Analyzed: 05/17/19

C10-C28 (DRO) 468 50 mg/kg 500 23.9 88.7 70-130 2.39 20

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: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**

05/17/19 06:18

### 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

May 19, 2019

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Warner 6-14

Work Order # 1905220

Enclosed are the results of analyses for samples received by Summit Scientific on 05/17/19 17:30. 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', with a stylized, cursive script.

Paul Shrewsbury

President





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

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
05/19/19 15:43

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS32@11'	1905220-01	Soil	05/17/19 10:16	05/17/19 17:30
SS33@18.5'	1905220-02	Soil	05/17/19 11:24	05/17/19 17:30
SS34@17'	1905220-03	Soil	05/17/19 11:26	05/17/19 17:30
SS35@11'	1905220-04	Soil	05/17/19 13:21	05/17/19 17:30
SS36@17'	1905220-05	Soil	05/17/19 13:23	05/17/19 17:30
SS37@18.5'	1905220-06	Soil	05/17/19 13:25	05/17/19 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

S<sub>2</sub>

1905220

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310 ♦ 303-374-5933 (f)

Page | of |

Client: PDC Energy

Project Manager: Mark Longhurst

Address:

E-Mail: Mark.Longhurst@pdce.com

City/State/Zip:


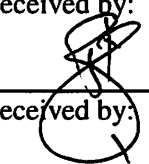
Phone:

Project Name: Warner 6-14

Sampler Name: Brock Nelson

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions	
					HCl	HNO <sub>3</sub>	None	Other	Water	Soil	Air-Canister #	Other	BTEX	TPH-GPC	TPH-DRO							
1	SS32 @ 11'	5/17/19	1016	1			X			X				X	X	X						
2	SS33 @ 18.5'		1124	1			X			X				X	X	X						
3	SS34 @ 17'		1126	1			X			X				X	X	X						
4	SS35 @ 11'		1321	1			X			X				X	X	X						
5	SS36 @ 17'		1323	1			X			X				X	X	X						
6	SS37 @ 18.5'		1325	1			X			X				X	X	X						
7																						
8																						
9																						
10																						

Relinquished by: 	Date/Time: 5/17/19 1600	Received by: T. Smith Lock Box	Date/Time: 5/17/19 1600	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours 24 hours <input type="checkbox"/> Standard 48 hours <input type="checkbox"/>	Notes:
Relinquished by: Lock Box	Date/Time: 5/17/19 17:30	Received by: 	Date/Time: 5/17/19 17:30	Sample Integrity: Temperature Upon Receipt: 3.2	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

# Sample Receipt Checklist

S2 Work Order 1905220

Client: PDC Energy Client Project ID: WARNER G-14

Shipped Via: H.D. (P.U.) FedEx/UPS/USPS/Other \_\_\_\_\_ Airbill #: \_\_\_\_\_

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

Temp (°C)	<u>3.2</u>
-----------	------------

Thermometer ID: 61857155-K

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

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

Custodian Printed Name or Initials RL

Signature of Custodian [Signature]

Date/Time 05/17/19

17:30



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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/19/19 15:43

**SS32@11'**  
**1905220-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/17/19 10:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1905257	05/17/19	05/18/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/17/19 10:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.2 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/17/19 10:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1905256	"	05/18/19	EPA 8015M	

Date Sampled: **05/17/19 10:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		99.1 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/19/19 15:43

**SS33@18.5'**  
**1905220-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/17/19 11:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1905257	05/17/19	05/18/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/17/19 11:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.4 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/17/19 11:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1905256	"	05/18/19	EPA 8015M	

Date Sampled: **05/17/19 11:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		105 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/19/19 15:43

**SS34@17'**  
**1905220-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/17/19 11:26**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1905257	05/17/19	05/18/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/17/19 11:26**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.2 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/17/19 11:26**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1905256	"	05/18/19	EPA 8015M	

Date Sampled: **05/17/19 11:26**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		98.0 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/19/19 15:43

**SS35@11'**  
**1905220-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/17/19 13:21**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1905257	05/17/19	05/18/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/17/19 13:21**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.4 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/17/19 13:21**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1905256	"	05/18/19	EPA 8015M	

Date Sampled: **05/17/19 13:21**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		106 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/19/19 15:43

**SS36@17'**  
**1905220-05 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/17/19 13:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1905257	05/17/19	05/18/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/17/19 13:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.7 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/17/19 13:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1905256	"	05/18/19	EPA 8015M	

Date Sampled: **05/17/19 13:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		104 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/19/19 15:43

**SS37@18.5'**  
**1905220-06 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/17/19 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1905257	05/17/19	05/18/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/17/19 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/17/19 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1905256	"	05/18/19	EPA 8015M	

Date Sampled: **05/17/19 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		98.5 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/19/19 15:43

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

### Summit Scientific

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

#### Batch 1905257 - EPA 5030 Soil MS

##### Blank (1905257-BLK1)

Prepared & Analyzed: 05/17/19

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Naphthalene	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0404		"	0.0400		101	23-173			
Surrogate: Toluene-d8	0.0394		"	0.0400		98.5	20-170			
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0400		100	21-167			

##### LCS (1905257-BS1)

Prepared & Analyzed: 05/17/19

Benzene	0.0913	0.0020	mg/kg	0.100		91.3	70-130			
Toluene	0.105	0.0050	"	0.100		105	70-130			
Ethylbenzene	0.115	0.0050	"	0.100		115	70-130			
m,p-Xylene	0.226	0.010	"	0.200		113	70-130			
o-Xylene	0.106	0.0050	"	0.100		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0407		"	0.0400		102	23-173			
Surrogate: Toluene-d8	0.0405		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	21-167			

##### Matrix Spike (1905257-MS1)

Source: 1905218-01

Prepared & Analyzed: 05/17/19

Benzene	0.0927	0.0020	mg/kg	0.100	0.00348	89.2	70-130			
Toluene	0.105	0.0050	"	0.100	ND	105	70-130			
Ethylbenzene	0.111	0.0050	"	0.100	ND	111	70-130			
m,p-Xylene	0.215	0.010	"	0.200	0.0104	102	70-130			
o-Xylene	0.103	0.0050	"	0.100	0.00324	99.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0424		"	0.0400		106	23-173			
Surrogate: Toluene-d8	0.0406		"	0.0400		102	20-170			
Surrogate: 4-Bromofluorobenzene	0.0393		"	0.0400		98.2	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: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
05/19/19 15:43

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

### Summit Scientific

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

#### Batch 1905257 - EPA 5030 Soil MS

Matrix Spike Dup (1905257-MSD1)		Source: 1905218-01			Prepared & Analyzed: 05/17/19					
Benzene	0.0902	0.0020	mg/kg	0.100	0.00348	86.8	70-130	2.72	30	
Toluene	0.102	0.0050	"	0.100	ND	102	70-130	2.32	30	
Ethylbenzene	0.112	0.0050	"	0.100	ND	112	70-130	0.892	30	
m,p-Xylene	0.219	0.010	"	0.200	0.0104	104	70-130	1.85	30	
o-Xylene	0.104	0.0050	"	0.100	0.00324	101	70-130	1.80	30	
<hr/>										
Surrogate: 1,2-Dichloroethane-d4	0.0421		"	0.0400		105	23-173			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0416		"	0.0400		104	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/19/19 15:43

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

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

**Batch 1905256 - EPA 3550A**

**Blank (1905256-BLK1)**

Prepared & Analyzed: 05/17/19

C10-C28 (DRO) ND 50 mg/kg

**LCS (1905256-BS1)**

Prepared & Analyzed: 05/17/19

C10-C28 (DRO) 514 50 mg/kg 500 103 70-130

**Matrix Spike (1905256-MS1)**

**Source: 1905218-01**

Prepared & Analyzed: 05/17/19

C10-C28 (DRO) 527 50 mg/kg 500 27.8 99.9 70-130

**Matrix Spike Dup (1905256-MSD1)**

**Source: 1905218-01**

Prepared & Analyzed: 05/17/19

C10-C28 (DRO) 516 50 mg/kg 500 27.8 97.6 70-130 2.20 20

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: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**

05/19/19 15:43

### 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

May 31, 2019

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Warner 6-14

Work Order # 1905321

Enclosed are the results of analyses for samples received by Summit Scientific on 05/30/19 17:33. 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', with a stylized, cursive script.

Paul Shrewsbury

President



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

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
05/31/19 06:01

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS38@11'	1905321-01	Soil	05/30/19 13:14	05/30/19 17:33

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

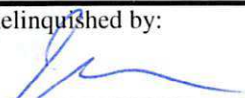

1905321

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: Jake McCarver

Project Manager: Mark Longhurst  
E-Mail: Mark.Longhurst@pdce.com  
Project Name: Warner 6-14  
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)	TPH - DRO														
SS38 @ 11'	5/30/2019	1:14	1			X			X					X	X												
Relinquished by:  Date/Time: <u>5/30/19</u> <u>4:04</u> <u>1733</u>				Received by:  Date/Time: <u>05/30/19</u> <u>1733</u>				Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input type="checkbox"/> 48 Hours <input type="checkbox"/>																			
Relinquished by: _____ Date/Time: _____				Received by: _____ Date/Time: _____				Sample Integrity: Temperature Upon Receipt: <u>3.4</u> Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																			
Relinquished by: _____ Date/Time: _____				Received in Lab by: _____ Date/Time: _____																							



### Sample Receipt Checklist

S2 Work Order 1805321

Client: PDC Client Project ID: WARNER 6-17

Shipped Via: H.D. (P.U.) FedEx/UPS/USPS/Other \_\_\_\_\_ Airbill #: \_\_\_\_\_

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

Temp (°C)	3.4
-----------	-----

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C <sup>(1)</sup> ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	X			On ICE
Were all samples received intact <sup>(1)</sup> ?	X			
Was adequate sample volume provided <sup>(1)</sup> ?	X			
If custody seals are present, are they intact <sup>(1)</sup> ?			X	
Are samples with holding times due within 48 hours sample due within 48 hours present?	X			SAME DAY DAT
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	X			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	X			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	X			
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	X			
For volatiles in water – is there headspace present? <b>If yes, contact client and note in narrative.</b>			X	
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			X	
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ? Record the pH in Comments.			X	
If dissolved metals are requested, were samples field filtered?			X	

Additional Comments (if any):

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

RG  
Custodian Printed Name or Initials

[Signature]  
Signature of Custodian

05/30/19  
Date/Time 1800



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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/31/19 06:01

**SS38@11'**  
**1905321-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/30/19 13:14**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1905415	05/30/19	05/31/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>0.11</b>	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>13</b>	0.50	"	"	"	"	"	"	

Date Sampled: **05/30/19 13:14**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		143 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/30/19 13:14**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>C10-C28 (DRO)</b>	<b>120</b>	50	mg/kg	1	1905416	05/30/19	05/31/19	EPA 8015M	

Date Sampled: **05/30/19 13:14**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		87.7 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/31/19 06:01

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

### Summit Scientific

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

#### Batch 1905415 - EPA 5030 Soil MS

##### Blank (1905415-BLK1)

Prepared: 05/30/19 Analyzed: 05/31/19

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Naphthalene	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0348		"	0.0400		87.0	23-173			
Surrogate: Toluene-d8	0.0354		"	0.0400		88.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0377		"	0.0400		94.3	21-167			

##### LCS (1905415-BS1)

Prepared: 05/30/19 Analyzed: 05/31/19

Benzene	0.106	0.0020	mg/kg	0.125		84.5	70-130			
Toluene	0.102	0.0050	"	0.125		81.7	70-130			
Ethylbenzene	0.103	0.0050	"	0.125		82.7	70-130			
m,p-Xylene	0.210	0.010	"	0.250		84.0	70-130			
o-Xylene	0.105	0.0050	"	0.125		84.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0346		"	0.0400		86.6	23-173			
Surrogate: Toluene-d8	0.0387		"	0.0400		96.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0362		"	0.0400		90.5	21-167			

##### Matrix Spike (1905415-MS1)

Source: 1905323-01

Prepared: 05/30/19 Analyzed: 05/31/19

Benzene	0.113	0.0020	mg/kg	0.125	ND	90.7	70-130			
Toluene	0.109	0.0050	"	0.125	ND	86.9	70-130			
Ethylbenzene	0.117	0.0050	"	0.125	ND	93.2	70-130			
m,p-Xylene	0.233	0.010	"	0.250	ND	93.1	70-130			
o-Xylene	0.118	0.0050	"	0.125	ND	94.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0353		"	0.0400		88.3	23-173			
Surrogate: Toluene-d8	0.0372		"	0.0400		93.0	20-170			
Surrogate: 4-Bromofluorobenzene	0.0362		"	0.0400		90.5	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: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
05/31/19 06:01

## 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 1905415 - EPA 5030 Soil MS

Matrix Spike Dup (1905415-MSD1)	Source: 1905323-01			Prepared: 05/30/19 Analyzed: 05/31/19						
Benzene	0.111	0.0020	mg/kg	0.125	ND	89.2	70-130	1.73	30	
Toluene	0.108	0.0050	"	0.125	ND	86.2	70-130	0.804	30	
Ethylbenzene	0.116	0.0050	"	0.125	ND	93.0	70-130	0.232	30	
m,p-Xylene	0.236	0.010	"	0.250	ND	94.3	70-130	1.31	30	
o-Xylene	0.118	0.0050	"	0.125	ND	94.6	70-130	0.560	30	
Surrogate: 1,2-Dichloroethane-d4	0.0360		"	0.0400		90.1	23-173			
Surrogate: Toluene-d8	0.0369		"	0.0400		92.3	20-170			
Surrogate: 4-Bromofluorobenzene	0.0361		"	0.0400		90.2	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/31/19 06:01

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

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

**Batch 1905416 - EPA 3550A**

**Blank (1905416-BLK1)**

Prepared: 05/30/19 Analyzed: 05/31/19

C10-C28 (DRO) ND 50 mg/kg

**LCS (1905416-BS1)**

Prepared: 05/30/19 Analyzed: 05/31/19

C10-C28 (DRO) 589 50 mg/kg 500 118 70-130

**Matrix Spike (1905416-MS1)**

**Source: 1905323-01**

Prepared: 05/30/19 Analyzed: 05/31/19

C10-C28 (DRO) 587 50 mg/kg 500 23.0 113 70-130

**Matrix Spike Dup (1905416-MSD1)**

**Source: 1905323-01**

Prepared: 05/30/19 Analyzed: 05/31/19

C10-C28 (DRO) 596 50 mg/kg 500 23.0 115 70-130 1.41 20

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: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**

05/31/19 06:01

### 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

June 03, 2019

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Warner 6-14

Work Order # 1905336

Enclosed are the results of analyses for samples received by Summit Scientific on 05/31/19 18:23. 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', with a stylized, cursive script.

Paul Shrewsbury

President



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

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
06/03/19 06:20

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS39@11'	1905336-01	Soil	05/31/19 14:06	05/31/19 18:23
SS40@17'	1905336-02	Soil	05/31/19 14:09	05/31/19 18:23
SS41@18'	1905336-03	Soil	05/31/19 14:22	05/31/19 18:23

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

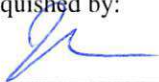

1905336

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: Jake McCarver

Project Manager: Mark Longhurst  
E-Mail: Mark.Longhurst@pdce.com  
Project Name: Warner 6-14  
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)	TPH - DRO												
SS39 @ 11'	5/31/2019	2:06	1			X			X				X	X											
SS40 @ 17'	5/31/2019	2:09	1			X			X				X	X											
SS41 @ 18'	5/31/2019	2:22	1			X			X				X	X											
Relinquished by:  Date/Time: <u>5/31/19 3:55</u>				Received by:  Date/Time: <u>5-31-19 15:55</u>				Turn Around Time (Check)																	
Relinquished by: _____ Date/Time: _____				Received by: _____ Date/Time: _____				Same Day <input checked="" type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input type="checkbox"/> 48 Hours <input type="checkbox"/>																	
Relinquished by: _____ Date/Time: _____				Received in Lab by: _____ Date/Time: _____				Sample Integrity: Temperature Upon Receipt: <u>2.2</u> Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																	

### Sample Receipt Checklist

S2 Work Order 1905336

Client: PDC Client Project ID: Warner 6-14

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

☐ ☒ ☐ ☐ ☐

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

Temp (°C)	2.2
-----------	-----

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C <sup>(1)</sup> ? NOTE: If samples are delivered the same day of sampling, this requirement is met 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 samples with holding times due within 48 hours sample due within 48 hours present?	✓			Same Day TAT
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? If yes, contact client and note in narrative.			✓	
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.				

MP

Custodian Printed Name or Initials

*Muri Premer*

Signature of Custodian

5/31/19

Date/Time



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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/03/19 06:20

**SS39@11'**  
**1905336-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/31/19 14:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1905437	05/31/19	06/01/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.014</b>	0.010	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>0.013</b>	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>1.7</b>	0.50	"	"	"	"	"	"	

Date Sampled: **05/31/19 14:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		112 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		111 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/31/19 14:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>81</b>	50	mg/kg	1	1905436	05/31/19	05/31/19	EPA 8015M	

Date Sampled: **05/31/19 14:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		100 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/03/19 06:20

**SS40@17'**  
**1905336-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/31/19 14:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1905437	05/31/19	06/01/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	<b>0.11</b>	0.0050	"	"	"	"	"	"	
Xylenes (total)	<b>0.12</b>	0.010	"	"	"	"	"	"	
Naphthalene	<b>0.037</b>	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	<b>4.9</b>	0.50	"	"	"	"	"	"	

Date Sampled: **05/31/19 14:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		99.0 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		112 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/31/19 14:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	<b>97</b>	50	mg/kg	1	1905436	05/31/19	06/01/19	EPA 8015M	

Date Sampled: **05/31/19 14:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		88.2 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

Reported:  
06/03/19 06:20

**SS41@18'**  
**1905336-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/31/19 14:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>0.0052</b>	0.0020	mg/kg	1	1905437	05/31/19	06/01/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.022</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.049</b>	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>0.88</b>	0.50	"	"	"	"	"	"	

Date Sampled: **05/31/19 14:22**

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		106 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/31/19 14:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1905436	05/31/19	06/01/19	EPA 8015M	

Date Sampled: **05/31/19 14:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		93.4 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/03/19 06:20

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

### Summit Scientific

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

#### Batch 1905437 - EPA 5030 Soil MS

##### Blank (1905437-BLK1)

Prepared: 05/31/19 Analyzed: 06/01/19

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Naphthalene	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0380		"	0.0400		95.0	23-173			
Surrogate: Toluene-d8	0.0414		"	0.0400		104	20-170			
Surrogate: 4-Bromofluorobenzene	0.0407		"	0.0400		102	21-167			

##### LCS (1905437-BS1)

Prepared: 05/31/19 Analyzed: 06/01/19

Benzene	0.0957	0.0020	mg/kg	0.100		95.7	70-130			
Toluene	0.103	0.0050	"	0.100		103	70-130			
Ethylbenzene	0.113	0.0050	"	0.100		113	70-130			
m,p-Xylene	0.220	0.010	"	0.200		110	70-130			
o-Xylene	0.104	0.0050	"	0.100		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0376		"	0.0400		94.1	23-173			
Surrogate: Toluene-d8	0.0407		"	0.0400		102	20-170			
Surrogate: 4-Bromofluorobenzene	0.0418		"	0.0400		105	21-167			

##### Matrix Spike (1905437-MS1)

Source: 1905336-01

Prepared: 05/31/19 Analyzed: 06/01/19

Benzene	0.0964	0.0020	mg/kg	0.100	ND	96.4	70-130			
Toluene	0.105	0.0050	"	0.100	0.00405	101	70-130			
Ethylbenzene	0.113	0.0050	"	0.100	0.00432	109	70-130			
m,p-Xylene	0.219	0.010	"	0.200	0.00903	105	70-130			
o-Xylene	0.105	0.0050	"	0.100	0.00468	101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0395		"	0.0400		98.8	23-173			
Surrogate: Toluene-d8	0.0410		"	0.0400		102	20-170			
Surrogate: 4-Bromofluorobenzene	0.0425		"	0.0400		106	21-167			

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
06/03/19 06:20

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

### Summit Scientific

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

#### Batch 1905437 - EPA 5030 Soil MS

Matrix Spike Dup (1905437-MSD1)		Source: 1905336-01			Prepared: 05/31/19 Analyzed: 06/01/19					
Benzene	0.0975	0.0020	mg/kg	0.100	ND	97.5	70-130	1.21	30	
Toluene	0.106	0.0050	"	0.100	0.00405	102	70-130	0.856	30	
Ethylbenzene	0.118	0.0050	"	0.100	0.00432	113	70-130	3.76	30	
m,p-Xylene	0.226	0.010	"	0.200	0.00903	109	70-130	3.11	30	
o-Xylene	0.108	0.0050	"	0.100	0.00468	104	70-130	2.75	30	
Surrogate: 1,2-Dichloroethane-d4	0.0396		"	0.0400		99.0	23-173			
Surrogate: Toluene-d8	0.0407		"	0.0400		102	20-170			
Surrogate: 4-Bromofluorobenzene	0.0444		"	0.0400		111	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/03/19 06:20

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

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

**Batch 1905436 - EPA 3550A**

**Blank (1905436-BLK1)**

Prepared & Analyzed: 05/31/19

C10-C28 (DRO) ND 50 mg/kg

**LCS (1905436-BS1)**

Prepared & Analyzed: 05/31/19

C10-C28 (DRO) 593 50 mg/kg 500 119 70-130

**Matrix Spike (1905436-MS1)**

**Source: 1905336-01**

Prepared & Analyzed: 05/31/19

C10-C28 (DRO) 639 50 mg/kg 500 80.9 112 70-130

**Matrix Spike Dup (1905436-MSD1)**

**Source: 1905336-01**

Prepared & Analyzed: 05/31/19

C10-C28 (DRO) 612 50 mg/kg 500 80.9 106 70-130 4.30 20

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: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**

06/03/19 06:20

### 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

June 04, 2019

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

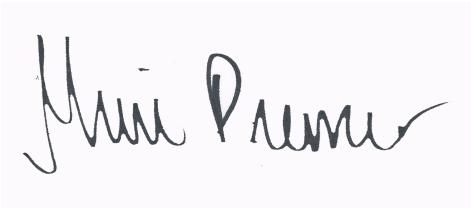
Denver, CO 80203

RE: Warner 6-14

Work Order # 1906007

Enclosed are the results of analyses for samples received by Summit Scientific on 06/03/19 17:52. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Muri Premier", is displayed on a light purple rectangular background.

Muri Premier For Paul Shrewsbury

President



PDC Energy

1775 Sherman St. STE. 3000

Denver CO, 80203

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**

06/04/19 15:46

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS42@11'	1906007-01	Soil	06/03/19 13:17	06/03/19 17:52
SS43@17'	1906007-02	Soil	06/03/19 13:20	06/03/19 17:52

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



1906007

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: Jake McCarver

Project Manager: Mark Longhurst  
E-Mail: Mark.Longhurst@pdce.com  
Project Name: Warner 6-14  
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)	TPH - DRO											
SS42 @ 11'	6/3/2019	1:17	1			X		X				X	X											
SS43 @ 17'	6/3/2019	1:20	1			X		X				X	X											
Relinquished by: 	Date/Time: <u>6/3/19</u> <u>3:55</u> <u>1752</u>	Received by: 	Date/Time: <u>06/03/19</u> <u>1752</u>	Turn Around Time (Check)										Sample Integrity: <u>1.7</u>										
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day	<input checked="" type="checkbox"/>	72 Hours	<input type="checkbox"/>	24 Hours	<input type="checkbox"/>	Standard	<input type="checkbox"/>	48 Hours	<input type="checkbox"/>											
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:	Intact:	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>															

# Sample Receipt Checklist

S2 Work Order 1906007

Client: PDC Client Project ID: WARNER G-14

Shipped Via: H.D. ED/FedEx/UPS/USPS/Other \_\_\_\_\_ Airbill #: \_\_\_\_\_

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

Temp (°C)	<u>1.7</u>
-----------	------------

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C <sup>(1)</sup> ?	<u>X</u>			<u>On ICE</u>
NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.				
Were all samples received intact <sup>(1)</sup> ?	<u>X</u>			
Was adequate sample volume provided <sup>(1)</sup> ?	<u>X</u>			
If custody seals are present, are they intact <sup>(1)</sup> ?			<u>X</u>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<u>X</u>			<u>SAME DAY TAT</u>
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	<u>X</u>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<u>X</u>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<u>X</u>			
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	<u>X</u>			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			<u>X</u>	
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			<u>X</u>	
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ?			<u>X</u>	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?			<u>X</u>	

Additional Comments (if any):

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

KE  
Custodian Printed Name or Initials

[Signature]  
Signature of Custodian

06/03/19  
Date/Time 1800



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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/04/19 15:46

**SS42@11'**  
**1906007-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/03/19 13:17**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1906011	06/03/19	06/03/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/03/19 13:17**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		89.1 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		90.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.3 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/03/19 13:17**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	1906012	"	06/03/19	EPA 8015M	

Date Sampled: **06/03/19 13:17**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		79.2 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/04/19 15:46

**SS43@17'**  
**1906007-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/03/19 13:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1906011	06/03/19	06/03/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/03/19 13:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		91.7 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		91.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.4 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/03/19 13:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1906012	"	06/03/19	EPA 8015M	

Date Sampled: **06/03/19 13:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		85.2 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/04/19 15:46

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

### Summit Scientific

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

#### Batch 1906011 - EPA 5030 Soil MS

##### Blank (1906011-BLK1)

Prepared: 06/03/19 Analyzed: 06/04/19

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Naphthalene	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0371		"	0.0400		92.7	23-173			
Surrogate: Toluene-d8	0.0451		"	0.0400		113	20-170			
Surrogate: 4-Bromofluorobenzene	0.0436		"	0.0400		109	21-167			

##### LCS (1906011-BS1)

Prepared: 06/03/19 Analyzed: 06/04/19

Benzene	0.0962	0.0020	mg/kg	0.100		96.2	70-130			
Toluene	0.104	0.0050	"	0.100		104	70-130			
Ethylbenzene	0.108	0.0050	"	0.100		108	70-130			
m,p-Xylene	0.215	0.010	"	0.200		107	70-130			
o-Xylene	0.103	0.0050	"	0.100		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0445		"	0.0400		111	23-173			
Surrogate: Toluene-d8	0.0419		"	0.0400		105	20-170			
Surrogate: 4-Bromofluorobenzene	0.0410		"	0.0400		102	21-167			

##### Matrix Spike (1906011-MS1)

Source: 1906008-01

Prepared: 06/03/19 Analyzed: 06/04/19

Benzene	0.0969	0.0020	mg/kg	0.100	ND	96.9	70-130			
Toluene	0.105	0.0050	"	0.100	ND	105	70-130			
Ethylbenzene	0.114	0.0050	"	0.100	ND	114	70-130			
m,p-Xylene	0.222	0.010	"	0.200	ND	111	70-130			
o-Xylene	0.107	0.0050	"	0.100	ND	107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0430		"	0.0400		108	23-173			
Surrogate: Toluene-d8	0.0410		"	0.0400		103	20-170			
Surrogate: 4-Bromofluorobenzene	0.0424		"	0.0400		106	21-167			

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
06/04/19 15:46

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

### Summit Scientific

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

#### Batch 1906011 - EPA 5030 Soil MS

Matrix Spike Dup (1906011-MSD1)		Source: 1906008-01			Prepared: 06/03/19 Analyzed: 06/04/19					
Benzene	0.107	0.0020	mg/kg	0.100	ND	107	70-130	10.1	30	
Toluene	0.113	0.0050	"	0.100	ND	113	70-130	7.10	30	
Ethylbenzene	0.107	0.0050	"	0.100	ND	107	70-130	5.90	30	
m,p-Xylene	0.208	0.010	"	0.200	ND	104	70-130	6.92	30	
o-Xylene	0.104	0.0050	"	0.100	ND	104	70-130	2.85	30	
Surrogate: 1,2-Dichloroethane-d4	0.0518		"	0.0400		130	23-173			
Surrogate: Toluene-d8	0.0429		"	0.0400		107	20-170			
Surrogate: 4-Bromofluorobenzene	0.0423		"	0.0400		106	21-167			

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/04/19 15:46

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

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

**Batch 1906012 - EPA 3550A**

**Blank (1906012-BLK1)**

Prepared: 06/03/19 Analyzed: 06/04/19

C10-C28 (DRO) ND 50 mg/kg

**LCS (1906012-BS1)**

Prepared: 06/03/19 Analyzed: 06/04/19

C10-C28 (DRO) 557 50 mg/kg 500 111 70-130

**Matrix Spike (1906012-MS1)**

**Source: 1906008-01**

Prepared: 06/03/19 Analyzed: 06/04/19

C10-C28 (DRO) 577 50 mg/kg 500 17.4 112 70-130

**Matrix Spike Dup (1906012-MSD1)**

**Source: 1906008-01**

Prepared: 06/03/19 Analyzed: 06/04/19

C10-C28 (DRO) 593 50 mg/kg 500 17.4 115 70-130 2.66 20

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: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**

06/04/19 15:46

### 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

June 05, 2019

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Warner 6-14

Work Order # 1906019

Enclosed are the results of analyses for samples received by Summit Scientific on 06/04/19 17:54. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Muri Premier", on a light blue background.

Muri Premier For Paul Shrewsbury

President



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

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
06/05/19 17:28

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS44@18'	1906019-01	Soil	06/04/19 09:33	06/04/19 17:54
SS45@11'	1906019-02	Soil	06/04/19 09:48	06/04/19 17:54
SS46@17'	1906019-03	Soil	06/04/19 09:51	06/04/19 17:54
SS47@11'	1906019-04	Soil	06/04/19 11:04	06/04/19 17:54
SS48@17'	1906019-05	Soil	06/04/19 11:07	06/04/19 17:54
SS49@7'	1906019-06	Soil	06/04/19 13:48	06/04/19 17:54
SS50@9'	1906019-07	Soil	06/04/19 14:00	06/04/19 17:54

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

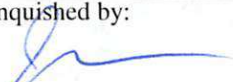

1906019

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: Jake McCarver

Project Manager: Mark Longhurst  
E-Mail: Mark.Longhurst@pdce.com  
Project Name: Warner 6-14  
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)	TPH - DRO														
SS44 @ 18'	6/4/2019	9:33	1			X			X				X	X													
SS45 @ 11'	6/4/2019	9:48	1			X			X				X	X													
SS46 @ 17'	6/4/2019	9:51	1			X			X				X	X													
SS47 @ 11'	6/4/2019	11:04	1			X			X				X	X													
SS48 @ 17'	6/4/2019	11:07	1			X			X				X	X													
SS49 @ 7'	6/4/2019	1:48	1			X			X				X	X													
SS50 @ 9'	6/4/2019	2:00	1			X			X				X	X													
Relinquished by:  6/4/19 4:08				Date/Time:				Received by:  6-4-19 17:20				Date/Time:				Turn Around Time (Check)											
Relinquished by:				Date/Time:				Received by:				Date/Time:				Same Day <input checked="" type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input type="checkbox"/> 48 Hours <input type="checkbox"/>											
Relinquished by:				Date/Time:				Received in Lab by:				Date/Time:				Sample Integrity: Temperature Upon Receipt: <u>1.4</u> Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>											

### Sample Receipt Checklist

S2 Work Order 1906019

Client: PDC Client Project ID: Warner 6-14

Shipped Via: ☐ H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: \_\_\_\_\_

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

Temp (°C)	1.4
-----------	-----

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.				
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact <sup>(1)</sup> ?	<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"/>	Same Day TAT
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	<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) <sup>(1)</sup> ?	<input type="checkbox"/>	<input type="checkbox"/>	<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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<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.

MP

Custodian Printed Name or Initials

*Muri Premer*

Signature of Custodian

6/4/19

Date/Time



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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/05/19 17:28

**SS44@18'**  
**1906019-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/04/19 09:33**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1906024	06/04/19	06/04/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/04/19 09:33**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/04/19 09:33**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	1906025	06/04/19	06/04/19	EPA 8015M	

Date Sampled: **06/04/19 09:33**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		93.4 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/05/19 17:28

**SS45@11'**  
**1906019-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/04/19 09:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1906024	06/04/19	06/04/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>15</b>	0.50	"	"	"	"	"	"	

Date Sampled: **06/04/19 09:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		95.2 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/04/19 09:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>C10-C28 (DRO)</b>	<b>76</b>	50	mg/kg	1	1906025	06/04/19	06/04/19	EPA 8015M	

Date Sampled: **06/04/19 09:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		99.2 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
06/05/19 17:28

**SS46@17'**  
**1906019-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/04/19 09:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1906024	06/04/19	06/05/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.017</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.012</b>	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>5.1</b>	0.50	"	"	"	"	"	"	

Date Sampled: **06/04/19 09:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		112 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/04/19 09:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1906025	06/04/19	06/04/19	EPA 8015M	

Date Sampled: **06/04/19 09:51**

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

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/05/19 17:28

**SS47@11'**  
**1906019-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/04/19 11:04**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1906024	06/04/19	06/04/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>2.1</b>	0.50	"	"	"	"	"	"	

Date Sampled: **06/04/19 11:04**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		132 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		107 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		140 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/04/19 11:04**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1906025	06/04/19	06/04/19	EPA 8015M	

Date Sampled: **06/04/19 11:04**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		99.6 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/05/19 17:28

**SS48@17'**  
**1906019-05 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/04/19 11:07**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1906024	06/04/19	06/04/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/04/19 11:07**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/04/19 11:07**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1906025	06/04/19	06/04/19	EPA 8015M	

Date Sampled: **06/04/19 11:07**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		101 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/05/19 17:28

**SS49@7'**  
**1906019-06 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/04/19 13:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1906024	06/04/19	06/05/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.15</b>	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>24</b>	0.50	"	"	"	"	"	"	

Date Sampled: **06/04/19 13:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		112 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		150 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/04/19 13:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>C10-C28 (DRO)</b>	<b>250</b>	50	mg/kg	1	1906025	06/04/19	06/04/19	EPA 8015M	

Date Sampled: **06/04/19 13:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		110 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/05/19 17:28

**SS50@9'**  
**1906019-07 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/04/19 14:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1906024	06/04/19	06/04/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/04/19 14:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		120 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/04/19 14:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1906025	06/04/19	06/04/19	EPA 8015M	

Date Sampled: **06/04/19 14:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		121 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/05/19 17:28

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

### Summit Scientific

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

#### Batch 1906024 - EPA 5030 Soil MS

##### Blank (1906024-BLK1)

Prepared: 06/04/19 Analyzed: 06/05/19

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Naphthalene	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0417		"	0.0400		104	23-173			
Surrogate: Toluene-d8	0.0408		"	0.0400		102	20-170			
Surrogate: 4-Bromofluorobenzene	0.0413		"	0.0400		103	21-167			

##### LCS (1906024-BS1)

Prepared: 06/04/19 Analyzed: 06/05/19

Benzene	0.0936	0.0020	mg/kg	0.100		93.6	70-130			
Toluene	0.101	0.0050	"	0.100		101	70-130			
Ethylbenzene	0.110	0.0050	"	0.100		110	70-130			
m,p-Xylene	0.216	0.010	"	0.200		108	70-130			
o-Xylene	0.103	0.0050	"	0.100		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0407		"	0.0400		102	23-173			
Surrogate: Toluene-d8	0.0406		"	0.0400		102	20-170			
Surrogate: 4-Bromofluorobenzene	0.0407		"	0.0400		102	21-167			

##### Matrix Spike (1906024-MS1)

Source: 1906017-01

Prepared: 06/04/19 Analyzed: 06/05/19

Benzene	0.118	0.0020	mg/kg	0.100	ND	118	70-130			
Toluene	0.126	0.0050	"	0.100	0.00612	120	70-130			
Ethylbenzene	0.123	0.0050	"	0.100	ND	123	70-130			
m,p-Xylene	0.218	0.010	"	0.200	0.00909	105	70-130			
o-Xylene	0.126	0.0050	"	0.100	ND	126	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0244		"	0.0400		61.0	23-173			
Surrogate: Toluene-d8	0.0480		"	0.0400		120	20-170			
Surrogate: 4-Bromofluorobenzene	0.0464		"	0.0400		116	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: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
06/05/19 17:28

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

### Summit Scientific

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

#### Batch 1906024 - EPA 5030 Soil MS

##### Matrix Spike Dup (1906024-MSD1)

Source: 1906017-01

Prepared: 06/04/19 Analyzed: 06/05/19

Benzene	0.0950	0.0020	mg/kg	0.100	ND	95.0	70-130	21.6	30	
Toluene	0.105	0.0050	"	0.100	0.00612	99.2	70-130	17.7	30	
Ethylbenzene	0.114	0.0050	"	0.100	ND	114	70-130	7.71	30	
m,p-Xylene	0.239	0.010	"	0.200	0.00909	115	70-130	9.23	30	
o-Xylene	0.111	0.0050	"	0.100	ND	111	70-130	12.4	30	
Surrogate: 1,2-Dichloroethane-d4	0.0423		"	0.0400		106	23-173			
Surrogate: Toluene-d8	0.0410		"	0.0400		102	20-170			
Surrogate: 4-Bromofluorobenzene	0.0422		"	0.0400		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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/05/19 17:28

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

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

**Batch 1906025 - EPA 3550A**

**Blank (1906025-BLK1)**

Prepared: 06/04/19 Analyzed: 06/05/19

C10-C28 (DRO) ND 50 mg/kg

**LCS (1906025-BS1)**

Prepared: 06/04/19 Analyzed: 06/05/19

C10-C28 (DRO) 539 50 mg/kg 500 108 70-130

**Matrix Spike (1906025-MS1)**

**Source: 1906017-01**

Prepared: 06/04/19 Analyzed: 06/05/19

C10-C28 (DRO) 526 50 mg/kg 500 14.5 102 70-130

**Matrix Spike Dup (1906025-MSD1)**

**Source: 1906017-01**

Prepared: 06/04/19 Analyzed: 06/05/19

C10-C28 (DRO) 563 50 mg/kg 500 14.5 110 70-130 6.84 20

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: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**

06/05/19 17:28

### 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

June 06, 2019

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Warner 6-14

Work Order # 1906041

Enclosed are the results of analyses for samples received by Summit Scientific on 06/05/19 17:34. 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', with a stylized, cursive script.

Paul Shrewsbury

President



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

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
06/06/19 06:24

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS51@7'	1906041-01	Soil	06/05/19 09:38	06/05/19 17:34
SS52@9'	1906041-02	Soil	06/05/19 09:41	06/05/19 17:34
SS53@12'	1906041-03	Soil	06/05/19 09:48	06/05/19 17:34
SS54@7'	1906041-04	Soil	06/05/19 10:06	06/05/19 17:34
SS55@9'	1906041-05	Soil	06/05/19 10:09	06/05/19 17:34
SS56@12'	1906041-06	Soil	06/05/19 10:12	06/05/19 17:34

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

1906041

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: Jake McCarver

Project Manager: Mark Longhurst  
E-Mail: Mark.Longhurst@pdce.com  
Project Name: Warner 6-14  
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)	TPH - DRO												
SS51 @ 7'	6/5/2019	9:38	1			X			X				X	X											
SS52 @ 9'	6/5/2019	9:41	1			X			X				X	X											
SS53 @ 12'	6/5/2019	9:48	1			X			X				X	X											
SS54 @ 7'	6/5/2019	10:06	1			X			X				X	X											
SS55 @ 9'	6/5/2019	10:09	1			X			X				X	X											
SS56 @ 12'	6/5/2019	10:12	1			X			X				X	X											

Relinquished by: 	Date/Time: 6/5/19 3:52 1734	Received by: 	Date/Time: 6/05/19 1734	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input type="checkbox"/> 48 Hours <input type="checkbox"/>
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity: Temperature Upon Receipt: 6.5 Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:	

# Sample Receipt Checklist

S2 Work Order 1906041

Client: PDC Client Project ID: WARNER 6-14

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>6.5</u>
-----------	------------

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C <sup>(1)</sup> ? 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"/>			<u>on ICE</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 samples with holding times due within 48 hours sample due within 48 hours present?	<input checked="" type="checkbox"/>			<u>SAME DAY TAT</u>
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> ? 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> ? 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.				

RZ  
Custodian Printed Name or Initials

[Signature]  
Signature of Custodian

06/05/19  
Date/Time 1818



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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/06/19 06:24

**SS51@7'**  
**1906041-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/05/19 09:38**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1906051	06/05/19	06/05/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/05/19 09:38**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		88.2 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		90.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.9 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/05/19 09:38**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	1906053	06/05/19	06/05/19	EPA 8015M	

Date Sampled: **06/05/19 09:38**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		91.1 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/06/19 06:24

**SS52@9'**  
**1906041-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/05/19 09:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1906051	06/05/19	06/05/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/05/19 09:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		82.5 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		91.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.0 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/05/19 09:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1906053	06/05/19	06/05/19	EPA 8015M	

Date Sampled: **06/05/19 09:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		95.2 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/06/19 06:24

**SS53@12'**  
**1906041-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/05/19 09:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1906051	06/05/19	06/05/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/05/19 09:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		87.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		92.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.2 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/05/19 09:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1906053	06/05/19	06/05/19	EPA 8015M	

Date Sampled: **06/05/19 09:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		52.7 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/06/19 06:24

**SS54@7'**  
**1906041-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/05/19 10:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1906051	06/05/19	06/05/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/05/19 10:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		78.7 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		92.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.9 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/05/19 10:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1906053	06/05/19	06/05/19	EPA 8015M	

Date Sampled: **06/05/19 10:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		107 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/06/19 06:24

**SS55@9'**  
**1906041-05 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/05/19 10:09**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1906051	06/05/19	06/05/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/05/19 10:09**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		82.3 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		93.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.3 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/05/19 10:09**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1906053	06/05/19	06/05/19	EPA 8015M	

Date Sampled: **06/05/19 10:09**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		101 %	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: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/06/19 06:24

**SS56@12'**  
**1906041-06 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/05/19 10:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1906051	06/05/19	06/05/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/05/19 10:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		82.2 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		92.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.7 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/05/19 10:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1906053	06/05/19	06/06/19	EPA 8015M	

Date Sampled: **06/05/19 10:12**

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

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/06/19 06:24

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

### Summit Scientific

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

#### Batch 1906051 - EPA 5030 Soil MS

##### Blank (1906051-BLK1)

Prepared: 06/05/19 Analyzed: 06/06/19

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Naphthalene	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0323		"	0.0400		80.8	23-173			
Surrogate: Toluene-d8	0.0367		"	0.0400		91.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0368		"	0.0400		92.1	21-167			

##### LCS (1906051-BS1)

Prepared: 06/05/19 Analyzed: 06/06/19

Benzene	0.107	0.0020	mg/kg	0.100		107	70-130			
Toluene	0.107	0.0050	"	0.100		107	70-130			
Ethylbenzene	0.117	0.0050	"	0.100		117	70-130			
m,p-Xylene	0.233	0.010	"	0.200		116	70-130			
o-Xylene	0.119	0.0050	"	0.100		119	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0315		"	0.0400		78.7	23-173			
Surrogate: Toluene-d8	0.0383		"	0.0400		95.7	20-170			
Surrogate: 4-Bromofluorobenzene	0.0362		"	0.0400		90.5	21-167			

##### Matrix Spike (1906051-MS1)

Source: 1906040-01

Prepared: 06/05/19 Analyzed: 06/06/19

Benzene	0.105	0.0020	mg/kg	0.100	ND	105	70-130			
Toluene	0.108	0.0050	"	0.100	ND	108	70-130			
Ethylbenzene	0.118	0.0050	"	0.100	ND	118	70-130			
m,p-Xylene	0.235	0.010	"	0.200	ND	117	70-130			
o-Xylene	0.120	0.0050	"	0.100	ND	120	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0324		"	0.0400		81.0	23-173			
Surrogate: Toluene-d8	0.0374		"	0.0400		93.5	20-170			
Surrogate: 4-Bromofluorobenzene	0.0362		"	0.0400		90.4	21-167			

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

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06/06/19 06:24

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

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

**Batch 1906051 - EPA 5030 Soil MS**

Matrix Spike Dup (1906051-MSD1)		Source: 1906040-01			Prepared: 06/05/19 Analyzed: 06/06/19					
Benzene	0.107	0.0020	mg/kg	0.100	ND	107	70-130	1.75	30	
Toluene	0.109	0.0050	"	0.100	ND	109	70-130	0.803	30	
Ethylbenzene	0.124	0.0050	"	0.100	ND	124	70-130	4.88	30	
m,p-Xylene	0.242	0.010	"	0.200	ND	121	70-130	3.07	30	
o-Xylene	0.123	0.0050	"	0.100	ND	123	70-130	1.80	30	
<hr/>										
Surrogate: 1,2-Dichloroethane-d4	0.0316		"	0.0400		79.1	23-173			
Surrogate: Toluene-d8	0.0365		"	0.0400		91.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0358		"	0.0400		89.6	21-167			

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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/06/19 06:24

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

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

**Batch 1906053 - EPA 3550A**

**Blank (1906053-BLK1)**

Prepared: 06/05/19 Analyzed: 06/06/19

C10-C28 (DRO) ND 50 mg/kg

**LCS (1906053-BS1)**

Prepared: 06/05/19 Analyzed: 06/06/19

C10-C28 (DRO) 614 50 mg/kg 500 123 70-130

**Matrix Spike (1906053-MS1)**

**Source: 1906040-01**

Prepared: 06/05/19 Analyzed: 06/06/19

C10-C28 (DRO) 514 50 mg/kg 500 19.0 99.0 70-130

**Matrix Spike Dup (1906053-MSD1)**

**Source: 1906040-01**

Prepared: 06/05/19 Analyzed: 06/06/19

C10-C28 (DRO) 515 50 mg/kg 500 19.0 99.1 70-130 0.111 20

Summit Scientific

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PDC Energy

1775 Sherman St. STE. 3000

Denver CO, 80203

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**

06/06/19 06:24

### 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