

**TABLE 1**  
**FORMER WARNER 6-14 TANK BATTERY**  
**INITIAL INVESTIGATION - SOIL ANALYTICAL RESULTS SUMMARY TABLE**

Sample ID	Date Sampled	Depth (ft bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	TPH <sup>(2)</sup> (mg/kg)	VOC Concentration <sup>(3)</sup> (ppm)
<b>COGCC Table 910-1 Soil Standard (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>	<b>-</b>
SS01 @ 7'	4/24/2019	7	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	3.8
SS02 @ 10'	4/24/2019	10	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	5.5
SS03 @ 10'	4/24/2019	10	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	1.5
SS04 @ 7'	4/25/2019	7	<0.0020	<0.0050	0.012	<0.010	0.053	13	50.7
SS05 @ 7'	4/26/2019	7	0.0091	<0.0050	0.030	<0.010	0.013	62.8	127.3
SS06 @ 7'	4/29/2019	7	<0.0020	<0.0050	<0.0050	<0.010	<0.010	890	332.0
SS07 @ 9'	4/29/2019	9	<0.0020	<0.0050	<0.0050	<0.010	<0.010	61.4	343.0
SS08 @ 9'	4/29/2019	9	<0.0020	<0.0050	<0.0050	<0.010	<0.010	4.5	47.6
SS09 @ 9'	4/30/2019	9	<0.0020	<0.0050	<0.0050	<0.010	<0.010	5.0	1.8
SS10 @ 7'	4/30/2019	7	<0.0020	<0.0050	<0.0050	<0.010	<0.010	0.54	0.1
SS11 @ 9'	4/30/2019	9	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	0.6
SS12 @ 12'	4/30/2019	12	<0.0020	<0.0050	0.020	0.036	0.011	1.3	137.0
SS13 @ 7'	5/2/2019	7	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	0.0
SS14 @ 9'	5/2/2019	9	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	132
SS15 @ 12'	5/3/2019	12	<0.0020	<0.0050	<0.0050	<0.010	<0.010	3.0	10.1
SS16 @ 7'	5/3/2019	7	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	2.0
SS17 @ 9'	5/3/2019	9	0.013	<0.0050	0.11	1.3	0.093	130	65.1
SS18 @ 7'	5/3/2019	7	<0.0020	<0.0050	<0.0050	<0.010	<0.010	2.3	2.6
SS19 @ 9'	5/3/2019	9	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	3.1
SS20 @ 7'	5/6/2019	7	<0.0020	<0.0050	<0.0050	<0.010	<0.010	5.3	8.6
SS21 @ 9'	5/6/2019	9	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	0.0
SS22 @ 12'	5/6/2019	12	0.0061	<0.0050	0.059	1.2	0.028	34	16.9
SS23 @ 7'	5/13/2019	7	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	0.0
SS24 @ 9'	5/13/2019	9	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	14.0
SS25 @ 12'	5/13/2019	12	<0.0020	<0.0050	<0.0050	0.015	<0.010	<50	6.8
SS26 @ 7'	5/13/2019	7	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	4.9
SS27 @ 9'	5/13/2019	9	<0.0020	<0.0050	0.036	0.16	0.040	202	152.3
SS28 @ 12'	5/14/2019	12	<0.0020	<0.0050	<0.0050	<0.010	<0.010	1.4	85.1
SS29 @ 7'	5/16/2019	7	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	2.7
SS30 @ 10'	5/16/2019	10	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	15.4
SS31 @ 17'	5/16/2019	17	0.038	0.027	0.056	0.53	0.046	139	326.0
SS32 @ 11'	5/17/2019	11	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	5.4
SS33 @ 18.5'	5/17/2019	18.5	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	19.7
SS34 @ 17'	5/17/2019	17	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	11.2
SS35 @ 11'	5/17/2019	11	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	4.1
SS36 @ 17'	5/17/2019	17	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	0.6
SS37 @ 18.5'	5/17/2019	18.5	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	37.9
SS38 @ 11'	5/30/2019	11	<0.0020	<0.0050	<0.0050	<0.010	0.11	133	219.0
SS39 @ 11'	5/31/2019	11	<0.0020	<0.0050	<0.0050	0.014	0.013	82.7	228.0
SS40 @ 17'	5/31/2019	17	<0.0020	<0.0050	0.11	0.12	0.037	101.9	205.0
SS41 @ 18'	5/31/2019	18	0.0052	<0.0050	0.022	0.049	<0.010	0.88	184.0
SS42 @ 11'	6/3/2019	11	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	1.9
SS43 @ 17'	6/3/2019	17	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	0.8
SS44 @ 18'	6/4/2019	18	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	27.1
SS45 @ 11'	6/4/2019	11	<0.0020	<0.0050	<0.0050	<0.010	<0.010	91	207.0
SS46 @ 17'	6/4/2019	17	<0.0020	<0.0050	0.017	0.012	<0.010	5.1	125.0
SS47 @ 11'	6/4/2019	11	<0.0020	<0.0050	<0.0050	<0.010	<0.010	2.1	45.0
SS48 @ 17'	6/4/2019	17	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	61.0
SS49 @ 7'	6/4/2019	7	<0.0020	<0.0050	0.15	<0.010	<0.010	274	174.0
SS50 @ 9'	6/4/2019	9	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	2.7

**TABLE 1**  
**FORMER WARNER 6-14 TANK BATTERY**  
**INITIAL INVESTIGATION - SOIL ANALYTICAL RESULTS SUMMARY TABLE**

Sample ID	Date Sampled	Depth (ft bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	TPH <sup>(2)</sup> (mg/kg)	VOC Concentration <sup>(3)</sup> (ppm)
<b>COGCC Table 910-1 Soil Standard (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>	<b>-</b>
SS51 @ 7'	6/5/2019	7	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	0.3
SS52 @ 9'	6/5/2019	9	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	0.7
SS53 @ 12'	6/5/2019	12	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	0.5
SS54 @ 7'	6/5/2019	7	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	0.1
SS55 @ 9'	6/5/2019	9	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	0.2
SS56 @ 12'	6/5/2019	12	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	19.0

**Notes:**

- Standards for soil are taken from 2 CCR 404-1, Table 910-1, effective May 1, 2018.
- TPH - Total volatile and extractable petroleum hydrocarbons. Value calculated by adding GRO and DRO concentrations.
- Volatile organic compound (VOC) concentrations are measured in the field using a photoionization detector (PID).

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

ft bgs = Feet below ground surface

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

**TABLE 2**  
**FORMER WARNER 6-14 TANK BATTERY**  
**SUPPLEMENTAL INVESTIGATION - SOIL ANALYTICAL RESULTS SUMMARY TABLE**

Sample ID	Date Sampled	Depth (ft 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 Table 910-1 Soil Standard (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>
BH01 @ 11-12'	7/8/2019	11 - 12	0.089	<0.0050	0.36	2.2	0.11	352
BH01 @ 18-18.5'	7/8/2019	18 - 18.5	0.071	0.25	0.059	0.53	0.024	69.9
BH02 @ 8-9'	7/30/2019	8 - 9	0.0058	<0.0050	0.13	0.73	0.059	100
BH02 @ 23-24'	7/30/2019	23 - 24	<0.0020	<0.0050	<0.0050	<0.010	<0.010	72.77
BH04 @ 13-14'	7/31/2019	13 - 14	<0.0020	<0.0050	<0.0050	0.022	<0.010	61.98
BH04 @ 23-24'	7/31/2019	23 - 24	0.0057	<0.0050	0.0086	0.082	<0.010	1.4
BH04 @ 28-29'	7/31/2019	28 - 29	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
BH05 @ 13-14'	7/31/2019	13 - 14	0.011	<0.0050	0.099	0.23	0.041	196.6
BH05 @ 23-24'	7/31/2019	23 - 24	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
BH06 @ 23-24'	7/31/2019	23 - 24	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
BH07 @ 23-34'	7/31/2019	23 - 24	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
BH08 @ 16-17'	7/31/2019	16 - 17	<0.0020	<0.0050	0.018	<0.010	<0.010	88.8
BH08 @ 23-24'	7/31/2019	23 - 24	0.015	0.051	0.036	0.42	0.020	62.7
BH08 @ 28-29'	7/31/2019	28 - 29	0.031	0.11	0.033	0.44	0.018	346.4

**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

ft bgs = Feet below ground surface

**TABLE 3**  
**FORMER WARNER 6-14 TANK BATTERY**  
**GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE**

Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth to Water <sup>(2)</sup> (ft)	Groundwater Elevation (ft AMSL)
<b>COGCC Table 910-1 Groundwater Standard (µg/L) <sup>(1)</sup></b>		<b>5</b>	<b>560</b>	<b>700</b>	<b>1,400</b>		
BH01	8/22/2019	<1.0	<1.0	<1.0	65	7.82 <sup>(3)</sup>	5,063.78
BH02	8/22/2019	Not Sampled - Dry				Dry <sup>(3)</sup>	NA
BH03	8/22/2019	Not Sampled - Dry				Dry <sup>(3)</sup>	NA
BH04	8/22/2019	Not Sampled - Dry				Dry <sup>(3)</sup>	NA
BH05	8/22/2019	Not Sampled - Dry				Dry <sup>(3)</sup>	NA
BH06	8/22/2019	Not Sampled - Dry				Dry <sup>(3)</sup>	NA
BH07	8/22/2019	Not Sampled - Dry				Dry <sup>(3)</sup>	NA
BH08	8/22/2019	Not Sampled - Dry				Dry <sup>(3)</sup>	NA

**Notes:**

1. Groundwater standards referenced from 2 CCR 404-1, Table 910-1, effective May 1, 2018.

2. Depth to water measurements were measured from ground surface for excavation samples. Monitoring well measurements were collected from top of casing and adjusted using survey data to reflect depth of water from ground surface.

3. Water level data collected on August 7, 2019.

COGCC = Colorado Oil and Gas Conservation Commission

µg/L = Micrograms per liter

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

ft = Feet

AMSL = Above Mean Sea Level

NA = Not applicable

## **ATTACHMENT A**

# Summit Scientific

---

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 15, 2019

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Warner 6-14

Work Order # 1907076

Enclosed are the results of analyses for samples received by Summit Scientific on 07/08/19 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:**  
07/15/19 13:20

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01@11-12'	1907076-01	Soil	07/08/19 11:17	07/08/19 17:30
BH01@18-18.5'	1907076-02	Soil	07/08/19 14:08	07/08/19 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

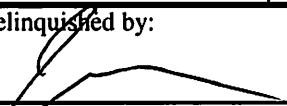
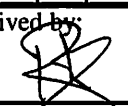
1907076

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													
BH01 @ 11-12'	7/8/2019	11:17	1			X			X				X	X												
BH01 @ 18-18.5'	7/8/2019	2:08	1			X			X				X	X												
Relinquished by: 				Date/Time: <u>7/8/19</u> <u>4:15</u> <u>17:36</u>				Received by: 				Date/Time: <u>07/08/19</u> <u>17:30</u>				Turn Around Time (Check)										
Relinquished by: _____				Date/Time: _____				Received by: _____				Date/Time: _____				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: _____				Date/Time: _____				Received in Lab by: _____				Date/Time: _____				Sample Integrity: <u>3.0</u> Temperature Upon Receipt: <u>3.0</u> Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No										



# Sample Receipt Checklist

S2 Work Order

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)

3.8

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	
Are samples with holding times due within 48 hours sample due within 48 hours present?		✓		
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	✓			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	X			
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> ?	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> ?			X	
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> ?			X	
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.

Custodian Printed Name or Initials

Signature of Custodian

Date/Time

07/08/19  
1801



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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
07/15/19 13:20

**BH01@11-12'**  
**1907076-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **07/08/19 11:17**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Benzene</b>	<b>0.089</b>	0.0020	mg/kg	1	1907108	07/09/19	07/11/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.36</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>2.2</b>	0.010	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>0.11</b>	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>32</b>	0.50	"	"	"	"	"	"	

Date Sampled: **07/08/19 11:17**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		107 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		190 %	21-167		"	"	"	"	S-02

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/08/19 11:17**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>C10-C28 (DRO)</b>	<b>320</b>	50	mg/kg	1	1907109	07/09/19	07/12/19	EPA 8015M	

Date Sampled: **07/08/19 11:17**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		102 %	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:**  
07/15/19 13:20

**BH01@18-18.5'**  
**1907076-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **07/08/19 14:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>Benzene</b>	<b>0.071</b>	0.0020	mg/kg	1	1907108	07/09/19	07/11/19	EPA 8260B	
<b>Toluene</b>	<b>0.25</b>	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.059</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.53</b>	0.010	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>0.024</b>	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>7.9</b>	0.50	"	"	"	"	"	"	

Date Sampled: **07/08/19 14:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<i>Surrogate: 1,2-Dichloroethane-d4</i>		106 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		104 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		113 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/08/19 14:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>C10-C28 (DRO)</b>	<b>62</b>	50	mg/kg	1	1907109	07/09/19	07/12/19	EPA 8015M	

Date Sampled: **07/08/19 14:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<i>Surrogate: o-Terphenyl</i>		103 %	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:**  
07/15/19 13:20

## 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 1907108 - EPA 5030 Soil MS

##### Blank (1907108-BLK1)

Prepared & Analyzed: 07/09/19

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	0.0411		"	0.0400		103	23-173			
Surrogate: Toluene-d8	0.0418		"	0.0400		104	20-170			
Surrogate: 4-Bromofluorobenzene	0.0415		"	0.0400		104	21-167			

##### LCS (1907108-BS1)

Prepared & Analyzed: 07/09/19

Benzene	0.0719	0.0020	mg/kg	0.100		71.9	70-130			
Toluene	0.0829	0.0050	"	0.100		82.9	70-130			
Ethylbenzene	0.0730	0.0050	"	0.100		73.0	70-130			
m,p-Xylene	0.150	0.010	"	0.200		75.0	70-130			
o-Xylene	0.0782	0.0050	"	0.100		78.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0400		"	0.0400		99.9	23-173			
Surrogate: Toluene-d8	0.0438		"	0.0400		110	20-170			
Surrogate: 4-Bromofluorobenzene	0.0391		"	0.0400		97.8	21-167			

##### Matrix Spike (1907108-MS1)

Source: 1907070-01

Prepared & Analyzed: 07/09/19

Benzene	0.0716	0.0020	mg/kg	0.100	ND	71.6	70-130			
Toluene	0.0802	0.0050	"	0.100	ND	80.2	70-130			
Ethylbenzene	0.0799	0.0050	"	0.100	ND	79.9	70-130			
m,p-Xylene	0.141	0.010	"	0.200	ND	70.6	70-130			
o-Xylene	0.0737	0.0050	"	0.100	ND	73.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0424		"	0.0400		106	23-173			
Surrogate: Toluene-d8	0.0426		"	0.0400		106	20-170			
Surrogate: 4-Bromofluorobenzene	0.0382		"	0.0400		95.6	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:**  
07/15/19 13:20

## 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 1907108 - EPA 5030 Soil MS

Matrix Spike Dup (1907108-MSD1)	Source: 1907070-01			Prepared & Analyzed: 07/09/19						
Benzene	0.0717	0.0020	mg/kg	0.100	ND	71.7	70-130	0.126	30	
Toluene	0.0840	0.0050	"	0.100	ND	84.0	70-130	4.68	30	
Ethylbenzene	0.0704	0.0050	"	0.100	ND	70.4	70-130	12.7	30	
m,p-Xylene	0.147	0.010	"	0.200	ND	73.5	70-130	4.02	30	
o-Xylene	0.0777	0.0050	"	0.100	ND	77.7	70-130	5.35	30	
Surrogate: 1,2-Dichloroethane-d4	0.0409		"	0.0400		102	23-173			
Surrogate: Toluene-d8	0.0442		"	0.0400		110	20-170			
Surrogate: 4-Bromofluorobenzene	0.0391		"	0.0400		97.8	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:**  
07/15/19 13:20

**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 1907109 - EPA 3550A**

**Blank (1907109-BLK1)**

Prepared: 07/09/19 Analyzed: 07/10/19

C10-C28 (DRO) ND 50 mg/kg

**LCS (1907109-BS1)**

Prepared: 07/09/19 Analyzed: 07/10/19

C10-C28 (DRO) 480 50 mg/kg 500 95.9 70-130

**Matrix Spike (1907109-MS1)**

**Source: 1907072-01**

Prepared: 07/09/19 Analyzed: 07/10/19

C10-C28 (DRO) 479 50 mg/kg 500 29.5 89.9 70-130

**Matrix Spike Dup (1907109-MSD1)**

**Source: 1907072-01**

Prepared: 07/09/19 Analyzed: 07/10/19

C10-C28 (DRO) 476 50 mg/kg 500 29.5 89.2 70-130 0.738 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:**  
07/15/19 13:20

### Notes and Definitions

S-02	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
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

August 06, 2019

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

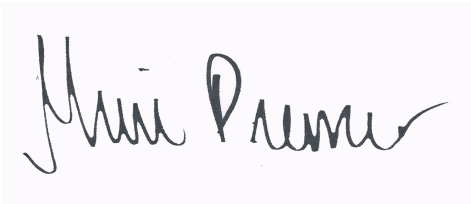
Denver, CO 80203

RE: Warner 6-14

Work Order # 1907370

Enclosed are the results of analyses for samples received by Summit Scientific on 07/30/19 17:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Muri Premer", on a light blue background.

Muri Premer For Ben Shrewsbury

Laboratory Manager





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

Project: Warner 6-14

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
08/06/19 14:32

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH02@8-9'	1907370-01	Soil	07/30/19 11:57	07/30/19 17:30
BH02@23-24'	1907370-02	Soil	07/30/19 12:41	07/30/19 17:30


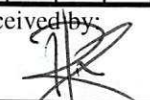
Summit Scientific

*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.*

## 1907370

Page 1 of 1

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												
BH02 @ 8-9'	7/30/2019	11:57	1		X			X				X	X												
BH02 @ 23-24'	7/30/2019	12:41	1		X			X				X	X												
Relinquished by:  7/30/19 4:43				Date/Time: 1730				Received by:  7/30/19 1730				Date/Time: 1730				Turn Around Time (Check)									
																Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/>									
Relinquished by:				Date/Time:				Received by:				Date/Time:				24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/>									
																48 Hours <input type="checkbox"/>									
Relinquished by:				Date/Time:				Received in Lab by:				Date/Time:				Sample Integrity:									
																Temperature Upon Receipt: 5.4									
																Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>									

1907370

## Sample Receipt Checklist

S2 Work Order \_\_\_\_\_

Client: PDC Client Project ID: WARNER 6-14Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: \_\_\_\_\_
☐ ☒ ☐ ☐ ☐
Matrix (check all that apply): ☐ Air ☒ Soil/Solid ☐ Water ☐ Other: \_\_\_\_\_  
(Describe)

Temp (°C)	5.4
-----------	-----

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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	On Ice
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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , 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.

RZ

Custodian Printed Name or Initials

RZ

Signature of Custodian

7/30/19

Date/Time



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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
08/06/19 14:32

**BH02@8-9'**  
**1907370-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **07/30/19 11:57**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Benzene</b>	<b>0.0058</b>	0.0020	mg/kg	1	1908025	08/02/19	08/03/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.13</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.73</b>	0.010	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>0.059</b>	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>11</b>	0.50	"	"	"	"	"	"	

Date Sampled: **07/30/19 11:57**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		79.7 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		93.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		135 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/30/19 11:57**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>C10-C28 (DRO)</b>	<b>89</b>	50	mg/kg	1	1908026	08/02/19	08/02/19	EPA 8015M	

Date Sampled: **07/30/19 11:57**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		111 %	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:**  
08/06/19 14:32

**BH02@23-24'**  
**1907370-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **07/30/19 12:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1908025	08/02/19	08/03/19	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>0.77</b>	0.50	"	"	"	"	"	"	

Date Sampled: **07/30/19 12:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		88.6 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		94.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.8 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/30/19 12:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>C10-C28 (DRO)</b>	<b>72</b>	50	mg/kg	1	1908026	08/02/19	08/02/19	EPA 8015M	

Date Sampled: **07/30/19 12:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		111 %	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:**  
08/06/19 14:32

## 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 1908025 - EPA 5030 Soil MS

##### Blank (1908025-BLK1)

Prepared & Analyzed: 08/02/19

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	0.0349		"	0.0400		87.3	23-173			
Surrogate: Toluene-d8	0.0352		"	0.0400		88.0	20-170			
Surrogate: 4-Bromofluorobenzene	0.0379		"	0.0400		94.6	21-167			

##### LCS (1908025-BS1)

Prepared & Analyzed: 08/02/19

Benzene	0.0710	0.0020	mg/kg	0.100		71.0	70-130			
Toluene	0.0751	0.0050	"	0.100		75.1	70-130			
Ethylbenzene	0.0801	0.0050	"	0.100		80.1	70-130			
m,p-Xylene	0.153	0.010	"	0.200		76.7	70-130			
o-Xylene	0.0776	0.0050	"	0.100		77.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0301		"	0.0400		75.2	23-173			
Surrogate: Toluene-d8	0.0374		"	0.0400		93.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0374		"	0.0400		93.4	21-167			

##### Matrix Spike (1908025-MS1)

Source: 1908005-01

Prepared: 08/02/19 Analyzed: 08/03/19

Benzene	0.0723	0.0020	mg/kg	0.100	ND	72.3	70-130			
Toluene	0.0771	0.0050	"	0.100	ND	77.1	70-130			
Ethylbenzene	0.0811	0.0050	"	0.100	ND	81.1	70-130			
m,p-Xylene	0.156	0.010	"	0.200	ND	78.0	70-130			
o-Xylene	0.0793	0.0050	"	0.100	ND	79.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0324		"	0.0400		81.1	23-173			
Surrogate: Toluene-d8	0.0375		"	0.0400		93.7	20-170			
Surrogate: 4-Bromofluorobenzene	0.0362		"	0.0400		90.4	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:**  
08/06/19 14:32

## 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 1908025 - EPA 5030 Soil MS

##### Matrix Spike Dup (1908025-MSD1)

Source: 1908005-01

Prepared: 08/02/19 Analyzed: 08/03/19

Benzene	0.0847	0.0020	mg/kg	0.100	ND	84.7	70-130	15.8	30	
Toluene	0.0738	0.0050	"	0.100	ND	73.8	70-130	4.33	30	
Ethylbenzene	0.0756	0.0050	"	0.100	ND	75.6	70-130	7.08	30	
m,p-Xylene	0.147	0.010	"	0.200	ND	73.3	70-130	6.20	30	
o-Xylene	0.0739	0.0050	"	0.100	ND	73.9	70-130	7.05	30	
Surrogate: 1,2-Dichloroethane-d4	0.0315		"	0.0400		78.8	23-173			
Surrogate: Toluene-d8	0.0380		"	0.0400		95.1	20-170			
Surrogate: 4-Bromofluorobenzene	0.0368		"	0.0400		91.9	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:**  
08/06/19 14:32

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

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

**Batch 1908026 - EPA 3550A**

**Blank (1908026-BLK1)**

Prepared & Analyzed: 08/02/19

C10-C28 (DRO) ND 50 mg/kg

**LCS (1908026-BS1)**

Prepared & Analyzed: 08/02/19

C10-C28 (DRO) 610 50 mg/kg 500 122 70-130

**Matrix Spike (1908026-MS1)**

**Source: 1908005-01**

Prepared & Analyzed: 08/02/19

C10-C28 (DRO) 577 50 mg/kg 500 38.9 108 70-130

**Matrix Spike Dup (1908026-MSD1)**

**Source: 1908005-01**

Prepared & Analyzed: 08/02/19

C10-C28 (DRO) 552 50 mg/kg 500 38.9 103 70-130 4.34 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:**

08/06/19 14:32

### 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

August 07, 2019

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

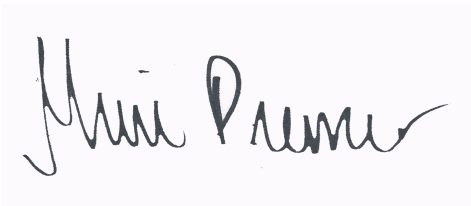
Denver, CO 80203

RE: Warner 6-14

Work Order # 1907394

Enclosed are the results of analyses for samples received by Summit Scientific on 07/31/19 18:30. 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:**  
08/07/19 09:29

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH04@13-14'	1907394-01	Soil	07/31/19 09:04	07/31/19 18:30
BH04@23-24'	1907394-02	Soil	07/31/19 09:08	07/31/19 18:30
BH04@28-29'	1907394-03	Soil	07/31/19 09:15	07/31/19 18:30
BH05@13-14'	1907394-04	Soil	07/31/19 10:38	07/31/19 18:30
BH05@23-24'	1907394-05	Soil	07/31/19 10:53	07/31/19 18:30
BH06@23-24'	1907394-06	Soil	07/31/19 12:22	07/31/19 18:30
BH07@23-24'	1907394-07	Soil	07/31/19 13:53	07/31/19 18:30
BH08@16-17'	1907394-08	Soil	07/31/19 15:02	07/31/19 18:30
BH08@23-24'	1907394-09	Soil	07/31/19 15:10	07/31/19 18:30
BH08@28-29'	1907394-10	Soil	07/31/19 15:36	07/31/19 18:30

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.*

1907394

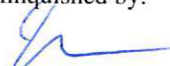

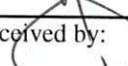
# Summit Scientific

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

Page \_\_\_\_\_ of \_\_\_\_\_

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											
BH04 @ 13-14'	7/31/2019	9:04	1			X			X				X	X										
BH04 @ 23-24'	7/31/2019	9:08	1			X			X				X	X										
BH04 @ 28-29'	7/31/2019	9:15	1			X			X				X	X										
BH05 @ 13-14'	7/31/2019	10:38	1			X			X				X	X										
BH05 @ 23-24'	7/31/2019	10:53	1			X			X				X	X										
BH06 @ 23-24'	7/31/2019	12:22	1			X			X				X	X										
BH07 @ 23-24'	7/31/2019	1:53	1			X			X				X	X										
BH08 @ 16-17'	7/31/2019	3:02	1			X			X				X	X										
BH08 @ 23-24'	7/31/2019	3:10	1			X			X				X	X										
BH08 @ 28-29'	7/31/2019	3:36	1			X			X				X	X										
Relinquished by:  Date/Time: 7/31/2019 5:18 PM				Received by:  Date/Time: 7/31/2019 1:20 PM				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: _____ Date/Time: _____				Received by:  Date/Time: _____				Sample Integrity: Temperature Upon Receipt: 3.2 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

1907394

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)

3.2

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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	On Ice
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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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.

RZ

Custodian Printed Name or Initials

Signature of Custodian

7/31/19

Date/Time



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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
08/07/19 09:29

**BH04@13-14'**  
**1907394-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **07/31/19 09:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1908004	08/01/19	08/02/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.022</b>	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>0.98</b>	0.50	"	"	"	"	"	"	

Date Sampled: **07/31/19 09:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		89.2 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		91.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.6 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/31/19 09:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>C10-C28 (DRO)</b>	<b>61</b>	50	mg/kg	1	1908002	08/01/19	08/02/19	EPA 8015M	

Date Sampled: **07/31/19 09:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
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:**  
08/07/19 09:29

**BH04@23-24'**  
**1907394-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **07/31/19 09:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>0.0057</b>	0.0020	mg/kg	1	1908004	08/01/19	08/02/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.0086</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.082</b>	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>1.4</b>	0.50	"	"	"	"	"	"	

Date Sampled: **07/31/19 09:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		83.6 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		88.9 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		96.2 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/31/19 09:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1908002	08/01/19	08/02/19	EPA 8015M	

Date Sampled: **07/31/19 09:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		106 %	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:**  
08/07/19 09:29

**BH04@28-29'**  
**1907394-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **07/31/19 09:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1908004	08/01/19	08/02/19	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: **07/31/19 09:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		86.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		88.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.9 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/31/19 09:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1908002	08/01/19	08/02/19	EPA 8015M	

Date Sampled: **07/31/19 09:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		115 %	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:**  
08/07/19 09:29

**BH05@13-14'**  
**1907394-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **07/31/19 10:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>Benzene</b>	<b>0.011</b>	0.0020	mg/kg	1	1908004	08/01/19	08/02/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.099</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.23</b>	0.010	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>0.041</b>	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>6.6</b>	0.50	"	"	"	"	"	"	

Date Sampled: **07/31/19 10:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		81.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		92.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		113 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/31/19 10:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>C10-C28 (DRO)</b>	<b>190</b>	50	mg/kg	1	1908002	08/01/19	08/02/19	EPA 8015M	

Date Sampled: **07/31/19 10:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		110 %	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:**  
08/07/19 09:29

**BH05@23-24'**  
**1907394-05 (Soil)**

**Summit Scientific**

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

Date Sampled: **07/31/19 10:53**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1908004	08/01/19	08/02/19	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: **07/31/19 10:53**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		84.9 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		87.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.0 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/31/19 10:53**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1908002	08/01/19	08/02/19	EPA 8015M	

Date Sampled: **07/31/19 10:53**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		110 %	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:**  
08/07/19 09:29

**BH06@23-24'**  
**1907394-06 (Soil)**

**Summit Scientific**

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

Date Sampled: **07/31/19 12:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1908004	08/01/19	08/02/19	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: **07/31/19 12:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		84.4 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		87.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.5 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/31/19 12:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1908002	08/01/19	08/02/19	EPA 8015M	

Date Sampled: **07/31/19 12:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		111 %	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:**  
08/07/19 09:29

**BH07@23-24'**  
**1907394-07 (Soil)**

**Summit Scientific**

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

Date Sampled: **07/31/19 13:53**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1908004	08/01/19	08/02/19	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: **07/31/19 13:53**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		87.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		87.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.0 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/31/19 13:53**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1908002	08/01/19	08/02/19	EPA 8015M	

Date Sampled: **07/31/19 13:53**

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:**  
08/07/19 09:29

**BH08@16-17'**  
**1907394-08 (Soil)**

**Summit Scientific**

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

Date Sampled: **07/31/19 15:02**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1908004	08/01/19	08/02/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.018</b>	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>2.8</b>	0.50	"	"	"	"	"	"	

Date Sampled: **07/31/19 15:02**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		82.4 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		109 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/31/19 15:02**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>C10-C28 (DRO)</b>	<b>86</b>	50	mg/kg	1	1908002	08/01/19	08/02/19	EPA 8015M	

Date Sampled: **07/31/19 15:02**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		105 %	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:**  
08/07/19 09:29

**BH08@23-24'**  
**1907394-09 (Soil)**

**Summit Scientific**

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

Date Sampled: **07/31/19 15:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>Benzene</b>	<b>0.015</b>	0.0020	mg/kg	1	1908004	08/01/19	08/02/19	EPA 8260B	
<b>Toluene</b>	<b>0.051</b>	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.036</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.42</b>	0.010	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>0.020</b>	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>5.7</b>	0.50	"	"	"	"	"	"	

Date Sampled: **07/31/19 15:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<i>Surrogate: 1,2-Dichloroethane-d4</i>		89.0 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		87.4 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		102 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/31/19 15:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>C10-C28 (DRO)</b>	<b>57</b>	50	mg/kg	1	1908002	08/01/19	08/02/19	EPA 8015M	

Date Sampled: **07/31/19 15:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<i>Surrogate: o-Terphenyl</i>		105 %	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:**  
08/07/19 09:29

**BH08@28-29'**  
**1907394-10 (Soil)**

**Summit Scientific**

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

Date Sampled: **07/31/19 15:36**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Benzene</b>	<b>0.031</b>	0.0020		mg/kg	1	1908004	08/01/19	08/02/19	EPA 8260B	
<b>Toluene</b>	<b>0.11</b>	0.0050		"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.033</b>	0.0050		"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.44</b>	0.010		"	"	"	"	"	"	
<b>Naphthalene</b>	<b>0.018</b>	0.010		"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>6.4</b>	0.50		"	"	"	"	"	"	

Date Sampled: **07/31/19 15:36**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: 1,2-Dichloroethane-d4</i>		80.0 %		23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		88.6 %		20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		112 %		21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/31/19 15:36**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>C10-C28 (DRO)</b>	<b>340</b>	50		mg/kg	1	1908002	08/01/19	08/02/19	EPA 8015M	

Date Sampled: **07/31/19 15:36**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: o-Terphenyl</i>		112 %		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:**  
08/07/19 09:29

## 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 1908004 - EPA 5030 Soil MS

##### Blank (1908004-BLK1)

Prepared: 08/01/19 Analyzed: 08/02/19

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	0.0352		"	0.0400		88.0	23-173			
Surrogate: Toluene-d8	0.0344		"	0.0400		86.1	20-170			
Surrogate: 4-Bromofluorobenzene	0.0378		"	0.0400		94.5	21-167			

##### LCS (1908004-BS1)

Prepared: 08/01/19 Analyzed: 08/02/19

Benzene	0.0660	0.0020	mg/kg	0.0750		88.0	70-130			
Toluene	0.0748	0.0050	"	0.0750		99.7	70-130			
Ethylbenzene	0.0790	0.0050	"	0.0750		105	70-130			
m,p-Xylene	0.153	0.010	"	0.150		102	70-130			
o-Xylene	0.0767	0.0050	"	0.0750		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0306		"	0.0400		76.5	23-173			
Surrogate: Toluene-d8	0.0387		"	0.0400		96.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0376		"	0.0400		94.0	21-167			

##### Matrix Spike (1908004-MS1)

Source: 1907366-01

Prepared: 08/01/19 Analyzed: 08/02/19

Benzene	0.0683	0.0020	mg/kg	0.0750	ND	91.0	70-130			
Toluene	0.0760	0.0050	"	0.0750	ND	101	70-130			
Ethylbenzene	0.0820	0.0050	"	0.0750	ND	109	70-130			
m,p-Xylene	0.158	0.010	"	0.150	ND	105	70-130			
o-Xylene	0.0808	0.0050	"	0.0750	ND	108	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0328		"	0.0400		81.9	23-173			
Surrogate: Toluene-d8	0.0375		"	0.0400		93.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0375		"	0.0400		93.7	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:**  
08/07/19 09:29

## 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 1908004 - EPA 5030 Soil MS

Matrix Spike Dup (1908004-MSD1)		Source: 1907366-01			Prepared: 08/01/19 Analyzed: 08/02/19					
Benzene	0.0659	0.0020	mg/kg	0.0750	ND	87.8	70-130	3.58	30	
Toluene	0.0754	0.0050	"	0.0750	ND	100	70-130	0.872	30	
Ethylbenzene	0.0860	0.0050	"	0.0750	ND	115	70-130	4.71	30	
m,p-Xylene	0.166	0.010	"	0.150	ND	111	70-130	5.10	30	
o-Xylene	0.0835	0.0050	"	0.0750	ND	111	70-130	3.29	30	
Surrogate: 1,2-Dichloroethane-d4	0.0307		"	0.0400		76.6	23-173			
Surrogate: Toluene-d8	0.0379		"	0.0400		94.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0360		"	0.0400		89.9	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:**  
08/07/19 09:29

**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 1908002 - EPA 3550A**

**Blank (1908002-BLK1)**

Prepared: 08/01/19 Analyzed: 08/02/19

C10-C28 (DRO) ND 50 mg/kg

**LCS (1908002-BS1)**

Prepared: 08/01/19 Analyzed: 08/02/19

C10-C28 (DRO) 570 50 mg/kg 500 114 70-130

**Matrix Spike (1908002-MS1)**

**Source: 1907366-01**

Prepared: 08/01/19 Analyzed: 08/02/19

C10-C28 (DRO) 570 50 mg/kg 500 38.3 106 70-130

**Matrix Spike Dup (1908002-MSD1)**

**Source: 1907366-01**

Prepared: 08/01/19 Analyzed: 08/02/19

C10-C28 (DRO) 563 50 mg/kg 500 38.3 105 70-130 1.23 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:**

08/07/19 09:29

### 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

August 29, 2019

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

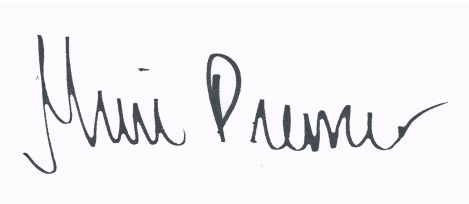
Denver, CO 80203

RE: Warner 6-14

Work Order # 1908284

Enclosed are the results of analyses for samples received by Summit Scientific on 08/22/19 17:30. 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:**

08/29/19 10:23

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	1908284-01	Water	08/22/19 10:50	08/22/19 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>

1908284



4653 Table Mountain Drive ♦ Golden, Colorado 80403  
303-277-9310

Page 1 of 1

Client:	PDC / Tasman	Project Manager:	Mark Longhurst
Address:	6855 W 119th Ave	E-Mail:	mark.longhurst@PDCE.com
City/State/Zip:	Broomfield/ CO/ 80020		
Phone:	303-487-1228	Project Name:	Warner 6-14
Sampler Name:	Mark Dahlgren	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	8260 BTEX	8260B GBTEXN	8015 DRO	pH / EC		
1	BH01	8/22/19	1050	2			X		X					X				
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Relinquished by: 	Date/Time: 8/22/19	Received by: Tasman's Lock Box	Date/Time: 8/22/19	Turn Around Time (Check) Same Day <input type="checkbox"/> 24 hours <input type="checkbox"/> 48 hours <input type="checkbox"/>	72 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/>	Notes:
Relinquished by: Tasman's Lock Box	Date/Time: 8/22/19 1730	Received by: 	Date/Time: 8/22/19 1730	Sample Integrity:		
Relinquished by:	Date/Time:	Received by:	Date/Time:	Temperature Upon Receipt: 3.6	Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

### Sample Receipt Checklist

S2 Work Order 1908284

Client: TASMAN / PDC Client Project ID: WARNER 6-14

Shipped Via: ☐ H.D./P.U./FedEx/UPS/USPS/Other ☒ Air ☐ Soil/Solid ☒ Water ☐ Other: \_\_\_\_\_

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


Temp (°C)	3.6
-----------	-----

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> ? 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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 checked="" type="checkbox"/>	<input 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.				

RZ

Custodian Printed Name or Initials

  
Signature of Custodian

8/22/19

Date/Time



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

Project: Warner 6-14

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
08/29/19 10:23

**BH01**  
**1908284-01 (Water)**

**Summit Scientific**

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

Date Sampled: **08/22/19 10:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	1908311	08/23/19	08/27/19	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>65</b>	2.0		"	"	"	"	"	"	

Date Sampled: **08/22/19 10:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		86.4 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		98.5 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %		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:**  
08/29/19 10:23

## 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 1908311 - EPA 5030 Water MS

##### Blank (1908311-BLK1)

Prepared: 08/23/19 Analyzed: 08/26/19

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Surrogate: 1,2-Dichloroethane-d4	16.0		"	13.3		120	23-173			
Surrogate: Toluene-d8	13.4		"	13.3		100	20-170			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		100	21-167			

##### LCS (1908311-BS1)

Prepared: 08/23/19 Analyzed: 08/26/19

Benzene	33.8	1.0	ug/l	33.3		101	51-132			
Toluene	34.7	1.0	"	33.3		104	51-138			
Ethylbenzene	34.2	1.0	"	33.3		103	58-146			
m,p-Xylene	63.1	2.0	"	66.7		94.7	57-144			
o-Xylene	33.1	1.0	"	33.3		99.4	53-146			
Surrogate: 1,2-Dichloroethane-d4	13.9		"	13.3		104	23-173			
Surrogate: Toluene-d8	14.1		"	13.3		106	20-170			
Surrogate: 4-Bromofluorobenzene	13.5		"	13.3		101	21-167			

##### Matrix Spike (1908311-MS1)

Source: 1908248-01

Prepared: 08/23/19 Analyzed: 08/26/19

Benzene	36.5	1.0	ug/l	33.3	ND	109	34-141			
Toluene	38.1	1.0	"	33.3	ND	114	27-151			
Ethylbenzene	37.8	1.0	"	33.3	ND	114	29-160			
m,p-Xylene	69.4	2.0	"	66.7	ND	104	20-166			
o-Xylene	36.9	1.0	"	33.3	ND	111	33-159			
Surrogate: 1,2-Dichloroethane-d4	14.4		"	13.3		108	23-173			
Surrogate: Toluene-d8	13.8		"	13.3		103	20-170			
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3		99.5	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:**  
08/29/19 10:23

## 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 1908311 - EPA 5030 Water MS

Matrix Spike Dup (1908311-MSD1)	Source: 1908248-01			Prepared: 08/23/19 Analyzed: 08/26/19						
Benzene	36.6	1.0	ug/l	33.3	ND	110	34-141	0.274	30	
Toluene	38.0	1.0	"	33.3	ND	114	27-151	0.0788	30	
Ethylbenzene	38.9	1.0	"	33.3	ND	117	29-160	2.71	30	
m,p-Xylene	71.2	2.0	"	66.7	ND	107	20-166	2.58	30	
o-Xylene	37.5	1.0	"	33.3	ND	112	33-159	1.48	30	
Surrogate: 1,2-Dichloroethane-d4	14.4		"	13.3		108	23-173			
Surrogate: Toluene-d8	13.7		"	13.3		103	20-170			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		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:**

08/29/19 10:23

### 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