

TABLE 1
FORMER EHRLICH 4, 22-7 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 ⁽²⁾ (mg/kg)	pH (units)	EC (mmhos/cm)
COGCC standards for soil (mg/kg) ⁽¹⁾			0.17	85	100	175	23	500	6-9	<4
SS01 @ 5'	10/29/2018	5	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	9.59	1.80
SS02 @ 3'	10/29/2018	3	NA	NA	NA	NA	NA	NA	8.40	3.19
SS03 @ 3'	10/29/2018	3	NA	NA	NA	NA	NA	NA	9.58	1.34
SS04 @ 3'	10/29/2018	3	NA	NA	NA	NA	NA	NA	10.0	0.911
SS05 @ 3'	10/29/2018	3	NA	NA	NA	NA	NA	NA	9.31	1.22
BG01 @ 3'	11/16/2018	3	NA	NA	NA	NA	NA	NA	7.64	5.36

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.

ATTACHMENT A

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

November 08, 2018

Mark Longhurst

PDC Energy

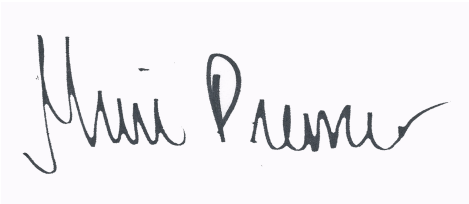
1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Ehrlich 4,22-7

Enclosed are the results of analyses for samples received by Summit Scientific on 10/29/18 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 Premer". The signature is written in a cursive style with a large, stylized "M" and a long, sweeping underline.

Muri Premer For Ben Shrewsbury

Laboratory Manager



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

Project: Ehrlich 4,22-7

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
11/08/18 10:06

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@5'	1810368-01	Soil	10/29/18 15:11	10/29/18 18:30
SS02@3'	1810368-02	Soil	10/29/18 15:14	10/29/18 18:30
SS03@3'	1810368-03	Soil	10/29/18 15:17	10/29/18 18:30
SS04@3'	1810368-04	Soil	10/29/18 15:20	10/29/18 18:30
SS05@3'	1810368-05	Soil	10/29/18 15:23	10/29/18 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.

1810368

Page 1 of 1

Project Manager:	Mark Longhurst
E-Mail:	Mark.Longhurst@pdce.com
Project Name:	Ehrlich 4, 22-7
Project Number:	

www.s2scientific.com

Sample Receipt Checklist

S2 Work Order 1810368

Client: PDC Client Project ID: Enrich 4, 22-7

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

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

Temp (°C)	<u>3.3</u>
-----------	------------

Thermometer ID: 61857155-K

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

10-29-18 1830
Date/Time



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

Project: Ehrlich 4,22-7

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/08/18 10:06

SS01@5'
1810368-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/29/18 15:11**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1810439	10/30/18	11/01/18	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: **10/29/18 15:11**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		73.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.1 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/29/18 15:11**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1810438	10/30/18	11/03/18	EPA 8015M	

Date Sampled: **10/29/18 15:11**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		103 %	30-150		"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/29/18 15:11**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
pH	9.59		pH Units	1	1810455	10/31/18	10/31/18	EPA 9045D	

Summit Scientific

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PDC Energy

1775 Sherman St. STE. 3000

Denver CO, 80203

Project: Ehrlich 4,22-7

Project Number: [none]

Project Manager: Mark Longhurst

Reported:

11/08/18 10:06

SS01@5'

1810368-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Specific Conductance by EPA Method 120.1

Date Sampled: **10/29/18 15:11**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	1.80	0.0100		mmhos/cm	1	1810463	10/31/18	10/31/18	EPA 120.1	

Summit Scientific

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

Project: Ehrlich 4,22-7

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
11/08/18 10:06

SS02@3'
1810368-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/29/18 15:14**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.40			pH Units	1	1811100	11/07/18	11/07/18	EPA 9045D	I-02

Specific Conductance by EPA Method 120.1

Date Sampled: **10/29/18 15:14**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	3.19	0.0100		mmhos/cm	1	1811101	11/07/18	11/07/18	EPA 120.1	

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

Project: Ehrlich 4,22-7

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
11/08/18 10:06

SS03@3'
1810368-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/29/18 15:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	9.58			pH Units	1	1811100	11/07/18	11/07/18	EPA 9045D	I-02

Specific Conductance by EPA Method 120.1

Date Sampled: **10/29/18 15:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	1.34	0.0100		mmhos/cm	1	1811101	11/07/18	11/07/18	EPA 120.1	

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

Project: Ehrlich 4,22-7

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
11/08/18 10:06

SS04@3'
1810368-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/29/18 15:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	10.0			pH Units	1	1811100	11/07/18	11/07/18	EPA 9045D	I-02

Specific Conductance by EPA Method 120.1

Date Sampled: **10/29/18 15:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.911	0.0100		mmhos/cm	1	1811101	11/07/18	11/07/18	EPA 120.1	

Summit Scientific

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

Project: Ehrlich 4,22-7

Project Number: [none]

Project Manager: Mark Longhurst

Reported:

11/08/18 10:06

SS05@3'
1810368-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/29/18 15:23**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	9.31			pH Units	1	1811100	11/07/18	11/07/18	EPA 9045D	I-02

Specific Conductance by EPA Method 120.1

Date Sampled: **10/29/18 15:23**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	1.22	0.0100		mmhos/cm	1	1811101	11/07/18	11/07/18	EPA 120.1	

Summit Scientific

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

Project: Ehrlich 4,22-7

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/08/18 10:06

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 1810439 - EPA 5030 Soil MS

Blank (1810439-BLK1)

Prepared: 10/30/18 Analyzed: 10/31/18

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	0.0300		"	0.0396		75.8	23-173			
Surrogate: Toluene-d8	0.0401		"	0.0400		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0374		"	0.0400		93.4	21-167			

LCS (1810439-BS1)

Prepared: 10/30/18 Analyzed: 10/31/18

Benzene	0.0743	0.0020	mg/kg	0.100		74.3	70-130			
Toluene	0.0903	0.0050	"	0.100		90.3	70-130			
Ethylbenzene	0.0934	0.0050	"	0.100		93.4	70-130			
m,p-Xylene	0.194	0.010	"	0.200		97.1	70-130			
o-Xylene	0.100	0.0050	"	0.100		100	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0308		"	0.0396		77.7	23-173			
Surrogate: Toluene-d8	0.0391		"	0.0400		97.7	20-170			
Surrogate: 4-Bromofluorobenzene	0.0375		"	0.0400		93.8	21-167			

Matrix Spike (1810439-MS1)

Source: 1810349-01

Prepared: 10/30/18 Analyzed: 10/31/18

Benzene	0.0773	0.0020	mg/kg	0.100	ND	77.3	70-130			
Toluene	0.0942	0.0050	"	0.100	ND	94.2	70-130			
Ethylbenzene	0.102	0.0050	"	0.100	ND	102	70-130			
m,p-Xylene	0.212	0.010	"	0.200	ND	106	70-130			
o-Xylene	0.108	0.0050	"	0.100	ND	108	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0308		"	0.0396		77.7	23-173			
Surrogate: Toluene-d8	0.0382		"	0.0400		95.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0378		"	0.0400		94.5	21-167			

Summit Scientific

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

Project: Ehrlich 4,22-7

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
11/08/18 10:06

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 1810439 - EPA 5030 Soil MS

Matrix Spike Dup (1810439-MSD1)

Source: 1810349-01

Prepared: 10/30/18 Analyzed: 10/31/18

Benzene	0.0744	0.0020	mg/kg	0.100	ND	74.4	70-130	3.84	30	
Toluene	0.0905	0.0050	"	0.100	ND	90.5	70-130	4.00	30	
Ethylbenzene	0.0980	0.0050	"	0.100	ND	98.0	70-130	3.84	30	
m,p-Xylene	0.204	0.010	"	0.200	ND	102	70-130	4.03	30	
o-Xylene	0.103	0.0050	"	0.100	ND	103	70-130	4.62	30	
Surrogate: 1,2-Dichloroethane-d4	0.0314		"	0.0396		79.4	23-173			
Surrogate: Toluene-d8	0.0385		"	0.0400		96.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0378		"	0.0400		94.6	21-167			

Summit Scientific

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

Project: Ehrlich 4,22-7

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/08/18 10:06

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 1810438 - EPA 3550A

Blank (1810438-BLK1)

Prepared: 10/30/18 Analyzed: 11/02/18

C10-C28 (DRO) ND 50 mg/kg

LCS (1810438-BS1)

Prepared: 10/30/18 Analyzed: 11/02/18

C10-C28 (DRO) 523 50 mg/kg 500 105 70-130

Matrix Spike (1810438-MS1)

Source: 1810349-01

Prepared: 10/30/18 Analyzed: 11/02/18

C10-C28 (DRO) 494 50 mg/kg 500 36.5 91.6 70-130

Matrix Spike Dup (1810438-MSD1)

Source: 1810349-01

Prepared: 10/30/18 Analyzed: 11/02/18

C10-C28 (DRO) 475 50 mg/kg 500 36.5 87.7 70-130 4.00 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: Ehrlich 4,22-7

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
11/08/18 10:06

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 1810455 - General Preparation

LCS (1810455-BS1)

Prepared & Analyzed: 10/31/18

pH	9.2		pH Units				95-105		
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Duplicate (1810455-DUP1)

Source: 1810343-01

Prepared & Analyzed: 10/31/18

pH	8.2		pH Units		8.2			0.490	20
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Batch 1811100 - General Preparation

LCS (1811100-BS1)

Prepared & Analyzed: 11/07/18

pH	9.1		pH Units	9.18		99.5	95-105		
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Duplicate (1811100-DUP1)

Source: 1810368-02

Prepared & Analyzed: 11/07/18

pH	8.7		pH Units		8.4			3.62	20
----	-----	--	----------	--	-----	--	--	------	----

Summit Scientific

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

Project: Ehrlich 4,22-7

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/08/18 10:06

Specific Conductance by EPA Method 120.1 - Quality Control
Summit Scientific

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

Batch 1810463 - General Preparation

Blank (1810463-BLK1)

Prepared & Analyzed: 10/31/18

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (1810463-BS1)

Prepared & Analyzed: 10/31/18

Specific Conductance (EC) 0.750 0.0100 mmhos/cm 0.750 99.9 90-110

Duplicate (1810463-DUP1)

Source: 1810343-01

Prepared & Analyzed: 10/31/18

Specific Conductance (EC) 0.430 0.0100 mmhos/cm 0.478 10.7 20

Batch 1811101 - General Preparation

Blank (1811101-BLK1)

Prepared & Analyzed: 11/07/18

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (1811101-BS1)

Prepared & Analyzed: 11/07/18

Specific Conductance (EC) 0.751 0.0100 mmhos/cm 0.750 100 90-110

Duplicate (1811101-DUP1)

Source: 1810368-02

Prepared & Analyzed: 11/07/18

Specific Conductance (EC) 3.15 0.0100 mmhos/cm 3.19 1.21 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: Ehrlich 4,22-7

Project Number: [none]

Project Manager: Mark Longhurst

Reported:

11/08/18 10:06

Notes and Definitions

I-02 This sample was analyzed outside of the recommended holding time.

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

November 26, 2018

Mark Longhurst

PDC Energy

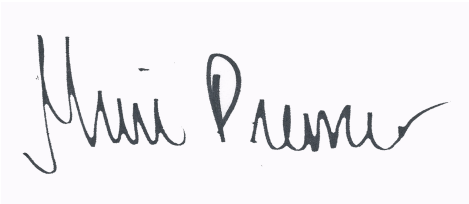
1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Ehrlich 4,22-7

Enclosed are the results of analyses for samples received by Summit Scientific on 11/16/18 15:44. 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: Ehrlich 4,22-7

Project Number: [none]

Project Manager: Mark Longhurst

Reported:

11/26/18 13:26

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BG01@3'	1811216-01	Soil	11/16/18 10:26	11/16/18 15:44

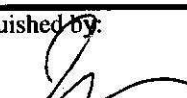

Summit Scientific

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 1

Project Manager:	Mark Longhurst
E-Mail:	Mark.Longhurst@pdce.com
Project Name:	Ehrlich 4, 22-7
Project Number:	

				Preservative				Matrix				Analyze For:										Special Instructions				
Sample Description	Date Sampled	Time Sampled	Number of Containers	HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Alr - Canister Serial #	Other (Specify)	GBTEXN (8260)	TPH - DRO	EC/pH												
BG01 @ 3'	11/16/2018	10:26	1			X			X					X												
Relinquished by:  Date/Time: 11/16/18 3:44 pm				Received by:  11-16-18 15:44				Date/Time:				Turn Around Time (Check)										Hold SS02-SS05				
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: Temperature Upon Receipt: <u>71</u> Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>										

Sample Receipt Checklist

S2 Work Order: 1811214

Client: PDC

Client Project ID: EHRlich 4, 22-7

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

Airbill #: _____

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

Temp (°C)	<u>.1</u>
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Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ?	<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 ⁽¹⁾ ?	<u>x</u>			
Was adequate sample volume provided ⁽¹⁾ ?	<u>x</u>			
If custody seals are present, are they intact ⁽¹⁾ ?			<u>x</u>	
Are samples with holding times due within 48 hours sample due within 48 hours present?			<u>x</u>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<u>x</u>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<u>x</u>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<u>x</u>			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<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) ⁽¹⁾ ?			<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 ⁽¹⁾ ?			<u>x</u>	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?			<u>x</u>	
Additional Comments (if any):				

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

Muri
Custodian Printed Name or Initials

11-16-18
Signature or Initials of Custodian

17:00
Date/Time



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

Project: Ehrlich 4,22-7

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
11/26/18 13:26

BG01@3'
1811216-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **11/16/18 10:26**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	7.64			pH Units	1	1811291	11/16/18	11/21/18	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **11/16/18 10:26**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	5.36	0.0100		mmhos/cm	1	1811279	11/21/18	11/21/18	EPA 120.1	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Ehrlich 4,22-7

Project Number: [none]

Project Manager: Mark Longhurst

Reported:

11/26/18 13:26

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 1811291 - General Preparation

LCS (1811291-BS1)

Prepared: 11/15/18 Analyzed: 11/21/18

pH	9.1		pH Units	9.18		99.6	95-105		
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Duplicate (1811291-DUP1)

Source: 1811184-01

Prepared: 11/15/18 Analyzed: 11/21/18

pH	7.2		pH Units		7.3			0.138	20
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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: Ehrlich 4,22-7

Project Number: [none]

Project Manager: Mark Longhurst

Reported:

11/26/18 13:26

Specific Conductance by EPA Method 120.1 - Quality Control

Summit Scientific

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

Batch 1811279 - General Preparation

Blank (1811279-BLK1)

Prepared & Analyzed: 11/21/18

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (1811279-BS1)

Prepared & Analyzed: 11/21/18

Specific Conductance (EC) 0.761 0.0100 mmhos/cm 0.750 101 90-110

Duplicate (1811279-DUP1)

Source: 1811184-01

Prepared & Analyzed: 11/21/18

Specific Conductance (EC) 5.41 0.0100 mmhos/cm 6.27 14.7 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: Ehrlich 4,22-7

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/26/18 13:26

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