

TABLE 1
FORMER DINNER 4-8-14 WELLHEAD
SOIL ANALYTICAL RESULTS SUMMARY TABLE
ORGANIC COMPOUNDS

Sample ID	Date Sampled	Depth	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1, 2, 4-TMB (mg/kg)	1, 3, 5-TMB (mg/kg)	Naphthalene (mg/kg)	TPH ⁽⁴⁾ (mg/kg)
Residential SSL^(1,2)			1.2	490	5.8	58	30	27	2	500
Protection of Groundwater SSL^(1,2,3)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500
WH01 @ 7'	3/14/2023	7 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FLR01 @ 4'	3/14/2023	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FL01-01 @ 4'	3/15/2023	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SEP02-FL @ 2.5'	3/13/2023	2.5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SEP02-DL @ 2.5'	3/13/2023	2.5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50

Notes:

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

COGCC = Colorado Oil and Gas Conservation Commission

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

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

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

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

mg/kg = Milligrams per kilogram

TMB = Trimethylbenzene

ft. = Feet

bgs = Below ground surface

TABLE 2
FORMER DINNER 4-8-14 WELLHEAD
SOIL ANALYTICAL RESULTS SUMMARY TABLE
INORGANIC COMPOUNDS

Sample ID	Date Sampled	Depth	pH (units)	EC (mmhos/cm)	SAR (units)	Boron (mg/L)
Soil Suitability for Reclamation Standard ⁽¹⁾			6-8.3	<4	<6	2
WH01 @ 7'	3/14/2023	7 ft. bgs	8.35	0.913	4.55	0.0951
FLR01 @ 4'	3/14/2023	4 ft. bgs	7.74	0.746	0.890	0.101
BKG01 @ 4'	3/15/2023	4 ft. bgs	7.94	NA	NA	NA
BKG01 @ 7'	3/15/2023	7 ft. bgs	8.06	NA	NA	NA

Notes:

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

COGCC = Colorado Oil and Gas Conservation Commission

EC = Electrical conductivity

SAR = Sodium adsorption ratio

mmhos/cm = millimhos per centimeter

mg/L = milligram per liter

ft. = Feet

bgs = Below ground surface

NA = Constituent not analyzed

TABLE 3
FORMER DINNER 4-8-14 WELLHEAD
SOIL ANALYTICAL RESULTS SUMMARY TABLE
ORGANIC COMPOUNDS - PAHs

Sample ID	Date Sampled	Depth	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benz(a) (mg/kg)	Benzo(a) (mg/kg)	Benzo(b) (mg/kg)	Benzo(k) (mg/kg)	Chrysene (mg/kg)	A,H (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	1,2,3-CD (mg/kg)	Pyrene (mg/kg)	1-M (mg/kg)	2-M (mg/kg)
Residential SSL ^(1,2)			360	1,800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
Protection of Groundwater SSL ^(1,2,3)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
WH01 @ 7'	3/14/2023	7 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FLR01 @ 4'	3/14/2023	4 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

Notes:

1. Compounds referenced from the COGCC 2 CCR 404-1, Table 915-1, effective January 15, 2021.
2. Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
3. SSLs are applicable if a pathway for communication with groundwater is present.

COGCC = Colorado Oil and Gas Conservation Commission

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

PAHs = Polycyclic aromatic hydrocarbons

Benzo(a) = Benzoanthracene

Benzo(a) = Benzopyrene

Benzo(b) = Benzofluoranthene

Benzo(k) = Benzofluoranthene

A,H = Dibenzoanthracene

1,2,3-CD = Indenopyrene

M = Methylnaphthalene

mg/kg = Milligrams per kilogram

bgs = Below ground surface

TABLE 4
FORMER DINNER 4-8-14 WELLHEAD
FIELD DATA SUMMARY TABLE

Sample ID	Date Sampled	Depth	GPS Data ⁽¹⁾ Latitude / Longitude		PDOP Value	VOC Concentration ⁽²⁾ (ppm)
WH01 @ 7'	3/14/2023	7 ft. bgs	40.306506	-104.741846	NC	0.0
FLR01 @ 4'	3/14/2023	4 ft. bgs	40.306520	-104.741857	0.9	0.1
WHS01-N @ 0-6"	3/14/2023	0-6 in. bgs	40.306536	-104.741853	0.9	0.0
WHS01-S @ 0-6"	3/14/2023	0-6 in. bgs	40.306483	-104.741869	1.0	0.0
WHS01-W @ 0-6"	3/14/2023	0-6 in. bgs	40.306515	-104.741903	0.8	0.7
WHS01-E @ 0-6"	3/14/2023	0-6 in. bgs	40.306507	-104.741818	0.9	0.0
FL01-01 @ 4'	3/15/2023	4 ft. bgs	40.305809	-104.740120	1.0	0.1
SEP02-FL @ 2.5'	3/13/2023	2.5 ft. bgs	40.305018	-104.738476	0.9	0.1
SEP02-DL @ 2.5'	3/13/2023	2.5 ft. bgs	40.305033	-104.738442	0.9	1.3
BKG01 @ 4'	3/15/2023	4 ft. bgs	40.306643	-104.741823	0.9	0.4
BKG01 @ 7'	3/15/2023	7 ft. bgs	40.306643	-104.741823	0.9	0.1

Notes:

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

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

PDOP = Position Dilution of Precision

ppm = Parts per million

ft. = Feet

in. = Inches

bgs = Below ground surface

NC = Not Collected

Attachment A

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

April 03, 2023

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Dinner 4-8-14 Wellhead

Work Order #2303366

Enclosed are the results of analyses for samples received by Summit Scientific on 03/14/23 17:47. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Scott Sheely For Paul Shrewsbury

President



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

Project: Dinner 4-8-14 Wellhead

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
04/03/23 10:43

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH01@7'	2303366-01	Soil	03/14/23 09:40	03/14/23 17:47
FLR01@4'	2303366-02	Soil	03/14/23 09:45	03/14/23 17:47

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

4653 Table Mountain Drive
Golden, CO 80403
303-277-9310

Lab ID	Page 1 of 1
2303366	

Client: PDC / Tasman		Project Manager: Mark Longhurst		Send Invoice To:	
Address: 6855 W 119th Ave		E-Mail: mark.longhurst@PDCE.com		Company: PDC Energy	
City/State/Zip: Broomfield / CO / 80220		Project Name: Dinner 4-8-14 wellhead		Project Name/Location:	
Phone: 303-487-1228		Project Number:		AFE#:	
Sampler Name: Emilia Wozniak				PO/Billing Codes:	
				Contact: Mark Longhurst	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested					Special Instructions		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS		pH, EC, SAR	PAH - 915
1	WHO1@7'	3/14/23	940	2			X			X			X	X	X				
2	FLR01@4'	3/14/23	945	2			X			X			X	X	X				
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			

Relinquished by: <i>Emilia Wozniak</i>	Date/Time: 3/14/23 1724	Received by: Tasman Lockbox	Date/Time: 3/14/23 1724	TAT Business Days	Field DO	Notes:
Relinquished by: <i>Tasman Lockbox</i>	Date/Time: 3/14/23 1747	Received by: <i>[Signature]</i>	Date/Time: 3/14/23 1747	Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
Relinquished by:	Date/Time:	Received by:	Date/Time:	2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
Temperature Upon Receipt: 94	Corrected Temperature: \emptyset	IR gun #: 1	HNO3 lot #:	Standard	X Field Turb.	

S₂

Sample Receipt Checklist

S2 Work Order# 2303366

Client: DOC/Tasman Client Project ID: Dimmer 4-8-14 wellhead

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

Matrix (Check all that apply) Air Soil/Solid Water Other

Temp (°C) Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>ON ICE</i>
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

AS

Custodian Printed Name

3/14/23

Date/Time



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

Project: Dinner 4-8-14 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
04/03/23 10:43

WH01@7'
2303366-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/14/23 09:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGC0558	03/18/23	03/19/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **03/14/23 09:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0406	101 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0408	102 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0428	107 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/14/23 09:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGC0562	03/18/23	03/19/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/14/23 09:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	10.3	82.4 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

I-02

Summit Scientific

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



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

Project: Dinner 4-8-14 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
04/03/23 10:43

WH01@7'
2303366-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

I-02

Date Sampled: **03/14/23 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGC1001	03/30/23	03/31/23	EPA 8270D SIM	
Acenaphthylene	ND	0.00500	"	"	"	"	"	"	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.0100	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.0100	"	"	"	"	"	"	
Naphthalene	ND	0.00500	"	"	"	"	"	"	
Phenanthrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/14/23 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0286	85.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0210	63.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/14/23 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0951	0.0100	mg/L	1	BGC0949	03/28/23	03/29/23	EPA 6020B	

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

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: Dinner 4-8-14 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
04/03/23 10:43

WH01@7'
2303366-01 (Soil)

Summit Scientific

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

Date Sampled: **03/14/23 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	15.1	0.0603	mg/L dry	1	BGC0989	03/29/23	03/31/23	EPA 6020B	
Magnesium	7.96	0.0603	"	"	"	"	"	"	
Sodium	87.8	0.0603	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/14/23 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.55	0.00100	units	1	BGC1059	03/31/23	03/31/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/14/23 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.9		%	1	BGC0946	03/28/23	03/28/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/14/23 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.913	0.0100	mmhos/cm	1	BGC1017	03/30/23	03/30/23	EPA 120.1	

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

Date Sampled: **03/14/23 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.35		pH Units	1	BGC1016	03/30/23	03/30/23	EPA 9045D	

Summit Scientific

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



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

Project: Dinner 4-8-14 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
04/03/23 10:43

FLR01@4'
2303366-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/14/23 09:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGC0558	03/18/23	03/19/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **03/14/23 09:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0413	103 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0408	102 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0426	107 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/14/23 09:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGC0562	03/18/23	03/19/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/14/23 09:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	11.7	93.5 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

I-02

Summit Scientific

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



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

Project: Dinner 4-8-14 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
04/03/23 10:43

FLR01@4'
2303366-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

I-02

Date Sampled: **03/14/23 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGC1001	03/30/23	03/31/23	EPA 8270D SIM	
Acenaphthylene	ND	0.00500	"	"	"	"	"	"	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.0100	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.0100	"	"	"	"	"	"	
Naphthalene	ND	0.00500	"	"	"	"	"	"	
Phenanthrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/14/23 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0314	94.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0211	63.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/14/23 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.101	0.0100	mg/L	1	BGC0949	03/28/23	03/29/23	EPA 6020B	

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

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: Dinner 4-8-14 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
04/03/23 10:43

FLR01@4'
2303366-02 (Soil)

Summit Scientific

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

Date Sampled: **03/14/23 09:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	53.3	0.0533	mg/L dry	1	BGC0989	03/29/23	03/31/23	EPA 6020B	
Magnesium	13.8	0.0533	"	"	"	"	"	"	
Sodium	28.2	0.0533	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/14/23 09:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	0.890	0.00100	units	1	BGC1059	03/31/23	03/31/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/14/23 09:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	93.8		%	1	BGC0946	03/28/23	03/28/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/14/23 09:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	0.746	0.0100	mmhos/cm	1	BGC1017	03/30/23	03/30/23	EPA 120.1	

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

Date Sampled: **03/14/23 09:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	7.74		pH Units	1	BGC1016	03/30/23	03/30/23	EPA 9045D	

Summit Scientific

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



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

Project: Dinner 4-8-14 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
04/03/23 10:43

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGC0558 - EPA 5030 Soil MS

Blank (BGC0558-BLK1)

Prepared: 03/18/23 Analyzed: 03/19/23

Benzene	ND	0.0020	mg/kg								
Toluene	ND	0.0050	"								
Ethylbenzene	ND	0.0050	"								
Xylenes (total)	ND	0.010	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
Naphthalene	ND	0.0038	"								
Gasoline Range Hydrocarbons	ND	0.50	"								
Surrogate: 1,2-Dichloroethane-d4	0.0404		"	0.0400		101	50-150				
Surrogate: Toluene-d8	0.0406		"	0.0400		102	50-150				
Surrogate: 4-Bromofluorobenzene	0.0432		"	0.0400		108	50-150				

LCS (BGC0558-BS1)

Prepared: 03/18/23 Analyzed: 03/19/23

Benzene	0.0904	0.0020	mg/kg	0.125		72.4	70-130				
Toluene	0.0890	0.0050	"	0.125		71.2	70-130				
Ethylbenzene	0.143	0.0050	"	0.125		114	70-130				
m,p-Xylene	0.286	0.010	"	0.250		114	70-130				
o-Xylene	0.136	0.0050	"	0.125		109	70-130				
1,2,4-Trimethylbenzene	0.150	0.0050	"	0.125		120	70-130				
1,3,5-Trimethylbenzene	0.162	0.0050	"	0.125		130	70-130				
Naphthalene	0.144	0.0038	"	0.125		115	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0422		"	0.0400		105	50-150				
Surrogate: Toluene-d8	0.0417		"	0.0400		104	50-150				
Surrogate: 4-Bromofluorobenzene	0.0403		"	0.0400		101	50-150				

Matrix Spike (BGC0558-MS1)

Source: 2303361-01

Prepared: 03/18/23 Analyzed: 03/19/23

Benzene	0.0896	0.0020	mg/kg	0.125	ND	71.7	70-130				
Toluene	0.0896	0.0050	"	0.125	ND	71.7	70-130				
Ethylbenzene	0.140	0.0050	"	0.125	ND	112	70-130				
m,p-Xylene	0.284	0.010	"	0.250	ND	114	70-130				
o-Xylene	0.137	0.0050	"	0.125	ND	109	70-130				
1,2,4-Trimethylbenzene	0.157	0.0050	"	0.125	ND	125	70-130				
1,3,5-Trimethylbenzene	0.156	0.0050	"	0.125	ND	125	70-130				
Naphthalene	0.160	0.0038	"	0.125	ND	128	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0408		"	0.0400		102	50-150				
Surrogate: Toluene-d8	0.0410		"	0.0400		103	50-150				
Surrogate: 4-Bromofluorobenzene	0.0393		"	0.0400		98.3	50-150				

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: Dinner 4-8-14 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 04/03/23 10:43

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

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

Batch BGC0558 - EPA 5030 Soil MS

Matrix Spike Dup (BGC0558-MSD1)	Source: 2303361-01			Prepared: 03/18/23 Analyzed: 03/19/23						
Benzene	0.0980	0.0020	mg/kg	0.125	ND	78.4	70-130	8.92	30	
Toluene	0.0956	0.0050	"	0.125	ND	76.5	70-130	6.45	30	
Ethylbenzene	0.141	0.0050	"	0.125	ND	113	70-130	0.448	30	
m,p-Xylene	0.283	0.010	"	0.250	ND	113	70-130	0.381	30	
o-Xylene	0.137	0.0050	"	0.125	ND	109	70-130	0.176	30	
1,2,4-Trimethylbenzene	0.158	0.0050	"	0.125	ND	126	70-130	0.935	30	
1,3,5-Trimethylbenzene	0.155	0.0050	"	0.125	ND	124	70-130	0.540	30	
Naphthalene	0.154	0.0038	"	0.125	ND	124	70-130	3.74	30	
Surrogate: 1,2-Dichloroethane-d4	0.0421		"	0.0400		105	50-150			
Surrogate: Toluene-d8	0.0418		"	0.0400		104	50-150			
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0400		99.0	50-150			

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: Dinner 4-8-14 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 04/03/23 10:43

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BGC0562 - EPA 3550A

Blank (BGC0562-BLK1)

Prepared: 03/18/23 Analyzed: 03/19/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	12.3		"	12.5		98.5	30-150				

LCS (BGC0562-BS1)

Prepared: 03/18/23 Analyzed: 03/19/23

C10-C28 (DRO)	455	50	mg/kg	500		90.9	70-130				
Surrogate: <i>o</i> -Terphenyl	13.2		"	12.5		106	30-150				

Matrix Spike (BGC0562-MS1)

Source: 2303361-01

Prepared: 03/18/23 Analyzed: 03/19/23

C10-C28 (DRO)	483	50	mg/kg	500	10.7	94.4	70-130				
Surrogate: <i>o</i> -Terphenyl	13.7		"	12.5		110	30-150				

Matrix Spike Dup (BGC0562-MSD1)

Source: 2303361-01

Prepared: 03/18/23 Analyzed: 03/19/23

C10-C28 (DRO)	451	50	mg/kg	500	10.7	88.1	70-130	6.76	20		
Surrogate: <i>o</i> -Terphenyl	12.6		"	12.5		101	30-150				

Summit Scientific

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



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

Project: Dinner 4-8-14 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
04/03/23 10:43

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGC1001 - EPA 5030 Soil MS

Blank (BGC1001-BLK1)

Prepared: 03/30/23 Analyzed: 03/31/23

Acenaphthene	ND	0.00500	mg/kg							
Acenaphthylene	ND	0.00500	"							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Benzo (g,h,i) perylene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.0100	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.0100	"							
Naphthalene	ND	0.00500	"							
Phenanthrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0374		"	0.0333	112	40-150				
Surrogate: Fluoranthene-d10	0.0315		"	0.0333	94.5	40-150				

LCS (BGC1001-BS1)

Prepared: 03/30/23 Analyzed: 03/31/23

Acenaphthene	0.0363	0.00500	mg/kg	0.0333	109	31-137				
Acenaphthylene	0.0391	0.00500	"	0.0333	117	30-120				
Anthracene	0.0326	0.00500	"	0.0333	97.9	30-120				
Benzo (a) anthracene	0.0318	0.00500	"	0.0333	95.5	30-120				
Benzo (a) pyrene	0.0319	0.00500	"	0.0333	95.8	30-120				
Benzo (b) fluoranthene	0.0395	0.00500	"	0.0333	118	30-120				
Benzo (k) fluoranthene	0.0392	0.00500	"	0.0333	118	30-120				
Benzo (g,h,i) perylene	0.0168	0.00500	"	0.0333	50.4	30-120				
Chrysene	0.0254	0.00500	"	0.0333	76.2	30-120				
Dibenz (a,h) anthracene	0.0177	0.0100	"	0.0333	53.1	30-120				
Fluoranthene	0.0316	0.00500	"	0.0333	94.7	30-120				
Fluorene	0.0343	0.00500	"	0.0333	103	30-120				
Indeno (1,2,3-cd) pyrene	0.0157	0.0100	"	0.0333	47.1	30-120				
Naphthalene	0.0339	0.00500	"	0.0333	102	30-120				
Phenanthrene	0.0336	0.00500	"	0.0333	101	30-120				
Pyrene	0.0377	0.00500	"	0.0333	113	35-142				
Surrogate: 2-Methylnaphthalene-d10	0.0381		"	0.0333	114	40-150				
Surrogate: Fluoranthene-d10	0.0369		"	0.0333	111	40-150				

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: Dinner 4-8-14 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
04/03/23 10:43

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGC1001 - EPA 5030 Soil MS

Matrix Spike (BGC1001-MS1)

Source: 2303519-01

Prepared: 03/30/23 Analyzed: 03/31/23

Acenaphthene	0.0292	0.00500	mg/kg	0.0333	ND	87.7	31-137		
Acenaphthylene	0.0368	0.00500	"	0.0333	ND	111	30-120		
Anthracene	0.0243	0.00500	"	0.0333	ND	72.9	30-120		
Benzo (a) anthracene	0.0243	0.00500	"	0.0333	ND	73.0	30-120		
Benzo (a) pyrene	0.0239	0.00500	"	0.0333	ND	71.6	30-120		
Benzo (b) fluoranthene	0.0302	0.00500	"	0.0333	ND	90.6	30-120		
Benzo (k) fluoranthene	0.0325	0.00500	"	0.0333	ND	97.4	30-120		
Benzo (g,h,i) perylene	0.0212	0.00500	"	0.0333	ND	63.6	30-120		
Chrysene	0.0196	0.00500	"	0.0333	ND	58.7	30-120		
Dibenz (a,h) anthracene	0.0203	0.0100	"	0.0333	ND	60.8	30-120		
Fluoranthene	0.0272	0.00500	"	0.0333	ND	81.6	30-120		
Fluorene	0.0267	0.00500	"	0.0333	ND	80.0	30-120		
Indeno (1,2,3-cd) pyrene	0.0162	0.0100	"	0.0333	ND	48.6	30-120		
Naphthalene	0.0243	0.00500	"	0.0333	ND	73.0	30-120		
Phenanthrene	0.0265	0.00500	"	0.0333	ND	79.4	30-120		
Pyrene	0.0285	0.00500	"	0.0333	ND	85.4	35-142		
Surrogate: 2-Methylnaphthalene-d10	0.0282		"	0.0333		84.5	40-150		
Surrogate: Fluoranthene-d10	0.0290		"	0.0333		86.9	40-150		

Matrix Spike Dup (BGC1001-MSD1)

Source: 2303519-01

Prepared: 03/30/23 Analyzed: 03/31/23

Acenaphthene	0.0259	0.00500	mg/kg	0.0333	ND	77.8	31-137	12.0	30
Acenaphthylene	0.0306	0.00500	"	0.0333	ND	91.8	30-120	18.5	30
Anthracene	0.0202	0.00500	"	0.0333	ND	60.5	30-120	18.7	30
Benzo (a) anthracene	0.0201	0.00500	"	0.0333	ND	60.2	30-120	19.2	30
Benzo (a) pyrene	0.0198	0.00500	"	0.0333	ND	59.4	30-120	18.7	30
Benzo (b) fluoranthene	0.0249	0.00500	"	0.0333	ND	74.6	30-120	19.3	30
Benzo (k) fluoranthene	0.0272	0.00500	"	0.0333	ND	81.6	30-120	17.6	30
Benzo (g,h,i) perylene	0.0187	0.00500	"	0.0333	ND	56.2	30-120	12.4	30
Chrysene	0.0161	0.00500	"	0.0333	ND	48.2	30-120	19.5	30
Dibenz (a,h) anthracene	0.0188	0.0100	"	0.0333	ND	56.4	30-120	7.38	30
Fluoranthene	0.0225	0.00500	"	0.0333	ND	67.4	30-120	19.1	30
Fluorene	0.0256	0.00500	"	0.0333	ND	76.9	30-120	4.01	30
Indeno (1,2,3-cd) pyrene	0.0157	0.0100	"	0.0333	ND	47.2	30-120	2.96	30
Naphthalene	0.0191	0.00500	"	0.0333	ND	57.4	30-120	23.9	30
Phenanthrene	0.0227	0.00500	"	0.0333	ND	68.1	30-120	15.4	30
Pyrene	0.0237	0.00500	"	0.0333	ND	71.0	35-142	18.5	30
Surrogate: 2-Methylnaphthalene-d10	0.0234		"	0.0333		70.2	40-150		
Surrogate: Fluoranthene-d10	0.0237		"	0.0333		71.2	40-150		

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: Dinner 4-8-14 Wellhead

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
 04/03/23 10:43

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGC1001 - EPA 5030 Soil MS

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: Dinner 4-8-14 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 04/03/23 10:43

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

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

Batch BGC0949 - EPA 3050B

Blank (BGC0949-BLK1)

Prepared: 03/28/23 Analyzed: 03/29/23

Boron ND 0.0100 mg/L

LCS (BGC0949-BS1)

Prepared: 03/28/23 Analyzed: 03/29/23

Boron 5.89 0.0100 mg/L 5.00 118 80-120

Duplicate (BGC0949-DUP1)

Source: 2303329-02

Prepared: 03/28/23 Analyzed: 03/29/23

Boron 0.469 0.0100 mg/L 0.473 0.841 20

Matrix Spike (BGC0949-MS1)

Source: 2303329-02

Prepared: 03/28/23 Analyzed: 03/29/23

Boron 6.10 0.0100 mg/L 5.00 0.473 112 75-125

Matrix Spike Dup (BGC0949-MSD1)

Source: 2303329-02

Prepared: 03/28/23 Analyzed: 03/29/23

Boron 6.12 0.0100 mg/L 5.00 0.473 113 75-125 0.294 25

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: Dinner 4-8-14 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 04/03/23 10:43

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

Summit Scientific

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

Batch BGC0989 - General Preparation

Blank (BGC0989-BLK1)

Prepared: 03/29/23 Analyzed: 03/31/23

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

LCS (BGC0989-BS1)

Prepared: 03/29/23 Analyzed: 03/31/23

Calcium	4.45	0.0500	mg/L wet	5.00	89.1	70-130				
Magnesium	4.94	0.0500	"	5.00	98.9	70-130				
Sodium	4.94	0.0500	"	5.00	98.9	70-130				

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: Dinner 4-8-14 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 04/03/23 10:43

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

Summit Scientific

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

Batch BGC0946 - General Preparation

Duplicate (BGC0946-DUP1)

Source: 2303288-03

Prepared & Analyzed: 03/28/23

% Solids	93.7		%		93.8			0.0706		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: Dinner 4-8-14 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 04/03/23 10:43

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

Summit Scientific

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

Batch BGC1017 - General Preparation

Blank (BGC1017-BLK1)

Prepared & Analyzed: 03/30/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGC1017-BS1)

Prepared & Analyzed: 03/30/23

Specific Conductance (EC) 0.151 0.0100 mmhos/cm 0.150 101 95-105

Duplicate (BGC1017-DUP1)

Source: 2303329-02

Prepared & Analyzed: 03/30/23

Specific Conductance (EC) 9.23 0.0100 mmhos/cm 9.29 0.605 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: Dinner 4-8-14 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 04/03/23 10:43

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

Summit Scientific

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

Batch BGC1016 - General Preparation

LCS (BGC1016-BS1)

Prepared & Analyzed: 03/30/23

pH 9.08 pH Units 9.18 98.9 95-105

Duplicate (BGC1016-DUP1)

Source: 2303366-01

Prepared & Analyzed: 03/30/23

pH 8.40 pH Units 8.35 0.597 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: Dinner 4-8-14 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
04/03/23 10:43

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

March 23, 2023

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Dinner 4-8-14 Wellhead

Work Order #2303418

Enclosed are the results of analyses for samples received by Summit Scientific on 03/15/23 18:18. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Scott Sheely For Paul Shrewsbury

President



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

Project: Dinner 4-8-14 Wellhead

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
03/23/23 16:01

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01-01@4'	2303418-01	Soil	03/15/23 11:30	03/15/23 18:18

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.

		Send Data To:		Send Invoice To:	
Client:	PDC / Tasman	Project Manager:	Mark Longhurst	Company:	PDC Energy
Address:	6855 W 119th Ave	E-Mail:	mark.longhurst@PDCE.com	Project Name/Location:	
City/State/Zip:	Broomfield / CO / 80220			AFE#:	
Phone:	303-487-1228	Project Name:	Dinner 4-8-14 wellhead	PO/Billing Codes:	
Sampler Name:	Emilia Wozniak	Project Number:		Contact:	Mark Longhurst

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested					Special Instructions		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR		PAH - 915	
1	FL01-01(4)	3/15/23	1130	2			X							X	X	X				
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				

Relinquished by:	Date/Time:	Received by: Tasman's Lockbox	Date/Time:	TAT Business Days	Field DO	Notes:
<i>Wm 9 Wm</i>	3/15/23 1627		3/15/23 1627	Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
Tasman's Lockbox	3/15/23 1818	<i>[Signature]</i>	3/15/23 1818	2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt:	9.6	Corrected Temperature	8	IR gun #:	1	HNO3 lot #:

S₂

Sample Receipt Checklist

S2 Work Order# 2303418

Client: Procton Client Project ID: Dinner 4-8-14 wellhead

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

Matrix (Check all that apply) Air Soil/Solid Water Other

Temp (°C) 9.6 Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>on ice</u>
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

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

[Signature]
Custodian Printed Name

3-15-23
Date/Time



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

Project: Dinner 4-8-14 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
03/23/23 16:01

FL01-01@4'
2303418-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/15/23 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGC0571	03/18/23	03/22/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **03/15/23 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0460	115 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0393	98.2 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0425	106 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/15/23 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGC0574	03/18/23	03/20/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/15/23 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.75	70.0 %		30-150		"	"	"	"	

Summit Scientific

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



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

Project: Dinner 4-8-14 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
03/23/23 16:01

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGC0571 - EPA 5030 Soil MS

Blank (BGC0571-BLK1)

Prepared: 03/18/23 Analyzed: 03/21/23

Benzene	ND	0.0020	mg/kg								
Toluene	ND	0.0050	"								
Ethylbenzene	ND	0.0050	"								
Xylenes (total)	ND	0.010	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
Naphthalene	ND	0.0038	"								
Gasoline Range Hydrocarbons	ND	0.50	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0492		"	0.0400		123	50-150				
<i>Surrogate: Toluene-d8</i>	0.0385		"	0.0400		96.2	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0400		"	0.0400		100	50-150				

LCS (BGC0571-BS1)

Prepared: 03/18/23 Analyzed: 03/21/23

Benzene	0.0838	0.0020	mg/kg	0.100		83.8	70-130				
Toluene	0.0724	0.0050	"	0.100		72.4	70-130				
Ethylbenzene	0.0908	0.0050	"	0.100		90.8	70-130				
m,p-Xylene	0.186	0.010	"	0.200		92.8	70-130				
o-Xylene	0.0883	0.0050	"	0.100		88.3	70-130				
1,2,4-Trimethylbenzene	0.0841	0.0050	"	0.100		84.1	70-130				
1,3,5-Trimethylbenzene	0.0876	0.0050	"	0.100		87.6	70-130				
Naphthalene	0.0771	0.0038	"	0.100		77.1	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0433		"	0.0400		108	50-150				
<i>Surrogate: Toluene-d8</i>	0.0365		"	0.0400		91.2	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0416		"	0.0400		104	50-150				

Matrix Spike (BGC0571-MS1)

Source: 2303418-01

Prepared: 03/18/23 Analyzed: 03/21/23

Benzene	0.0798	0.0020	mg/kg	0.100	ND	79.8	70-130				
Toluene	0.0710	0.0050	"	0.100	ND	71.0	70-130				
Ethylbenzene	0.0861	0.0050	"	0.100	ND	86.1	70-130				
m,p-Xylene	0.178	0.010	"	0.200	ND	89.1	70-130				
o-Xylene	0.0884	0.0050	"	0.100	ND	88.4	70-130				
1,2,4-Trimethylbenzene	0.0850	0.0050	"	0.100	ND	85.0	70-130				
1,3,5-Trimethylbenzene	0.0874	0.0050	"	0.100	ND	87.4	70-130				
Naphthalene	0.0805	0.0038	"	0.100	ND	80.5	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0434		"	0.0400		109	50-150				
<i>Surrogate: Toluene-d8</i>	0.0386		"	0.0400		96.4	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0425		"	0.0400		106	50-150				

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: Dinner 4-8-14 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 03/23/23 16:01

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGC0571 - EPA 5030 Soil MS

Matrix Spike Dup (BGC0571-MSD1)	Source: 2303418-01			Prepared: 03/18/23 Analyzed: 03/21/23						
Benzene	0.0849	0.0020	mg/kg	0.100	ND	84.9	70-130	6.27	30	
Toluene	0.0770	0.0050	"	0.100	ND	77.0	70-130	8.19	30	
Ethylbenzene	0.0904	0.0050	"	0.100	ND	90.4	70-130	4.86	30	
m,p-Xylene	0.182	0.010	"	0.200	ND	91.1	70-130	2.28	30	
o-Xylene	0.0867	0.0050	"	0.100	ND	86.7	70-130	1.95	30	
1,2,4-Trimethylbenzene	0.0806	0.0050	"	0.100	ND	80.6	70-130	5.43	30	
1,3,5-Trimethylbenzene	0.0865	0.0050	"	0.100	ND	86.5	70-130	1.14	30	
Naphthalene	0.0793	0.0038	"	0.100	ND	79.3	70-130	1.58	30	
Surrogate: 1,2-Dichloroethane-d4	0.0412		"	0.0400		103	50-150			
Surrogate: Toluene-d8	0.0386		"	0.0400		96.6	50-150			
Surrogate: 4-Bromofluorobenzene	0.0403		"	0.0400		101	50-150			

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: Dinner 4-8-14 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 03/23/23 16:01

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BGC0574 - EPA 3550A

Blank (BGC0574-BLK1)

Prepared: 03/18/23 Analyzed: 03/20/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	13.6		"	12.5		109		30-150			

LCS (BGC0574-BS1)

Prepared: 03/18/23 Analyzed: 03/20/23

C10-C28 (DRO)	356	50	mg/kg	500		71.1		70-130			
Surrogate: <i>o</i> -Terphenyl	13.4		"	12.5		107		30-150			

Matrix Spike (BGC0574-MS1)

Source: 2303418-01

Prepared: 03/18/23 Analyzed: 03/20/23

C10-C28 (DRO)	375	50	mg/kg	500	9.70	73.0		70-130			
Surrogate: <i>o</i> -Terphenyl	11.1		"	12.5		88.8		30-150			

Matrix Spike Dup (BGC0574-MSD1)

Source: 2303418-01

Prepared: 03/18/23 Analyzed: 03/20/23

C10-C28 (DRO)	386	50	mg/kg	500	9.70	75.3		70-130	3.03	20	
Surrogate: <i>o</i> -Terphenyl	10.6		"	12.5		85.1		30-150			

Summit Scientific

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



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

Project: Dinner 4-8-14 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
03/23/23 16:01

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

March 17, 2023

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Dinner 4-8-14 Wellhead

Work Order #2303316

Enclosed are the results of analyses for samples received by Summit Scientific on 03/13/23 18:03. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Scott Sheely For Paul Shrewsbury
President



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

Project: Dinner 4-8-14 Wellhead

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
03/17/23 15:30

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SEP02-FL@2.5'	2303316-01	Soil	03/13/23 14:35	03/13/23 18:03
SEP02-DL@2.5'	2303316-02	Soil	03/13/23 14:40	03/13/23 18:03

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.

Send Data To:		Send Invoice To:	
Client: PDC / Tasman	Project Manager: Mark Longhurst	Company: PDC Energy	
Address: 6855 W 119th Ave	E-Mail: mark.longhurst@PDCE.com	Project Name/Location:	
City/State/Zip: Broomfield / CO / 80220		AFE#:	
Phone: 303-487-1228	Project Name: <i>Dinner 4-8-14 Wellhead</i>	PO/Billing Codes:	
Sampler Name: Emilia Wozniak	Project Number:	Contact: Mark Longhurst	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested						Special Instructions			
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR		PAH - 915		
1	SEPO2-FL @ 2.5'	3/13/23	1435	2			+						+	+	+						
2	SEPO2-DL @ 2.5'	↓	1440	2			+						+	+	+						
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: <i>Uma W</i>	Date/Time: 3/13/23 1750	Received by: Tasman's Lockbox	Date/Time: 3/13/23 1750	TAT Business Days	Field DO	Notes:
Relinquished by: Tasman Lockbox	Date/Time: 3/13/23 1803	Received by: <i>[Signature]</i>	Date/Time: 3/13/23 1803	Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
Relinquished by:	Date/Time:	Received by:	Date/Time:	2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
Temperature Upon Receipt: 9.1	Corrected Temperature: <i>[Signature]</i>	IR gun #: /	HNO3 lot #:	Standard	<input checked="" type="checkbox"/> Field Turb.	

S₂

Sample Receipt Checklist

S2 Work Order# 230331b

Client: POC Trasman Client Project ID: Dinner 4-8-14 wellhead

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

Matrix (Check all that apply) Air Soil/Solid Water Other

Temp (°C) 9.1 Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>once</i>
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

AS
Custodian Printed Name

3/13/23
Date/Time



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

Project: Dinner 4-8-14 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
03/17/23 15:30

SEP02-FL@2.5'
2303316-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/23 14:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGC0430	03/15/23	03/16/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **03/13/23 14:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0334	83.5 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0358	89.4 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0360	90.1 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/23 14:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGC0433	03/15/23	03/15/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/13/23 14:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	11.3	90.3 %		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: Dinner 4-8-14 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
03/17/23 15:30

SEP02-DL@2.5'
2303316-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/23 14:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGC0430	03/15/23	03/16/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **03/13/23 14:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0345	86.2 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0352	88.0 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0360	90.0 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/23 14:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGC0433	03/15/23	03/15/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/13/23 14:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	11.1	89.1 %		30-150		"	"	"	"	

Summit Scientific

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



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

Project: Dinner 4-8-14 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
03/17/23 15:30

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 BGC0430 - EPA 5030 Soil MS

Blank (BGC0430-BLK1)

Prepared: 03/15/23 Analyzed: 03/16/23

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0431		"	0.0400		108	50-150			
Surrogate: Toluene-d8	0.0400		"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0420		"	0.0400		105	50-150			

LCS (BGC0430-BS1)

Prepared: 03/15/23 Analyzed: 03/16/23

Benzene	0.151	0.0020	mg/kg	0.150		101	70-130			
Toluene	0.150	0.0050	"	0.150		100	70-130			
Ethylbenzene	0.156	0.0050	"	0.150		104	70-130			
m,p-Xylene	0.313	0.010	"	0.300		104	70-130			
o-Xylene	0.153	0.0050	"	0.150		102	70-130			
1,2,4-Trimethylbenzene	0.152	0.0050	"	0.150		101	70-130			
1,3,5-Trimethylbenzene	0.154	0.0050	"	0.150		102	70-130			
Naphthalene	0.154	0.0038	"	0.150		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0404		"	0.0400		101	50-150			
Surrogate: Toluene-d8	0.0396		"	0.0400		99.1	50-150			
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0400		99.0	50-150			

Matrix Spike (BGC0430-MS1)

Source: 2303271-01

Prepared: 03/15/23 Analyzed: 03/16/23

Benzene	0.151	0.0020	mg/kg	0.150	ND	101	70-130			
Toluene	0.153	0.0050	"	0.150	ND	102	70-130			
Ethylbenzene	0.155	0.0050	"	0.150	ND	103	70-130			
m,p-Xylene	0.310	0.010	"	0.300	ND	103	70-130			
o-Xylene	0.146	0.0050	"	0.150	ND	97.2	70-130			
1,2,4-Trimethylbenzene	0.149	0.0050	"	0.150	ND	99.4	70-130			
1,3,5-Trimethylbenzene	0.154	0.0050	"	0.150	ND	103	70-130			
Naphthalene	0.128	0.0038	"	0.150	ND	85.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0415		"	0.0400		104	50-150			
Surrogate: Toluene-d8	0.0402		"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0395		"	0.0400		98.8	50-150			

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: Dinner 4-8-14 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 03/17/23 15:30

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		

Batch BGC0430 - EPA 5030 Soil MS

Matrix Spike Dup (BGC0430-MSD1)	Source: 2303271-01			Prepared: 03/15/23 Analyzed: 03/16/23						
Benzene	0.153	0.0020	mg/kg	0.150	ND	102	70-130	1.26	30	
Toluene	0.156	0.0050	"	0.150	ND	104	70-130	1.40	30	
Ethylbenzene	0.159	0.0050	"	0.150	ND	106	70-130	2.74	30	
m,p-Xylene	0.319	0.010	"	0.300	ND	106	70-130	2.78	30	
o-Xylene	0.152	0.0050	"	0.150	ND	101	70-130	3.97	30	
1,2,4-Trimethylbenzene	0.154	0.0050	"	0.150	ND	103	70-130	3.30	30	
1,3,5-Trimethylbenzene	0.158	0.0050	"	0.150	ND	106	70-130	2.69	30	
Naphthalene	0.150	0.0038	"	0.150	ND	100	70-130	15.8	30	
Surrogate: 1,2-Dichloroethane-d4	0.0412		"	0.0400		103	50-150			
Surrogate: Toluene-d8	0.0404		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0392		"	0.0400		97.9	50-150			

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: Dinner 4-8-14 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 03/17/23 15:30

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BGC0433 - EPA 3550A

Blank (BGC0433-BLK1)

Prepared & Analyzed: 03/15/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	12.1		"	12.5		96.5		30-150			

LCS (BGC0433-BS1)

Prepared & Analyzed: 03/15/23

C10-C28 (DRO)	510	50	mg/kg	500		102		70-130			
Surrogate: <i>o</i> -Terphenyl	15.8		"	12.5		127		30-150			

Matrix Spike (BGC0433-MS1)

Source: 2303261-01

Prepared & Analyzed: 03/15/23

C10-C28 (DRO)	400	50	mg/kg	500	21.9	75.7		70-130			
Surrogate: <i>o</i> -Terphenyl	8.78		"	12.5		70.3		30-150			

Matrix Spike Dup (BGC0433-MSD1)

Source: 2303261-01

Prepared & Analyzed: 03/15/23

C10-C28 (DRO)	405	50	mg/kg	500	21.9	76.6		70-130	1.22	20	
Surrogate: <i>o</i> -Terphenyl	14.5		"	12.5		116		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: Dinner 4-8-14 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
03/17/23 15:30

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

April 06, 2023

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Dinner 4-6-14 Wellhead

Work Order #2303419

Enclosed are the results of analyses for samples received by Summit Scientific on 03/15/23 18:18. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Scott Sheely For Paul Shrewsbury

President



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

Project: Dinner 4-6-14 Wellhead

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
04/06/23 10:14

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH01@7'	2303419-01	Soil	03/15/23 09:25	03/15/23 18:18
FLR01@4'	2303419-02	Soil	03/15/23 09:30	03/15/23 18:18
FL01-01@4'	2303419-03	Soil	03/15/23 11:35	03/15/23 18:18
BKG01@4'	2303419-04	Soil	03/15/23 11:00	03/15/23 18:18
BKG01@7'	2303419-05	Soil	03/15/23 11:05	03/15/23 18:18

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.

Client: PDC / Tasman		Send Data To: Project Manager: Mark Longhurst		Send Invoice To: Company: PDC Energy	
Address: 6855 W 119th Ave		E-Mail: mark.longhurst@PDCE.com		Project Name/Location:	
City/State/Zip: Broomfield / CO / 80220		Project Name: <i>Dinner 4-6-14 wellhead</i>		AFE#:	
Phone: 303-487-1228		Project Number:		PO/Billing Codes:	
Sampler Name: Emilia Wozniak		Contact: Mark Longhurst			

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested						Special Instructions			
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR	PAH - 915				
1	WHO1 @ 7'	3/15/23	925	2			X							X	X	X	X	X	X			
2	FLR01 @ 4'	↓	930	↓										X	X	X	X	X	X			
3	FL01-01 @ 4'	↓	1133	↓										X	X	X						
4	BKG01 @ 4'	↓	1100	↓																	X	
5	BKG01 @ 7'	↓	1105	↓																	X	
6																						
7																						
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15																						

Relinquished by: <i>Wing W</i>	Date/Time: 3/15/23 1827	Received by: Tasman's Lockbox	Date/Time: 3/15/23 1827	TAT Business Days	Field DO	Notes:
Relinquished by: <i>Tasmanlockbox</i>	Date/Time: 3/15/23 1818	Received by: <i>[Signature]</i>	Date/Time: 3/15/23 1818	Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
Relinquished by:	Date/Time:	Received by:	Date/Time:	2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
Temperature Upon Receipt: 9.4	Corrected Temperature: <i>[Signature]</i>	IR gun #:		Standard	X Field Turb.	
				HNO3 lot #:		

S₂

Sample Receipt Checklist

S2 Work Order# 2303419

Client: P. Tasman Client Project ID: Dinner 4-6-14 wellhead

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

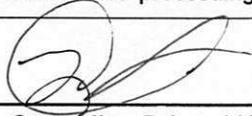
Matrix (Check all that apply) Air Soil/Solid Water Other

Temp (°C) Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>on ice</u>
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

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


Custodian Printed Name

3-15-23
Date/Time



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

Project: Dinner 4-6-14 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
04/06/23 10:14

WH01@7'
2303419-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/15/23 09:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGC0571	03/18/23	03/22/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **03/15/23 09:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0306	76.5 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0390	97.5 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0427	107 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/15/23 09:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGC0574	03/18/23	03/20/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/15/23 09:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	9.16	73.3 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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: Dinner 4-6-14 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
04/06/23 10:14

WH01@7'
2303419-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/15/23 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGC0771	03/23/23	03/23/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/15/23 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0193	57.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0212	63.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/15/23 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0969	0.0100	mg/L	1	BGC0653	03/20/23	03/22/23	EPA 6020B	

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

Date Sampled: **03/15/23 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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: Dinner 4-6-14 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 04/06/23 10:14

WH01@7'
2303419-01 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	38.1	0.0558	mg/L dry	1	BGC0628	03/20/23	03/21/23	EPA 6020B	
Magnesium	10.9	0.0558	"	"	"	"	"	"	
Sodium	41.4	0.0558	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/15/23 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.52	0.00100	units	1	BGC0816	03/24/23	03/24/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/15/23 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.7		%	1	BGC0713	03/21/23	03/22/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/15/23 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.384	0.0100	mmhos/cm	1	BGC0665	03/21/23	03/21/23	EPA 120.1	

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

Date Sampled: **03/15/23 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.18		pH Units	1	BGC0666	03/21/23	03/21/23	EPA 9045D	

Summit Scientific

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



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

Project: Dinner 4-6-14 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
04/06/23 10:14

FLR01@4'
2303419-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/15/23 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGC0571	03/18/23	03/22/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/15/23 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0394	98.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0386	96.5 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0409	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/15/23 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGC0574	03/18/23	03/20/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/15/23 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.02	72.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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: Dinner 4-6-14 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
04/06/23 10:14

FLR01@4'
2303419-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/15/23 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGC0771	03/23/23	03/23/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/15/23 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0186	55.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0194	58.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/15/23 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.156	0.0100	mg/L	1	BGC0653	03/20/23	03/22/23	EPA 6020B	

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

Date Sampled: **03/15/23 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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: Dinner 4-6-14 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
04/06/23 10:14

FLR01@4'
2303419-02 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	33.0	0.0596	mg/L dry	1	BGC0628	03/20/23	03/21/23	EPA 6020B	
Magnesium	10.2	0.0596	"	"	"	"	"	"	
Sodium	65.9	0.0596	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/15/23 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.57	0.00100	units	1	BGC0816	03/24/23	03/24/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/15/23 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.9		%	1	BGC0713	03/21/23	03/22/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/15/23 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.634	0.0100	mmhos/cm	1	BGC0665	03/21/23	03/21/23	EPA 120.1	

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

Date Sampled: **03/15/23 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.91		pH Units	1	BGC0666	03/21/23	03/21/23	EPA 9045D	

Summit Scientific

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



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

Project: Dinner 4-6-14 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
04/06/23 10:14

FL01-01@4'
2303419-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/15/23 11:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGC0571	03/18/23	03/22/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **03/15/23 11:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0542	136 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0393	98.2 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0413	103 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/15/23 11:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGC0574	03/18/23	03/20/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/15/23 11:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	9.20	73.6 %		30-150		"	"	"	"	

Summit Scientific

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



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

Project: Dinner 4-6-14 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 04/06/23 10:14

BKG01@4'
2303419-04 (Soil)

Summit Scientific

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

Date Sampled: **03/15/23 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	7.94		pH Units	1	BGD0135	04/05/23	04/05/23	EPA 9045D	I-02

Summit Scientific

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





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

Project: Dinner 4-6-14 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 04/06/23 10:14

BKG01@7'
2303419-05 (Soil)

Summit Scientific

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

Date Sampled: **03/15/23 11:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.06		pH Units	1	BGD0135	04/05/23	04/05/23	EPA 9045D	I-02

Summit Scientific

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





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

Project: Dinner 4-6-14 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
04/06/23 10:14

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGC0571 - EPA 5030 Soil MS

Blank (BGC0571-BLK1)

Prepared: 03/18/23 Analyzed: 03/21/23

Benzene	ND	0.0020	mg/kg								
Toluene	ND	0.0050	"								
Ethylbenzene	ND	0.0050	"								
Xylenes (total)	ND	0.010	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
Naphthalene	ND	0.0038	"								
Gasoline Range Hydrocarbons	ND	0.50	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0492		"	0.0400		123	50-150				
<i>Surrogate: Toluene-d8</i>	0.0385		"	0.0400		96.2	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0400		"	0.0400		100	50-150				

LCS (BGC0571-BS1)

Prepared: 03/18/23 Analyzed: 03/21/23

Benzene	0.0838	0.0020	mg/kg	0.100		83.8	70-130				
Toluene	0.0724	0.0050	"	0.100		72.4	70-130				
Ethylbenzene	0.0908	0.0050	"	0.100		90.8	70-130				
m,p-Xylene	0.186	0.010	"	0.200		92.8	70-130				
o-Xylene	0.0883	0.0050	"	0.100		88.3	70-130				
1,2,4-Trimethylbenzene	0.0841	0.0050	"	0.100		84.1	70-130				
1,3,5-Trimethylbenzene	0.0876	0.0050	"	0.100		87.6	70-130				
Naphthalene	0.0771	0.0038	"	0.100		77.1	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0433		"	0.0400		108	50-150				
<i>Surrogate: Toluene-d8</i>	0.0365		"	0.0400		91.2	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0416		"	0.0400		104	50-150				

Matrix Spike (BGC0571-MS1)

Source: 2303418-01

Prepared: 03/18/23 Analyzed: 03/21/23

Benzene	0.0798	0.0020	mg/kg	0.100	ND	79.8	70-130				
Toluene	0.0710	0.0050	"	0.100	ND	71.0	70-130				
Ethylbenzene	0.0861	0.0050	"	0.100	ND	86.1	70-130				
m,p-Xylene	0.178	0.010	"	0.200	ND	89.1	70-130				
o-Xylene	0.0884	0.0050	"	0.100	ND	88.4	70-130				
1,2,4-Trimethylbenzene	0.0850	0.0050	"	0.100	ND	85.0	70-130				
1,3,5-Trimethylbenzene	0.0874	0.0050	"	0.100	ND	87.4	70-130				
Naphthalene	0.0805	0.0038	"	0.100	ND	80.5	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0434		"	0.0400		109	50-150				
<i>Surrogate: Toluene-d8</i>	0.0386		"	0.0400		96.4	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0425		"	0.0400		106	50-150				

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: Dinner 4-6-14 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 04/06/23 10:14

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 BGC0571 - EPA 5030 Soil MS

Matrix Spike Dup (BGC0571-MSD1)	Source: 2303418-01			Prepared: 03/18/23 Analyzed: 03/21/23						
Benzene	0.0849	0.0020	mg/kg	0.100	ND	84.9	70-130	6.27	30	
Toluene	0.0770	0.0050	"	0.100	ND	77.0	70-130	8.19	30	
Ethylbenzene	0.0904	0.0050	"	0.100	ND	90.4	70-130	4.86	30	
m,p-Xylene	0.182	0.010	"	0.200	ND	91.1	70-130	2.28	30	
o-Xylene	0.0867	0.0050	"	0.100	ND	86.7	70-130	1.95	30	
1,2,4-Trimethylbenzene	0.0806	0.0050	"	0.100	ND	80.6	70-130	5.43	30	
1,3,5-Trimethylbenzene	0.0865	0.0050	"	0.100	ND	86.5	70-130	1.14	30	
Naphthalene	0.0793	0.0038	"	0.100	ND	79.3	70-130	1.58	30	
Surrogate: 1,2-Dichloroethane-d4	0.0412		"	0.0400		103	50-150			
Surrogate: Toluene-d8	0.0386		"	0.0400		96.6	50-150			
Surrogate: 4-Bromofluorobenzene	0.0403		"	0.0400		101	50-150			

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: Dinner 4-6-14 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 04/06/23 10:14

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BGC0574 - EPA 3550A

Blank (BGC0574-BLK1)

Prepared: 03/18/23 Analyzed: 03/20/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	13.6		"	12.5		109	30-150				

LCS (BGC0574-BS1)

Prepared: 03/18/23 Analyzed: 03/20/23

C10-C28 (DRO)	356	50	mg/kg	500		71.1	70-130				
Surrogate: <i>o</i> -Terphenyl	13.4		"	12.5		107	30-150				

Matrix Spike (BGC0574-MS1)

Source: 2303418-01

Prepared: 03/18/23 Analyzed: 03/20/23

C10-C28 (DRO)	375	50	mg/kg	500	9.70	73.0	70-130				
Surrogate: <i>o</i> -Terphenyl	11.1		"	12.5		88.8	30-150				

Matrix Spike Dup (BGC0574-MSD1)

Source: 2303418-01

Prepared: 03/18/23 Analyzed: 03/20/23

C10-C28 (DRO)	386	50	mg/kg	500	9.70	75.3	70-130	3.03	20		
Surrogate: <i>o</i> -Terphenyl	10.6		"	12.5		85.1	30-150				

Summit Scientific

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



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

Project: Dinner 4-6-14 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
04/06/23 10:14

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGC0771 - EPA 5030 Soil MS

Blank (BGC0771-BLK1)

Prepared & Analyzed: 03/23/23

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0280		"	0.0333		84.0	40-150			
Surrogate: Fluoranthene-d10	0.0285		"	0.0333		85.5	40-150			

LCS (BGC0771-BS1)

Prepared & Analyzed: 03/23/23

Acenaphthene	0.0311	0.00500	mg/kg	0.0333		93.2	31-137			
Anthracene	0.0293	0.00500	"	0.0333		87.8	30-120			
Benzo (a) anthracene	0.0247	0.00500	"	0.0333		74.0	30-120			
Benzo (a) pyrene	0.0317	0.00500	"	0.0333		95.2	30-120			
Benzo (b) fluoranthene	0.0301	0.00500	"	0.0333		90.4	30-120			
Benzo (k) fluoranthene	0.0362	0.00500	"	0.0333		109	30-120			
Chrysene	0.0273	0.00500	"	0.0333		81.9	30-120			
Dibenz (a,h) anthracene	0.0249	0.00500	"	0.0333		74.6	30-120			
Fluoranthene	0.0293	0.00500	"	0.0333		87.9	30-120			
Fluorene	0.0318	0.00500	"	0.0333		95.5	30-120			
Indeno (1,2,3-cd) pyrene	0.0275	0.00500	"	0.0333		82.4	30-120			
Pyrene	0.0327	0.00500	"	0.0333		98.1	35-142			
1-Methylnaphthalene	0.0334	0.00500	"	0.0333		100	35-142			
2-Methylnaphthalene	0.0206	0.00500	"	0.0333		61.7	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0399		"	0.0333		120	40-150			
Surrogate: Fluoranthene-d10	0.0308		"	0.0333		92.3	40-150			

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: Dinner 4-6-14 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
04/06/23 10:14

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGC0771 - EPA 5030 Soil MS

Matrix Spike (BGC0771-MS1)

Source: 2303414-01

Prepared & Analyzed: 03/23/23

Acenaphthene	0.0844	0.00500	mg/kg	0.0333	0.0190	196	31-137			QM-02
Anthracene	0.140	0.00500	"	0.0333	0.0284	335	30-120			QM-02
Benzo (a) anthracene	0.164	0.00500	"	0.0333	0.0331	394	30-120			QM-02
Benzo (a) pyrene	0.0862	0.00500	"	0.0333	0.0154	213	30-120			QM-02
Benzo (b) fluoranthene	0.135	0.00500	"	0.0333	0.0276	322	30-120			QM-02
Benzo (k) fluoranthene	0.0617	0.00500	"	0.0333	0.0106	153	30-120			QM-02
Chrysene	0.133	0.00500	"	0.0333	0.0280	315	30-120			QM-02
Dibenz (a,h) anthracene	0.0419	0.00500	"	0.0333	ND	126	30-120			QM-02
Fluoranthene	0.358	0.00500	"	0.0333	0.0860	816	30-120			QM-02
Fluorene	0.103	0.00500	"	0.0333	0.0213	246	30-120			QM-02
Indeno (1,2,3-cd) pyrene	0.0682	0.00500	"	0.0333	0.0108	172	30-120			QM-02
Pyrene	0.251	0.00500	"	0.0333	0.0621	568	35-142			QM-02
1-Methylnaphthalene	0.0302	0.00500	"	0.0333	ND	90.7	15-130			
2-Methylnaphthalene	0.0230	0.00500	"	0.0333	ND	69.0	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0299		"	0.0333		89.7	40-150			
Surrogate: Fluoranthene-d10	0.0253		"	0.0333		75.9	40-150			

Matrix Spike Dup (BGC0771-MSD1)

Source: 2303414-01

Prepared & Analyzed: 03/23/23

Acenaphthene	0.0544	0.00500	mg/kg	0.0333	0.0190	106	31-137	43.2	30	QM-02
Anthracene	0.0751	0.00500	"	0.0333	0.0284	140	30-120	60.4	30	QM-02
Benzo (a) anthracene	0.0942	0.00500	"	0.0333	0.0331	183	30-120	54.3	30	QM-02
Benzo (a) pyrene	0.0534	0.00500	"	0.0333	0.0154	114	30-120	47.0	30	QM-02
Benzo (b) fluoranthene	0.0831	0.00500	"	0.0333	0.0276	167	30-120	47.6	30	QM-02
Benzo (k) fluoranthene	0.0452	0.00500	"	0.0333	0.0106	104	30-120	30.9	30	QM-02
Chrysene	0.0718	0.00500	"	0.0333	0.0280	131	30-120	59.7	30	QM-02
Dibenz (a,h) anthracene	0.0337	0.00500	"	0.0333	ND	101	30-120	21.7	30	
Fluoranthene	0.199	0.00500	"	0.0333	0.0860	339	30-120	57.1	30	QM-02
Fluorene	0.0641	0.00500	"	0.0333	0.0213	128	30-120	46.8	30	QM-02
Indeno (1,2,3-cd) pyrene	0.0448	0.00500	"	0.0333	0.0108	102	30-120	41.5	30	QM-02
Pyrene	0.146	0.00500	"	0.0333	0.0621	251	35-142	53.3	30	QM-02
1-Methylnaphthalene	0.0305	0.00500	"	0.0333	ND	91.4	15-130	0.736	50	
2-Methylnaphthalene	0.0207	0.00500	"	0.0333	ND	62.2	15-130	10.4	50	
Surrogate: 2-Methylnaphthalene-d10	0.0311		"	0.0333		93.2	40-150			
Surrogate: Fluoranthene-d10	0.0265		"	0.0333		79.6	40-150			

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: Dinner 4-6-14 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 04/06/23 10:14

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

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

Batch BGC0653 - EPA 3050B

Blank (BGC0653-BLK1)		Prepared: 03/20/23 Analyzed: 03/22/23									
Boron	ND	0.0100	mg/L								
LCS (BGC0653-BS1)		Prepared: 03/20/23 Analyzed: 03/22/23									
Boron	4.94	0.0100	mg/L	5.00	98.7	80-120					
Duplicate (BGC0653-DUP1)		Source: 2303414-01		Prepared: 03/20/23 Analyzed: 03/22/23							
Boron	0.162	0.0100	mg/L	0.165			1.71	20			
Matrix Spike (BGC0653-MS1)		Source: 2303414-01		Prepared: 03/20/23 Analyzed: 03/22/23							
Boron	5.29	0.0100	mg/L	5.00	0.165	102	75-125				
Matrix Spike Dup (BGC0653-MSD1)		Source: 2303414-01		Prepared: 03/20/23 Analyzed: 03/22/23							
Boron	5.17	0.0100	mg/L	5.00	0.165	100	75-125	2.30	25		

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: Dinner 4-6-14 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 04/06/23 10:14

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

Summit Scientific

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

Batch BGC0628 - General Preparation

Blank (BGC0628-BLK1)

Prepared: 03/20/23 Analyzed: 03/21/23

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

LCS (BGC0628-BS1)

Prepared: 03/20/23 Analyzed: 03/21/23

Calcium	5.44	0.0500	mg/L wet	5.00		109	70-130			
Magnesium	5.24	0.0500	"	5.00		105	70-130			
Sodium	4.87	0.0500	"	5.00		97.4	70-130			

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: Dinner 4-6-14 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 04/06/23 10:14

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

Summit Scientific

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

Batch BGC0713 - General Preparation

Duplicate (BGC0713-DUP1)		Source: 2303411-01		Prepared: 03/21/23 Analyzed: 03/22/23	
% Solids	93.6	%		93.7	0.145 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: Dinner 4-6-14 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 04/06/23 10:14

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

Summit Scientific

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

Batch BGC0665 - General Preparation

Blank (BGC0665-BLK1)

Prepared & Analyzed: 03/21/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGC0665-BS1)

Prepared & Analyzed: 03/21/23

Specific Conductance (EC) 0.153 0.0100 mmhos/cm 0.150 102 95-105

Duplicate (BGC0665-DUP1)

Source: 2303359-01

Prepared & Analyzed: 03/21/23

Specific Conductance (EC) 1.21 0.0100 mmhos/cm 1.22 0.826 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: Dinner 4-6-14 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 04/06/23 10:14

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

Summit Scientific

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

Batch BGC0666 - General Preparation

LCS (BGC0666-BS1)										
					Prepared & Analyzed: 03/21/23					
pH	9.16		pH Units	9.18	99.8	95-105				
Duplicate (BGC0666-DUP1)										
					Source: 2303359-01					
					Prepared & Analyzed: 03/21/23					
pH	9.33		pH Units	9.33	0.00	20				

Batch BGD0135 - General Preparation

LCS (BGD0135-BS1)										
					Prepared & Analyzed: 04/05/23					
pH	9.02		pH Units	9.18	98.3	95-105				
Duplicate (BGD0135-DUP1)										
					Source: 2303419-04					
					Prepared & Analyzed: 04/05/23					
pH	7.93		pH Units	7.94	0.126	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: Dinner 4-6-14 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
04/06/23 10:14

Notes and Definitions

- QM-02 The RPD and/or percent recovery for this QC sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
- 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