

TABLE 1
FORMER GUTTERSEN 33-6 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 @ 6'	12/6/2022	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FLR01 @ 4'	12/6/2022	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FL01-02 @ 5'	12/7/2022	5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FL01-04 @ 5'	12/7/2022	5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FL01-07 @ 5'	12/8/2022	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 GUTTERSEN 33-6 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 @ 6'	12/6/2022	6 ft. bgs	9.82	0.602	2.71	0.0587
FLR01 @ 4'	12/6/2022	4 ft. bgs	7.81	0.247	0.163	0.0423
BKG01 @ 4'	12/6/2022	4 ft. bgs	7.13	NA	NA	NA
BKG01 @ 6'	12/6/2022	6 ft. bgs	7.85	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

BOLD = Analytical result is in exceedance of applicable standard.

TABLE 3
FORMER GUTTERSEN 33-6 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 @ 6'	12/6/2022	6 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'	12/6/2022	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

Benz(a) = Benzantracene

Benzo(a) = Benzopyrene

Benzo(b) = Benzofluoranthene

Benzo(k) = Benzofluoranthene

A,H = Dibenzanthracene

1,2,3-CD = Indenopyrene

M = Methylnaphthalene

mg/kg = Milligrams per kilogram

ft. = Feet

bgs = Below ground surface

TABLE 4
FORMER GUTTERSEN 33-6 WELLHEAD
FIELD DATA SUMMARY TABLE

Sample ID	Date Sampled	Depth	GPS Data ⁽¹⁾		PDOP Value	VOC Concentration ⁽²⁾ (ppm)
			Latitude	Longitude		
WH01 @ 6'	12/6/2022	6 ft. bgs	NC	NC	NC	3.2
FLR01 @ 4'	12/6/2022	4 ft. bgs	40.252668	-104.478197	0.9	3.1
WHS01-N @ 0-6"	12/6/2022	0-6 in. bgs	40.252748	-104.478147	0.9	0.2
WHS01-E @ 0-6"	12/6/2022	0-6 in. bgs	40.252691	-104.478159	1.0	0.2
WHS01-S @ 0-6"	12/6/2022	0-6 in. bgs	40.252650	-104.478209	0.9	0.6
WHS01-W @ 0-6"	12/6/2022	0-6 in. bgs	40.252710	-104.478260	0.9	0.5
FL01-01 @ 3'	12/7/2022	3 ft. bgs	40.252078	-104.478668	0.8	0.0
FL01-02 @ 5'	12/7/2022	5 ft. bgs	40.251682	-104.478868	1.1	0.0
FL01-03 @ 5'	12/7/2022	5 ft. bgs	40.251482	-104.478048	0.7	0.0
FL01-04 @ 5'	12/7/2022	5 ft. bgs	40.251182	-104.477281	0.7	0.0
FL01-05 @ 5'	12/7/2022	5 ft. bgs	40.250888	-104.476502	1.0	0.0
FL01-06 @ 4'	12/7/2022	4 ft. bgs	40.250590	-104.475726	0.8	0.0
FL01-07 @ 5'	12/8/2022	5 ft. bgs	40.250515	-104.475596	1.0	0.0
BKG01 @ 4'	12/6/2022	4 ft. bgs	40.252788	-104.478170	0.9	0.0
BKG01 @ 6'	12/6/2022	6 ft. bgs	40.252788	-104.478170	0.9	0.0

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

ATTACHMENT A

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

December 29, 2022

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Guttersen 33-6 Wellhead

Work Order #2212124

Enclosed are the results of analyses for samples received by Summit Scientific on 12/06/22 17:48. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mikayla Axtell For Paul Shrewsbury
President



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

Project: Guttersen 33-6 Wellhead

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
12/29/22 14:31

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH01@6'	2212124-01	Soil	12/06/22 12:25	12/06/22 17:48
FLR01@4'	2212124-02	Soil	12/06/22 12:30	12/06/22 17:48
BKG01@4'	2212124-03	Soil	12/06/22 12:40	12/06/22 17:48
BKG01@6'	2212124-04	Soil	12/06/22 12:45	12/06/22 17:48

Summit Scientific

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

Summit Scientific

S₂

2212124

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

Client: PDC / Tasman	Project Manager: Mark Longhurst
Address: 6855 W 119th Ave	E-Mail: mark.longhurst@PDCE.com
City/State/Zip: Broomfield/ CO/ 80020	
Phone: 303-487-1228	Project Name: <i>Gutterson 33-6 wellhead</i>
Sampler Name: Emilia Wozniak	Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested						Special Instructions						
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR	PAH - 915							
1	<i>WA01(g) 6'</i>	<i>12/6/22</i>	<i>1225</i>	<i>3</i>			<i>↓</i>			<i>↓</i>			<i>x</i>	<i>x</i>	<i>+</i>	<i>+</i>	<i>+</i>	<i>+</i>	<i>+</i>	<i>+</i>		<i>On hold</i>	pH, EC, SAR by saturated paste		
2	<i>FLR01(g) 4'</i>	<i>↓</i>	<i>1230</i>	<i>3</i>									<i>x</i>	<i>x</i>	<i>+</i>	<i>+</i>	<i>+</i>	<i>+</i>	<i>+</i>	<i>+</i>					
3	<i>BKG01(g) 4'</i>	<i>↓</i>	<i>1240</i>	<i>1</i>			<i>↓</i>			<i>↓</i>											<i>+</i>				
4	<i>BKG01(g) 6'</i>	<i>↓</i>	<i>1245</i>	<i>1</i>			<i>↓</i>			<i>↓</i>											<i>+</i>				
5																									
6																									
7																									
8																									
9																									
10																									

Relinquished by: <i>Emilia Wozniak</i>	Date/Time: <i>12/6/22 1718</i>	Received by: <i>Tasman's Lock Box</i>	Date/Time: <i>12/6/22 1718</i>	Turn Around Time (Check) Same Day _____ 72 hours 24 hours _____ Standard <input checked="" type="checkbox"/> 48 hours _____ Sample Integrity: Temperature Upon Receipt: <u>7.3</u> Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	Notes:
Relinquished by: <i>Tasman's Lock Box</i>	Date/Time: <i>12/6/22 1748</i>	Received by: <i>[Signature]</i>	Date/Time: <i>12/6/22 1748</i>		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

S₂

Sample Receipt Checklist

S2 Work Order# 2212124

Client: Proffersman Client Project ID: Guterson 33-6 wellhead

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

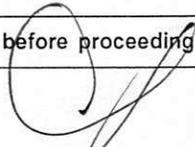
Matrix (Check all that apply) Air Soil/Solid Water Other

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>NOTICE</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

12-6-22
Date/Time



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

Project: Guttersen 33-6 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/22 14:31

WH01@6'
2212124-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/06/22 12:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BFL0213	12/08/22	12/10/22	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: **12/06/22 12:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0399	99.7 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0382	95.6 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0396	99.1 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/06/22 12:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BFL0215	12/08/22	12/09/22	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **12/06/22 12:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	7.24	57.9 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Gutteresen 33-6 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/22 14:31

WH01@6'
2212124-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/06/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFL0235	12/09/22	12/09/22	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: **12/06/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0285	85.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0236	71.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/06/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0587	0.0100	mg/L	1	BFL0245	12/09/22	12/11/22	EPA 6020B	

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

Date Sampled: **12/06/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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

Project: Guttersen 33-6 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/22 14:31

WH01@6'
2212124-01 (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	87.6	0.0536	mg/L dry	1	BFL0253	12/09/22	12/12/22	EPA 6020B	
Magnesium	54.7	0.0536	"	"	"	"	"	"	
Sodium	131	0.0536	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **12/06/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.71	0.00100	units	1	BFL0324	12/13/22	12/13/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/06/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.4		%	1	BFL0291	12/12/22	12/12/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/06/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.602	0.0100	mmhos/cm	1	BFL0266	12/10/22	12/10/22	EPA 120.1	

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

Date Sampled: **12/06/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.82		pH Units	1	BFL0267	12/10/22	12/10/22	EPA 9045D	

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

Project: Guttersen 33-6 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/22 14:31

FLR01@4'
2212124-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/06/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFL0213	12/08/22	12/10/22	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: **12/06/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0416	104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0387	96.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0399	99.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/06/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFL0215	12/08/22	12/09/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/06/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.77	62.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Guttersen 33-6 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/22 14:31

FLR01@4'
2212124-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/06/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFL0235	12/09/22	12/09/22	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: **12/06/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0269	80.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0182	54.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/06/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0423	0.0100	mg/L	1	BFL0245	12/09/22	12/11/22	EPA 6020B	

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

Date Sampled: **12/06/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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

Project: Guttersen 33-6 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/22 14:31

FLR01@4'
2212124-02 (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	27.1	0.0525	mg/L dry	1	BFL0253	12/09/22	12/12/22	EPA 6020B	
Magnesium	3.56	0.0525	"	"	"	"	"	"	
Sodium	3.39	0.0525	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **12/06/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.163	0.00100	units	1	BFL0324	12/13/22	12/13/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/06/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.2		%	1	BFL0291	12/12/22	12/12/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/06/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.247	0.0100	mmhos/cm	1	BFL0266	12/10/22	12/10/22	EPA 120.1	

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

Date Sampled: **12/06/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.81		pH Units	1	BFL0267	12/10/22	12/10/22	EPA 9045D	

Summit Scientific

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

Project: Guttersen 33-6 Wellhead

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
 12/29/22 14:31

BKG01@4'
2212124-03 (Soil)

Summit Scientific

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

Date Sampled: **12/06/22 12:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	7.13		pH Units	1	BFL0720	12/29/22	12/29/22	EPA 9045D	I-04

Summit Scientific



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

Project: Guttersen 33-6 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 12/29/22 14:31

BKG01@6'
2212124-04 (Soil)

Summit Scientific

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

Date Sampled: **12/06/22 12:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	7.85		pH Units	1	BFL0720	12/29/22	12/29/22	EPA 9045D	I-04

Summit Scientific



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

Project: Guttersen 33-6 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/22 14:31

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 BFL0213 - EPA 5030 Soil MS

Blank (BFL0213-BLK1)

Prepared: 12/08/22 Analyzed: 12/10/22

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	0.0417		"	0.0400		104	50-150				
Surrogate: Toluene-d8	0.0390		"	0.0400		97.6	50-150				
Surrogate: 4-Bromofluorobenzene	0.0407		"	0.0400		102	50-150				

LCS (BFL0213-BS1)

Prepared: 12/08/22 Analyzed: 12/10/22

Benzene	0.155	0.0020	mg/kg	0.150		104	70-130				
Toluene	0.145	0.0050	"	0.150		96.8	70-130				
Ethylbenzene	0.157	0.0050	"	0.150		105	70-130				
m,p-Xylene	0.308	0.010	"	0.300		103	70-130				
o-Xylene	0.142	0.0050	"	0.150		94.5	70-130				
1,2,4-Trimethylbenzene	0.151	0.0050	"	0.150		101	70-130				
1,3,5-Trimethylbenzene	0.154	0.0050	"	0.150		103	70-130				
Naphthalene	0.125	0.0038	"	0.150		83.2	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0415		"	0.0400		104	50-150				
Surrogate: Toluene-d8	0.0401		"	0.0400		100	50-150				
Surrogate: 4-Bromofluorobenzene	0.0381		"	0.0400		95.2	50-150				

Matrix Spike (BFL0213-MS1)

Source: 2212111-01

Prepared: 12/08/22 Analyzed: 12/10/22

Benzene	0.153	0.0020	mg/kg	0.150	ND	102	70-130				
Toluene	0.146	0.0050	"	0.150	ND	97.4	70-130				
Ethylbenzene	0.156	0.0050	"	0.150	ND	104	70-130				
m,p-Xylene	0.304	0.010	"	0.300	ND	101	70-130				
o-Xylene	0.142	0.0050	"	0.150	ND	94.7	70-130				
1,2,4-Trimethylbenzene	0.152	0.0050	"	0.150	ND	101	70-130				
1,3,5-Trimethylbenzene	0.155	0.0050	"	0.150	ND	103	70-130				
Naphthalene	0.138	0.0038	"	0.150	ND	92.0	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0426		"	0.0400		106	50-150				
Surrogate: Toluene-d8	0.0401		"	0.0400		100	50-150				
Surrogate: 4-Bromofluorobenzene	0.0384		"	0.0400		96.1	50-150				

Summit Scientific

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

Project: Guttersen 33-6 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 12/29/22 14:31

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 BFL0213 - EPA 5030 Soil MS

Matrix Spike Dup (BFL0213-MSD1)	Source: 2212111-01			Prepared: 12/08/22 Analyzed: 12/10/22						
Benzene	0.153	0.0020	mg/kg	0.150	ND	102	70-130	0.00	30	
Toluene	0.147	0.0050	"	0.150	ND	97.9	70-130	0.512	30	
Ethylbenzene	0.164	0.0050	"	0.150	ND	109	70-130	4.74	30	
m,p-Xylene	0.318	0.010	"	0.300	ND	106	70-130	4.52	30	
o-Xylene	0.145	0.0050	"	0.150	ND	96.9	70-130	2.28	30	
1,2,4-Trimethylbenzene	0.156	0.0050	"	0.150	ND	104	70-130	2.94	30	
1,3,5-Trimethylbenzene	0.163	0.0050	"	0.150	ND	108	70-130	4.99	30	
Naphthalene	0.139	0.0038	"	0.150	ND	92.8	70-130	0.887	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0399</i>		<i>"</i>	<i>0.0400</i>		<i>99.8</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0395</i>		<i>"</i>	<i>0.0400</i>		<i>98.8</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0374</i>		<i>"</i>	<i>0.0400</i>		<i>93.6</i>	<i>50-150</i>			

Summit Scientific

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

Project: Guttersen 33-6 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 12/29/22 14:31

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 BFL0215 - EPA 3550A

Blank (BFL0215-BLK1)

Prepared: 12/08/22 Analyzed: 12/09/22

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	11.6		"	12.5		93.0	30-150				

LCS (BFL0215-BS1)

Prepared: 12/08/22 Analyzed: 12/09/22

C10-C28 (DRO)	415	50	mg/kg	500		83.0	70-130				
Surrogate: <i>o</i> -Terphenyl	11.0		"	12.5		88.1	30-150				

Matrix Spike (BFL0215-MS1)

Source: 2212111-01

Prepared: 12/08/22 Analyzed: 12/09/22

C10-C28 (DRO)	395	50	mg/kg	500	14.5	76.0	70-130				
Surrogate: <i>o</i> -Terphenyl	6.29		"	12.5		50.3	30-150				

Matrix Spike Dup (BFL0215-MSD1)

Source: 2212111-01

Prepared: 12/08/22 Analyzed: 12/09/22

C10-C28 (DRO)	408	50	mg/kg	500	14.5	78.7	70-130	3.34	20		
Surrogate: <i>o</i> -Terphenyl	5.67		"	12.5		45.4	30-150				

Summit Scientific

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

Project: Guttersen 33-6 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/22 14:31

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 BFL0235 - EPA 5030 Soil MS

Blank (BFL0235-BLK1)

Prepared & Analyzed: 12/09/22

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	0.0397		"	0.0333	119	40-150				
Surrogate: Fluoranthene-d10	0.0256		"	0.0333	76.7	40-150				

LCS (BFL0235-BS1)

Prepared & Analyzed: 12/09/22

Acenaphthene	0.0318	0.00500	mg/kg	0.0333	95.4	31-137				
Anthracene	0.0307	0.00500	"	0.0333	92.0	30-120				
Benzo (a) anthracene	0.0250	0.00500	"	0.0333	75.1	30-120				
Benzo (a) pyrene	0.0280	0.00500	"	0.0333	84.2	30-120				
Benzo (b) fluoranthene	0.0276	0.00500	"	0.0333	82.7	30-120				
Benzo (k) fluoranthene	0.0356	0.00500	"	0.0333	107	30-120				
Chrysene	0.0312	0.00500	"	0.0333	93.7	30-120				
Dibenz (a,h) anthracene	0.0343	0.00500	"	0.0333	103	30-120				
Fluoranthene	0.0315	0.00500	"	0.0333	94.6	30-120				
Fluorene	0.0288	0.00500	"	0.0333	86.3	30-120				
Indeno (1,2,3-cd) pyrene	0.0355	0.00500	"	0.0333	106	30-120				
Pyrene	0.0314	0.00500	"	0.0333	94.2	35-142				
1-Methylnaphthalene	0.0293	0.00500	"	0.0333	87.8	35-142				
2-Methylnaphthalene	0.0286	0.00500	"	0.0333	85.9	35-142				
Surrogate: 2-Methylnaphthalene-d10	0.0294		"	0.0333	88.3	40-150				
Surrogate: Fluoranthene-d10	0.0314		"	0.0333	94.1	40-150				

Summit Scientific

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

Project: Guttersen 33-6 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/22 14:31

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 BFL0235 - EPA 5030 Soil MS

Matrix Spike (BFL0235-MS1)

Source: 2212124-01

Prepared & Analyzed: 12/09/22

Acenaphthene	0.0227	0.00500	mg/kg	0.0333	ND	68.2	31-137		
Anthracene	0.0243	0.00500	"	0.0333	ND	72.9	30-120		
Benzo (a) anthracene	0.0219	0.00500	"	0.0333	ND	65.7	30-120		
Benzo (a) pyrene	0.0211	0.00500	"	0.0333	ND	63.2	30-120		
Benzo (b) fluoranthene	0.0221	0.00500	"	0.0333	ND	66.2	30-120		
Benzo (k) fluoranthene	0.0253	0.00500	"	0.0333	ND	75.9	30-120		
Chrysene	0.0239	0.00500	"	0.0333	ND	71.7	30-120		
Dibenz (a,h) anthracene	0.0221	0.00500	"	0.0333	ND	66.4	30-120		
Fluoranthene	0.0254	0.00500	"	0.0333	ND	76.3	30-120		
Fluorene	0.0222	0.00500	"	0.0333	ND	66.6	30-120		
Indeno (1,2,3-cd) pyrene	0.0232	0.00500	"	0.0333	ND	69.7	30-120		
Pyrene	0.0253	0.00500	"	0.0333	ND	76.0	35-142		
1-Methylnaphthalene	0.0253	0.00500	"	0.0333	ND	75.8	15-130		
2-Methylnaphthalene	0.0227	0.00500	"	0.0333	ND	68.1	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0237		"	0.0333		71.2	40-150		
Surrogate: Fluoranthene-d10	0.0239		"	0.0333		71.7	40-150		

Matrix Spike Dup (BFL0235-MSD1)

Source: 2212124-01

Prepared & Analyzed: 12/09/22

Acenaphthene	0.0225	0.00500	mg/kg	0.0333	ND	67.6	31-137	0.994	30
Anthracene	0.0217	0.00500	"	0.0333	ND	65.0	30-120	11.4	30
Benzo (a) anthracene	0.0199	0.00500	"	0.0333	ND	59.8	30-120	9.27	30
Benzo (a) pyrene	0.0189	0.00500	"	0.0333	ND	56.7	30-120	10.8	30
Benzo (b) fluoranthene	0.0195	0.00500	"	0.0333	ND	58.5	30-120	12.3	30
Benzo (k) fluoranthene	0.0225	0.00500	"	0.0333	ND	67.5	30-120	11.6	30
Chrysene	0.0217	0.00500	"	0.0333	ND	65.1	30-120	9.53	30
Dibenz (a,h) anthracene	0.0197	0.00500	"	0.0333	ND	59.0	30-120	11.8	30
Fluoranthene	0.0234	0.00500	"	0.0333	ND	70.3	30-120	8.24	30
Fluorene	0.0220	0.00500	"	0.0333	ND	65.9	30-120	1.02	30
Indeno (1,2,3-cd) pyrene	0.0214	0.00500	"	0.0333	ND	64.3	30-120	8.15	30
Pyrene	0.0226	0.00500	"	0.0333	ND	67.8	35-142	11.5	30
1-Methylnaphthalene	0.0228	0.00500	"	0.0333	ND	68.3	15-130	10.5	50
2-Methylnaphthalene	0.0232	0.00500	"	0.0333	ND	69.6	15-130	2.12	50
Surrogate: 2-Methylnaphthalene-d10	0.0221		"	0.0333		66.2	40-150		
Surrogate: Fluoranthene-d10	0.0215		"	0.0333		64.6	40-150		

Summit Scientific

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

Project: Guttersen 33-6 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 12/29/22 14:31

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 BFL0245 - EPA 3050B

Blank (BFL0245-BLK1)

Prepared: 12/09/22 Analyzed: 12/11/22

Boron ND 0.0100 mg/L

LCS (BFL0245-BS1)

Prepared: 12/09/22 Analyzed: 12/11/22

Boron 4.30 0.0100 mg/L 5.00 85.9 80-120

Duplicate (BFL0245-DUP1)

Source: 2212124-01

Prepared: 12/09/22 Analyzed: 12/11/22

Boron 0.0541 0.0100 mg/L 0.0587 8.19 20

Matrix Spike (BFL0245-MS1)

Source: 2212124-01

Prepared: 12/09/22 Analyzed: 12/11/22

Boron 4.49 0.0100 mg/L 5.00 0.0587 88.5 75-125

Matrix Spike Dup (BFL0245-MSD1)

Source: 2212124-01

Prepared: 12/09/22 Analyzed: 12/11/22

Boron 4.21 0.0100 mg/L 5.00 0.0587 83.1 75-125 6.29 25

Summit Scientific

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

Project: Guttersen 33-6 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 12/29/22 14:31

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 BFL0253 - General Preparation

Blank (BFL0253-BLK1)

Prepared: 12/09/22 Analyzed: 12/12/22

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

LCS (BFL0253-BS1)

Prepared: 12/09/22 Analyzed: 12/12/22

Calcium	6.43	0.0500	mg/L wet	5.00		129	70-130			
Magnesium	6.08	0.0500	"	5.00		122	70-130			
Sodium	5.71	0.0500	"	5.00		114	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: Guttersen 33-6 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 12/29/22 14:31

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 BFL0291 - General Preparation

Duplicate (BFL0291-DUP1)

Source: 2212122-01

Prepared & Analyzed: 12/12/22

% Solids	96.2		%		96.1			0.0999		20	
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Summit Scientific

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



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

Project: Guttersen 33-6 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 12/29/22 14:31

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 BFL0266 - General Preparation

Blank (BFL0266-BLK1)

Prepared & Analyzed: 12/10/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFL0266-BS1)

Prepared & Analyzed: 12/10/22

Specific Conductance (EC) 0.143 0.0100 mmhos/cm 0.150 95.3 95-105

Duplicate (BFL0266-DUP1)

Source: 2212123-01

Prepared & Analyzed: 12/10/22

Specific Conductance (EC) 0.519 0.0100 mmhos/cm 0.508 2.03 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: Guttersen 33-6 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 12/29/22 14:31

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	Limit	

Batch BFL0267 - General Preparation

LCS (BFL0267-BS1)

Prepared & Analyzed: 12/10/22

pH	9.01		pH Units	9.18		98.1	95-105			
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Duplicate (BFL0267-DUP1)

Source: 2212123-01

Prepared & Analyzed: 12/10/22

pH	7.76		pH Units			7.75		0.129	20	
----	------	--	----------	--	--	------	--	-------	----	--

Batch BFL0720 - General Preparation

LCS (BFL0720-BS1)

Prepared & Analyzed: 12/29/22

pH	9.05		pH Units	9.18		98.6	95-105			
----	------	--	----------	------	--	------	--------	--	--	--

Duplicate (BFL0720-DUP1)

Source: 2212124-03

Prepared & Analyzed: 12/29/22

pH	7.15		pH Units			7.13		0.280	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: Guttersen 33-6 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/22 14:31

Notes and Definitions

I-04 Sample was analyzed out of recommended holding time per clients request.

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

December 13, 2022

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Guttersen 33-6 Wellhead

Work Order #2212166

Enclosed are the results of analyses for samples received by Summit Scientific on 12/07/22 17:59. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mikayla Axtell For Paul Shrewsbury

President



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

Project: Guttersen 33-6 Wellhead

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
12/13/22 15:37

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01-02@5'	2212166-01	Soil	12/07/22 12:45	12/07/22 17:59
FL01-04@5'	2212166-02	Soil	12/07/22 14:17	12/07/22 17:59

Summit Scientific

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

Summit Scientific

S₂

2212166

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

Page | of |

Client: PDC / Tasman Project Manager: Mark Longhurst
Address: 6855 W 119th Ave E-Mail: mark.longhurst@PDCE.com
City/State/Zip: Broomfield/ CO/ 80020
Phone: 303-487-1228 Project Name: *Gutteresen 33-6 Wellhead*
Sampler Name: Emilia Wozniak Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested						Special Instructions		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR	PAH - 915			
1	F101-02 (6) S1	12/7/22	1245	2			X			X				X	X	X					pH, EC, SAR by saturated paste
2	F101-04 (6) S1	✓	1417	2			X			X				X	X	X					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by: <i>Emilia Wozniak</i> Date/Time: 12/7/22 1657	Received by: <i>Tasman's Lock Box</i> Date/Time: 12/7/22 1657	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 hours 24 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 hours <input type="checkbox"/>	Notes:
Relinquished by: <i>Tasman's Lock Box</i> Date/Time: 12/7/22 1759	Received by: <i>[Signature]</i> Date/Time: 12/7/22 1759	Sample Integrity: Temperature Upon Receipt: <u>9.3</u>	
Relinquished by:	Received by:	Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

S₂

Sample Receipt Checklist

S2 Work Order# 2212166

Client: POC/Trasman Client Project ID: Gutterson 33-6 wellhead

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

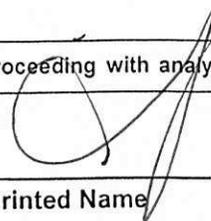
Matrix (Check all that apply) Air Soil/Solid Water Other

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"/>	ON ICE
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

12.7.22
Date/Time



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

Project: Guttersen 33-6 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/13/22 15:37

FL01-02@5'
2212166-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/07/22 12:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BFL0240	12/09/22	12/11/22	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: **12/07/22 12:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0410	103 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0394	98.5 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0404	101 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/07/22 12:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BFL0243	12/09/22	12/10/22	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **12/07/22 12:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	12.6	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: Guttersen 33-6 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/13/22 15:37

FL01-04@5'
2212166-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/07/22 14:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BFL0240	12/09/22	12/11/22	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: **12/07/22 14:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0380	95.1 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0385	96.3 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0392	98.0 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/07/22 14:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BFL0243	12/09/22	12/10/22	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **12/07/22 14:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	11.8	94.6 %		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: Guttersen 33-6 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/13/22 15:37

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 BFL0240 - EPA 5030 Soil MS

Blank (BFL0240-BLK1)

Prepared: 12/09/22 Analyzed: 12/11/22

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	0.0401		"	0.0400		100	50-150				
Surrogate: Toluene-d8	0.0387		"	0.0400		96.8	50-150				
Surrogate: 4-Bromofluorobenzene	0.0406		"	0.0400		101	50-150				

LCS (BFL0240-BS1)

Prepared: 12/09/22 Analyzed: 12/11/22

Benzene	0.142	0.0020	mg/kg	0.125		114	70-130				
Toluene	0.144	0.0050	"	0.125		115	70-130				
Ethylbenzene	0.159	0.0050	"	0.125		127	70-130				
m,p-Xylene	0.323	0.010	"	0.250		129	70-130				
o-Xylene	0.149	0.0050	"	0.125		119	70-130				
1,2,4-Trimethylbenzene	0.160	0.0050	"	0.125		128	70-130				
1,3,5-Trimethylbenzene	0.153	0.0050	"	0.125		122	70-130				
Naphthalene	0.131	0.0038	"	0.125		105	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0390		"	0.0400		97.4	50-150				
Surrogate: Toluene-d8	0.0399		"	0.0400		99.8	50-150				
Surrogate: 4-Bromofluorobenzene	0.0376		"	0.0400		94.1	50-150				

Matrix Spike (BFL0240-MS1)

Source: 2212154-01

Prepared: 12/09/22 Analyzed: 12/11/22

Benzene	0.140	0.0020	mg/kg	0.125	ND	112	70-130				
Toluene	0.144	0.0050	"	0.125	ND	115	70-130				
Ethylbenzene	0.159	0.0050	"	0.125	ND	127	70-130				
m,p-Xylene	0.313	0.010	"	0.250	ND	125	70-130				
o-Xylene	0.145	0.0050	"	0.125	ND	116	70-130				
1,2,4-Trimethylbenzene	0.154	0.0050	"	0.125	ND	124	70-130				
1,3,5-Trimethylbenzene	0.162	0.0050	"	0.125	ND	129	70-130				
Naphthalene	0.143	0.0038	"	0.125	ND	114	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0418		"	0.0400		105	50-150				
Surrogate: Toluene-d8	0.0401		"	0.0400		100	50-150				
Surrogate: 4-Bromofluorobenzene	0.0384		"	0.0400		95.9	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: Guttersen 33-6 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 12/13/22 15:37

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 BFL0240 - EPA 5030 Soil MS

Matrix Spike Dup (BFL0240-MSD1)

Source: 2212154-01

Prepared: 12/09/22 Analyzed: 12/11/22

Benzene	0.142	0.0020	mg/kg	0.125	ND	113	70-130	1.26	30	
Toluene	0.146	0.0050	"	0.125	ND	117	70-130	1.12	30	
Ethylbenzene	0.160	0.0050	"	0.125	ND	128	70-130	0.639	30	
m,p-Xylene	0.311	0.010	"	0.250	ND	124	70-130	0.577	30	
o-Xylene	0.147	0.0050	"	0.125	ND	118	70-130	1.23	30	
1,2,4-Trimethylbenzene	0.160	0.0050	"	0.125	ND	128	70-130	3.59	30	
1,3,5-Trimethylbenzene	0.162	0.0050	"	0.125	ND	130	70-130	0.278	30	
Naphthalene	0.154	0.0038	"	0.125	ND	123	70-130	7.72	30	
Surrogate: 1,2-Dichloroethane-d4	0.0419		"	0.0400		105	50-150			
Surrogate: Toluene-d8	0.0399		"	0.0400		99.8	50-150			
Surrogate: 4-Bromofluorobenzene	0.0378		"	0.0400		94.4	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: Guttersen 33-6 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 12/13/22 15:37

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BFL0243 - EPA 3550A

Blank (BFL0243-BLK1)

Prepared: 12/09/22 Analyzed: 12/10/22

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	12.0		"	12.5		96.3	30-150				

LCS (BFL0243-BS1)

Prepared: 12/09/22 Analyzed: 12/10/22

C10-C28 (DRO)	357	50	mg/kg	500		71.3	70-130				
Surrogate: <i>o</i> -Terphenyl	13.5		"	12.5		108	30-150				

Matrix Spike (BFL0243-MS1)

Source: 2212154-01

Prepared: 12/09/22 Analyzed: 12/10/22

C10-C28 (DRO)	402	50	mg/kg	500	21.5	76.1	70-130				
Surrogate: <i>o</i> -Terphenyl	9.81		"	12.5		78.5	30-150				

Matrix Spike Dup (BFL0243-MSD1)

Source: 2212154-01

Prepared: 12/09/22 Analyzed: 12/10/22

C10-C28 (DRO)	427	50	mg/kg	500	21.5	81.2	70-130	6.11	20		
Surrogate: <i>o</i> -Terphenyl	13.7		"	12.5		110	30-150				

Summit Scientific

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



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

Project: Guttersen 33-6 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/13/22 15:37

Notes and Definitions

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

December 14, 2022

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Guttersen 33-6 Wellhead

Work Order #2212185

Enclosed are the results of analyses for samples received by Summit Scientific on 12/08/22 17:22. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mikayla Axtell For Paul Shrewsbury

President



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

Project: Guttersen 33-6 Wellhead

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
12/14/22 09:02

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01-07@5'	2212185-01	Soil	12/08/22 10:50	12/08/22 17:22

Summit Scientific

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

Summit Scientific

S₂

2212185

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

Page 1 of 1

Client: PDC / Tasman Project Manager: Mark Longhurst
Address: 6855 W 119th Ave E-Mail: mark.longhurst@PDCE.com
City/State/Zip: Broomfield/ CO/ 80020
Phone: 303-487-1228 Project Name: *Gutteresen 33-6 Wellhead*
Sampler Name: Emilia Wozniak Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested						Special Instructions				
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR	PAH - 915					
1	<i>FL01-07 @ 5'</i>	<i>12/18/22</i>	<i>1050</i>	<i>2</i>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					pH, EC, SAR by saturated paste		
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							

Relinquished by: <i>Emilia Wozniak</i> Date/Time: <i>12/18/22 11:15</i>	Received by: <i>Tasman's Lock Box</i> Date/Time: <i>12/18/22 17:15</i>	Turn Around Time (Check) Same Day _____ 72 hours 24 hours _____ Standard <input checked="" type="checkbox"/> 48 hours _____ Sample Integrity: Temperature Upon Receipt: <i>8.4</i> Samples Intact: <input checked="" type="checkbox"/> Yes No	Notes:
Relinquished by: <i>Tasman's Lock Box</i> Date/Time: <i>12/22 17:22</i>	Received by: <i>[Signature]</i> Date/Time: <i>12/22 17:22</i>		
Relinquished by:	Received by:		

S₂

Sample Receipt Checklist

S2 Work Order# 2212185

Client: PC/TASMAN Client Project ID: Guthersen 33-6 well head

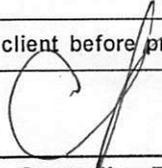
Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: _____

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

Temp (°C) 8.4 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.


Custodian Printed Name

12.8.22
Date/Time



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

Project: Guttersen 33-6 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/14/22 09:02

FL01-07@5'
2212185-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/08/22 10:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BFL0241	12/09/22	12/12/22	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: **12/08/22 10:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0370	92.6 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0386	96.6 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0396	98.9 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/08/22 10:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BFL0244	12/09/22	12/10/22	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **12/08/22 10:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	11.4	90.9 %		30-150		"	"	"	"	

Summit Scientific

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

Project: Guttersen 33-6 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/14/22 09:02

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 BFL0241 - EPA 5030 Soil MS

Blank (BFL0241-BLK1)

Prepared: 12/09/22 Analyzed: 12/11/22

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	0.0384		"	0.0400		95.9	50-150				
Surrogate: Toluene-d8	0.0391		"	0.0400		97.8	50-150				
Surrogate: 4-Bromofluorobenzene	0.0399		"	0.0400		99.8	50-150				

LCS (BFL0241-BS1)

Prepared: 12/09/22 Analyzed: 12/11/22

Benzene	0.138	0.0020	mg/kg	0.125		110	70-130				
Toluene	0.143	0.0050	"	0.125		114	70-130				
Ethylbenzene	0.159	0.0050	"	0.125		127	70-130				
m,p-Xylene	0.311	0.010	"	0.250		124	70-130				
o-Xylene	0.145	0.0050	"	0.125		116	70-130				
1,2,4-Trimethylbenzene	0.155	0.0050	"	0.125		124	70-130				
1,3,5-Trimethylbenzene	0.161	0.0050	"	0.125		129	70-130				
Naphthalene	0.132	0.0038	"	0.125		106	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0386		"	0.0400		96.6	50-150				
Surrogate: Toluene-d8	0.0394		"	0.0400		98.4	50-150				
Surrogate: 4-Bromofluorobenzene	0.0376		"	0.0400		94.0	50-150				

Matrix Spike (BFL0241-MS1)

Source: 2212172-01

Prepared: 12/09/22 Analyzed: 12/11/22

Benzene	0.137	0.0020	mg/kg	0.125	ND	109	70-130				
Toluene	0.143	0.0050	"	0.125	ND	114	70-130				
Ethylbenzene	0.159	0.0050	"	0.125	ND	127	70-130				
m,p-Xylene	0.311	0.010	"	0.250	ND	124	70-130				
o-Xylene	0.145	0.0050	"	0.125	ND	116	70-130				
1,2,4-Trimethylbenzene	0.155	0.0050	"	0.125	ND	124	70-130				
1,3,5-Trimethylbenzene	0.159	0.0050	"	0.125	ND	127	70-130				
Naphthalene	0.140	0.0038	"	0.125	ND	112	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0400		"	0.0400		100	50-150				
Surrogate: Toluene-d8	0.0398		"	0.0400		99.4	50-150				
Surrogate: 4-Bromofluorobenzene	0.0374		"	0.0400		93.4	50-150				

Summit Scientific

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

Project: Guttersen 33-6 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/14/22 09:02

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 BFL0241 - EPA 5030 Soil MS

Matrix Spike Dup (BFL0241-MSD1)	Source: 2212172-01			Prepared: 12/09/22 Analyzed: 12/11/22						
Benzene	0.137	0.0020	mg/kg	0.125	ND	110	70-130	0.153	30	
Toluene	0.143	0.0050	"	0.125	ND	114	70-130	0.00	30	
Ethylbenzene	0.160	0.0050	"	0.125	ND	128	70-130	0.885	30	
m,p-Xylene	0.310	0.010	"	0.250	ND	124	70-130	0.251	30	
o-Xylene	0.145	0.0050	"	0.125	ND	116	70-130	0.352	30	
1,2,4-Trimethylbenzene	0.155	0.0050	"	0.125	ND	124	70-130	0.175	30	
1,3,5-Trimethylbenzene	0.161	0.0050	"	0.125	ND	129	70-130	1.58	30	
Naphthalene	0.144	0.0038	"	0.125	ND	116	70-130	2.97	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0390</i>		<i>"</i>	<i>0.0400</i>		<i>97.4</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0394</i>		<i>"</i>	<i>0.0400</i>		<i>98.5</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0373</i>		<i>"</i>	<i>0.0400</i>		<i>93.3</i>	<i>50-150</i>			

Summit Scientific

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

Project: Guttersen 33-6 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 12/14/22 09:02

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 BFL0244 - EPA 3550A

Blank (BFL0244-BLK1)

Prepared & Analyzed: 12/09/22

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	7.71		"	12.5	61.7	30-150					

LCS (BFL0244-BS1)

Prepared & Analyzed: 12/09/22

C10-C28 (DRO)	408	50	mg/kg	500	81.7	70-130					
Surrogate: <i>o</i> -Terphenyl	8.90		"	12.5	71.2	30-150					

Matrix Spike (BFL0244-MS1)

Source: 2212172-01

Prepared & Analyzed: 12/09/22

C10-C28 (DRO)	403	50	mg/kg	500	23.9	75.8	70-130				
Surrogate: <i>o</i> -Terphenyl	9.24		"	12.5	73.9	30-150					

Matrix Spike Dup (BFL0244-MSD1)

Source: 2212172-01

Prepared & Analyzed: 12/09/22

C10-C28 (DRO)	386	50	mg/kg	500	23.9	72.3	70-130	4.34	20		
Surrogate: <i>o</i> -Terphenyl	7.04		"	12.5	56.3	30-150					

Summit Scientific

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

Project: Guttersen 33-6 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/14/22 09:02

Notes and Definitions

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