

TABLE 1
FORMER BOOTH 7-26 WELLHEAD
SOIL ANALYTICAL RESULTS SUMMARY TABLE

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'	6/30/2021	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FLR01-B @ 7'	6/30/2021	7 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FLR01-S @ 3'	6/30/2021	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50

Notes:

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

mg/kg = Milligrams per kilogram

TMB = Trimethylbenzene

ft. = Feet

bgs = Below ground surface

TABLE 2
FORMER BOOTH 7-26 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
FLR01 @ 2.5'	6/30/2021	2.5 ft. bgs	8.31	0.389	0.868	0.102
BKG01 @ 2.5'	6/30/2021	2.5 ft. bgs	8.58	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.

NA = Constituent not analyzed

TABLE 3
FORMER BOOTH 7-26 WELLHEAD
FIELD DATA SUMMARY TABLE

Sample ID	Date Sampled	Depth	GPS Data ⁽¹⁾ Latitude / Longitude		PDOP Value	VOC Concentration ⁽²⁾ (ppm)
WH01 @ 6'	6/30/2021	6 ft. bgs	40.551493	-104.628959	1.1	3.4
FLR01 @ 2.5'	6/30/2021	2.5 ft. bgs	40.551500	-104.628954	1.1	0.3
FLR01-B @ 7'	6/30/2021	7 ft. bgs	40.551501	-104.628941	1.0	3.6
WHS01-N @ 0-6"	6/30/2021	0-6 in. bgs	40.551504	-104.628933	1.1	0.0
WHS01-E @ 0-6"	6/30/2021	0-6 in. bgs	40.551475	-104.628904	1.1	0.0
WHS01-W @ 0-6"	6/30/2021	0-6 in. bgs	40.551523	-104.628989	1.1	0.1
BKG01 @ 2.5'	6/30/2021	2.5 ft. bgs	40.551342	-104.629175	1.1	0.1
FL01-01 @ 5'	6/30/2021	5 ft. bgs	40.552747	-104.629592	1.1	0.0
FLR01-N @ 3'	6/30/2021	3' bgs	40.551506	-104.628943	1.1	0.0
FLR01-E @ 3'	6/30/2021	3' bgs	40.551474	-104.628936	1.0	0.2
FLR01-S @ 3'	6/30/2021	3' bgs	40.551463	-104.628982	1.1	0.3
FLR01-W @ 3'	6/30/2021	3' bgs	40.551501	-104.628981	1.1	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

July 09, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

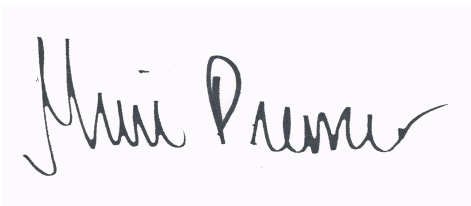
Denver, CO 80203

RE: Booth 7-26 Wellhead

Work Order #2106527

Enclosed are the results of analyses for samples received by Summit Scientific on 06/30/21 18:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Muri Premier", is displayed on a light purple rectangular background.

Muri Premier For Paul Shrewsbury
President



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

Project: Booth 7-26 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/09/21 14:18

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FLR01-B@7'	2106527-01	Soil	06/30/21 15:25	06/30/21 18:10
FLR01-S@3'	2106527-04	Soil	06/30/21 15:31	06/30/21 18:10
WH01@6'	2106527-06	Soil	06/30/21 12:06	06/30/21 18:10
FLR01@2.5'	2106527-07	Soil	06/30/21 12:13	06/30/21 18:10

Summit Scientific

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

Summit Scientific

2106527

S₂

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: Booth 7-26 wellhead

Sampler Name: TX1-L5 Muffel

Project Number:

					Preservative				Matrix				Analysis Requested							Special Instructions						
ID	Sample Description	Date Sampled	Time Sampled	# of containers	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									pH, EC, SAR by saturated paste
1	FLR01-B 07'	6/30/21	15:25	3			X			X			X	X	X											
2	FLR01-N 03'	↓	15:29	3			↓			↓									X							
3	FLR01-E 03'	↓	15:30	3			↓			↓									X							
4	FLR01-S 03'	↓	15:31	3			↓			↓			X	X	X											
5	FLR01-W 03'	↓	15:32	3			↓			↓									X							
6	WH01 06'	↓	12:06	3			↓			↓			X	X	X											
7	FLR01 02.5		12:13	1													X	X								
8																										
9																										
10																										

Relinquished by: <u>Tasman</u>	Date/Time: <u>6/30/21 17:58</u>	Received by: <u>Tasman's Lock Box</u>	Date/Time: <u>6/30/21 1810</u>	Turn Around Time (Check) Same Day <u>X</u> 72 hours ___ 24 hours ___ Standard ___ 48 hours ___ Sample Integrity: Temperature Upon Receipt: <u>7</u> Samples Intact: <u>Yes</u> No	Notes:
Relinquished by: <u>Tasman's Lock Box</u>	Date/Time: <u>6/30/21 1810</u>	Received by: <u>[Signature]</u>	Date/Time: <u>6/30/21 1810</u>		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

Sample Receipt Checklist

S2 Work Order 2106527

Client: PDC / Tasman Client Project ID: Booth 7-26 wellhead

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

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

Temp (°C)	<u>7</u>
-----------	----------

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>On ice</u>
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"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Same day.</u>
Is a chain-of-custody (COC) form present and filled out completely ⁽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"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽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, H2SO4, NaOH, HNO3, ect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽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.

JB
Custodian Printed Name or Initials

[Signature]
Signature of Custodian

6/30/12
Date/Time



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

Project: Booth 7-26 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/09/21 14:18

FLR01-B@7'
2106527-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/30/21 15:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEF0624	06/30/21	06/30/21	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: **06/30/21 15:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		98.1 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/30/21 15:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEF0625	06/30/21	06/30/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/30/21 15:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		98.6 %	30-150		"	"	"	"	

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

Project: Booth 7-26 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/09/21 14:18

FLR01-S@3'
2106527-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/30/21 15:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEF0624	06/30/21	06/30/21	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: **06/30/21 15:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		97.9 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/30/21 15:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEF0625	06/30/21	06/30/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/30/21 15:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		97.1 %	30-150		"	"	"	"	

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

Project: Booth 7-26 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/09/21 14:18

WH01@6'
2106527-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/30/21 12:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEF0624	06/30/21	06/30/21	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: **06/30/21 12:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		96.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/30/21 12:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEF0625	06/30/21	06/30/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/30/21 12:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		96.8 %	30-150		"	"	"	"	

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

Project: Booth 7-26 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/09/21 14:18

FLR01@2.5'
2106527-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/30/21 12:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.102	0.0100	mg/L	1	BEG0072	07/06/21	07/07/21	EPA 6020B	

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

Date Sampled: **06/30/21 12:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	39.4	0.0582	mg/L dry	1	BEG0031	07/01/21	07/02/21	EPA 6020B	
Magnesium	14.3	0.0582	"	"	"	"	"	"	
Sodium	25.0	0.0582	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **06/30/21 12:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.868	0.00100	units	1	BEG0146	07/08/21	07/08/21	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/30/21 12:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.0		%	1	BEG0070	07/06/21	07/07/21	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/30/21 12:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.389	0.0100	mmhos/cm	1	BEG0053	07/02/21	07/04/21	EPA 120.1	

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

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

Project: Booth 7-26 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/09/21 14:18

FLR01@2.5'
2106527-07 (Soil)

Summit Scientific

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

Date Sampled: **06/30/21 12:13**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.31			pH Units	1	BEG0054	07/02/21	07/04/21	EPA 9045D	

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

Project: Booth 7-26 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/09/21 14:18

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BEF0624 - EPA 5030 Soil MS

Blank (BEF0624-BLK1)

Prepared: 06/30/21 Analyzed: 07/01/21

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	0.0406	"	0.0400	102	23-173
Surrogate: Toluene-d8	0.0409	"	0.0400	102	20-170
Surrogate: 4-Bromofluorobenzene	0.0403	"	0.0400	101	21-167

LCS (BEF0624-BS1)

Prepared: 06/30/21 Analyzed: 07/01/21

Benzene	0.107	0.0020	mg/kg	0.100	107	70-130
Toluene	0.111	0.0050	"	0.100	111	70-130
Ethylbenzene	0.0970	0.0050	"	0.100	97.0	70-130
m,p-Xylene	0.187	0.010	"	0.200	93.6	70-130
o-Xylene	0.103	0.0050	"	0.100	103	70-130
1,2,4-Trimethylbenzene	0.0939	0.0050	"	0.100	93.9	70-130
1,3,5-Trimethylbenzene	0.0866	0.0050	"	0.100	86.6	70-130
Naphthalene	0.0813	0.0038	"	0.100	81.3	70-130

Surrogate: 1,2-Dichloroethane-d4	0.0417	"	0.0400	104	23-173
Surrogate: Toluene-d8	0.0427	"	0.0400	107	20-170
Surrogate: 4-Bromofluorobenzene	0.0406	"	0.0400	101	21-167

Matrix Spike (BEF0624-MS1)

Source: 2106526-01

Prepared: 06/30/21 Analyzed: 07/01/21

Benzene	0.113	0.0020	mg/kg	0.100	0.0179	95.2	70-130
Toluene	0.0841	0.0050	"	0.100	0.00627	77.8	70-130
Ethylbenzene	0.104	0.0050	"	0.100	ND	104	70-130
m,p-Xylene	0.201	0.010	"	0.200	ND	101	70-130
o-Xylene	0.0805	0.0050	"	0.100	ND	80.5	70-130
1,2,4-Trimethylbenzene	0.102	0.0050	"	0.100	ND	102	70-130
1,3,5-Trimethylbenzene	0.0963	0.0050	"	0.100	ND	96.3	70-130
Naphthalene	0.0958	0.0038	"	0.100	ND	95.8	70-130

Surrogate: 1,2-Dichloroethane-d4	0.0425	"	0.0400	106	23-173
Surrogate: Toluene-d8	0.0426	"	0.0400	106	20-170
Surrogate: 4-Bromofluorobenzene	0.0402	"	0.0400	100	21-167

Summit Scientific

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



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

Project: Booth 7-26 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/09/21 14:18

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

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

Batch BEF0624 - EPA 5030 Soil MS

Matrix Spike Dup (BEF0624-MSD1)	Source: 2106526-01			Prepared: 06/30/21 Analyzed: 07/01/21						
Benzene	0.117	0.0020	mg/kg	0.100	0.0179	99.3	70-130	3.52	30	
Toluene	0.103	0.0050	"	0.100	0.00627	96.6	70-130	20.1	30	
Ethylbenzene	0.0906	0.0050	"	0.100	ND	90.6	70-130	13.8	30	
m,p-Xylene	0.170	0.010	"	0.200	ND	85.0	70-130	16.7	30	
o-Xylene	0.0944	0.0050	"	0.100	ND	94.4	70-130	16.0	30	
1,2,4-Trimethylbenzene	0.0888	0.0050	"	0.100	ND	88.8	70-130	14.0	30	
1,3,5-Trimethylbenzene	0.0815	0.0050	"	0.100	ND	81.5	70-130	16.6	30	
Naphthalene	0.0837	0.0038	"	0.100	ND	83.7	70-130	13.5	30	
Surrogate: 1,2-Dichloroethane-d4	0.0415		"	0.0400		104	23-173			
Surrogate: Toluene-d8	0.0424		"	0.0400		106	20-170			
Surrogate: 4-Bromofluorobenzene	0.0401		"	0.0400		100	21-167			

Summit Scientific

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



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

Project: Booth 7-26 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/09/21 14:18

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BEF0625 - EPA 3550A

Blank (BEF0625-BLK1)

Prepared & Analyzed: 06/30/21

C10-C28 (DRO)	ND	50	mg/kg
C28-C36 (ORO)	ND	50	"

LCS (BEF0625-BS1)

Prepared: 06/30/21 Analyzed: 07/01/21

C10-C28 (DRO)	505	50	mg/kg	500	101	70-130
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Matrix Spike (BEF0625-MS1)

Source: 2106526-01

Prepared: 06/30/21 Analyzed: 07/01/21

C10-C28 (DRO)	477	50	mg/kg	500	16.1	92.1	70-130
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Matrix Spike Dup (BEF0625-MSD1)

Source: 2106526-01

Prepared: 06/30/21 Analyzed: 07/01/21

C10-C28 (DRO)	496	50	mg/kg	500	16.1	96.0	70-130	3.98	20
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Summit Scientific

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

Project: Booth 7-26 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/09/21 14:18

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

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

Batch BEG0072 - EPA 3050B

Blank (BEG0072-BLK1)

Prepared: 07/06/21 Analyzed: 07/07/21

Boron ND 0.0100 mg/L

LCS (BEG0072-BS1)

Prepared: 07/06/21 Analyzed: 07/07/21

Boron 5.03 0.0100 mg/L 5.00 101 80-120

Duplicate (BEG0072-DUP1)

Source: 2106519-01

Prepared: 07/06/21 Analyzed: 07/07/21

Boron 0.426 0.0100 mg/L 0.492 14.5 20

Matrix Spike (BEG0072-MS1)

Source: 2106519-01

Prepared: 07/06/21 Analyzed: 07/07/21

Boron 5.03 0.0100 mg/L 5.00 0.492 90.9 75-125

Matrix Spike Dup (BEG0072-MSD1)

Source: 2106519-01

Prepared: 07/06/21 Analyzed: 07/07/21

Boron 5.00 0.0100 mg/L 5.00 0.492 90.1 75-125 0.755 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: Booth 7-26 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/09/21 14:18

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

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

Batch BEG0031 - General Preparation

Blank (BEG0031-BLK1)

Prepared: 07/01/21 Analyzed: 07/02/21

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

LCS (BEG0031-BS1)

Prepared: 07/01/21 Analyzed: 07/02/21

Calcium	5.26	0.0500	mg/L wet	5.00	105	70-130
Magnesium	5.24	0.0500	"	5.00	105	70-130
Sodium	5.17	0.0500	"	5.00	103	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: Booth 7-26 Wellhead

Project Number: [none]

Project Manager: Mark Longhurst

Reported:

07/09/21 14:18

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

Summit Scientific

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

Batch BEG0070 - General Preparation

Duplicate (BEG0070-DUP1)		Source: 2106485-10		Prepared: 07/06/21 Analyzed: 07/07/21	
% Solids	84.4		%	83.8	0.647 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: Booth 7-26 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/09/21 14:18

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

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

Batch BEG0053 - General Preparation

Blank (BEG0053-BLK1)

Prepared: 07/02/21 Analyzed: 07/04/21

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BEG0053-BS1)

Prepared: 07/02/21 Analyzed: 07/04/21

Specific Conductance (EC) 0.140 0.0100 mmhos/cm 0.150 93.1 90-110

Duplicate (BEG0053-DUP1)

Source: 2106513-01

Prepared: 07/02/21 Analyzed: 07/04/21

Specific Conductance (EC) 0.844 0.0100 mmhos/cm 0.845 0.0829 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: Booth 7-26 Wellhead

Project Number: [none]

Project Manager: Mark Longhurst

Reported:

07/09/21 14:18

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

Summit Scientific

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

Batch BEG0054 - General Preparation

LCS (BEG0054-BS1)

Prepared: 07/02/21 Analyzed: 07/04/21

pH	9.21	pH Units	9.21	100	95-105
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Duplicate (BEG0054-DUP1)

Source: 2106513-01

Prepared: 07/02/21 Analyzed: 07/04/21

pH	8.06	pH Units	8.11	0.618	20
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Summit Scientific

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

Project: Booth 7-26 Wellhead

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
07/09/21 14:18

Notes and Definitions

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 02, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Booth 25-26 Wellheads

Work Order #2106544

Enclosed are the results of analyses for samples received by Summit Scientific on 06/30/21 18:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury

President



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

Project: Booth 25-26 Wellheads

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/02/21 12:14

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH01@6'	2106544-01	Soil	06/30/21 11:31	06/30/21 18:10
FLR01@2.5'	2106544-02	Soil	06/30/21 11:38	06/30/21 18:10
BKG01@2.5'	2106544-03	Soil	06/30/21 11:48	06/30/21 18:10

Summit Scientific

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

Summit Scientific

S₂

2106544

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: Booth 25-26 wellheads
Sampler Name: Tyler Murrel Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR	Other		
1	WH01 @ 6'	6/30/21	11:31	3			X			X			X	X	X					pH, EC, SAR by saturated paste
2	FLR01 @ 2.5'	↓	11:38	1			X			X						X	X			
3	BK G01 @ 2.5'	↓	11:48	1			X			X								X		
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Relinquished by: <i>lym</i>	Date/Time: 6/30/21 17:46	Received by: Tasman's Lock Box	Date/Time: 6/30/21 1810	Turn Around Time (Check)	Notes:
				Same Day _____ 72 hours	
				24 hours _____ Standard <input checked="" type="checkbox"/>	
				48 hours _____	
Relinquished by: Tasman's Lock Box	Date/Time: 6/30/21 1810	Received by: <i>[Signature]</i>	Date/Time: 6/30/21 1810	Sample Integrity:	
				Temperature Upon Receipt: <u>7</u>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Sample Receipt Checklist

S2 Work Order 2106544

Client: PDC/Troman Client Project ID: Booth 25-26 wellheads

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

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

Temp (°C) 7

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>On ice.</u>
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"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input type="checkbox"/>	<input 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"/>	
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"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽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, H2SO4, NaOH, HNO3, ect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽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.

JB
Custodian Printed Name or Initials

[Signature]
Signature of Custodian

6/30/21
Date/Time



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

Project: Booth 25-26 Wellheads
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/02/21 12:14

BKG01@2.5'
2106544-03 (Soil)

Summit Scientific

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

Date Sampled: **06/30/21 11:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.58			pH Units	1	BEG0525	07/29/21	07/29/21	EPA 9045D	

Summit Scientific

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

Project: Booth 25-26 Wellheads

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/02/21 12:14

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BEG0044 - EPA 5030 Soil MS

Blank (BEG0044-BLK1)

Prepared: 07/02/21 Analyzed: 07/03/21

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	0.0265		"	0.0400		66.2	23-173			
Surrogate: Toluene-d8	0.0422		"	0.0400		106	20-170			
Surrogate: 4-Bromofluorobenzene	0.0362		"	0.0400		90.6	21-167			

LCS (BEG0044-BS1)

Prepared: 07/02/21 Analyzed: 07/03/21

Benzene	0.0699	0.0020	mg/kg	0.0750		93.2	70-130			
Toluene	0.0837	0.0050	"	0.0750		112	70-130			
Ethylbenzene	0.0968	0.0050	"	0.0750		129	70-130			
m,p-Xylene	0.175	0.010	"	0.150		116	70-130			
o-Xylene	0.0821	0.0050	"	0.0750		109	70-130			
1,2,4-Trimethylbenzene	0.0902	0.0050	"	0.0750		120	70-130			
1,3,5-Trimethylbenzene	0.0938	0.0050	"	0.0750		125	70-130			
Naphthalene	0.0556	0.0038	"	0.0750		74.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0210		"	0.0400		52.4	23-173			
Surrogate: Toluene-d8	0.0421		"	0.0400		105	20-170			
Surrogate: 4-Bromofluorobenzene	0.0366		"	0.0400		91.4	21-167			

Matrix Spike (BEG0044-MS1)

Source: 2106543-03

Prepared: 07/02/21 Analyzed: 07/03/21

Benzene	0.0700	0.0020	mg/kg	0.0750	ND	93.4	70-130			
Toluene	0.0796	0.0050	"	0.0750	ND	106	70-130			
Ethylbenzene	0.0962	0.0050	"	0.0750	ND	128	70-130			
m,p-Xylene	0.178	0.010	"	0.150	ND	119	70-130			
o-Xylene	0.0822	0.0050	"	0.0750	ND	110	70-130			
1,2,4-Trimethylbenzene	0.0904	0.0050	"	0.0750	ND	121	70-130			
1,3,5-Trimethylbenzene	0.0926	0.0050	"	0.0750	ND	124	70-130			
Naphthalene	0.0659	0.0038	"	0.0750	ND	87.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0233		"	0.0400		58.3	23-173			
Surrogate: Toluene-d8	0.0394		"	0.0400		98.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0361		"	0.0400		90.2	21-167			

Summit Scientific

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



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

Project: Booth 25-26 Wellheads
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/02/21 12:14

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

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

Batch BEG0044 - EPA 5030 Soil MS

Matrix Spike Dup (BEG0044-MSD1)	Source: 2106543-03			Prepared: 07/02/21 Analyzed: 07/03/21						
Benzene	0.0716	0.0020	mg/kg	0.0750	ND	95.5	70-130	2.20	30	
Toluene	0.0790	0.0050	"	0.0750	ND	105	70-130	0.757	30	
Ethylbenzene	0.0890	0.0050	"	0.0750	ND	119	70-130	7.81	30	
m,p-Xylene	0.181	0.010	"	0.150	ND	121	70-130	1.45	30	
o-Xylene	0.0837	0.0050	"	0.0750	ND	112	70-130	1.81	30	
1,2,4-Trimethylbenzene	0.0931	0.0050	"	0.0750	ND	124	70-130	2.91	30	
1,3,5-Trimethylbenzene	0.0957	0.0050	"	0.0750	ND	128	70-130	3.22	30	
Naphthalene	0.0697	0.0038	"	0.0750	ND	92.9	70-130	5.53	30	
Surrogate: 1,2-Dichloroethane-d4	0.0239		"	0.0400		59.8	23-173			
Surrogate: Toluene-d8	0.0386		"	0.0400		96.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0363		"	0.0400		90.7	21-167			

Summit Scientific

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



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

Project: Booth 25-26 Wellheads
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/02/21 12:14

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BEG0045 - EPA 3550A

Blank (BEG0045-BLK1)

Prepared & Analyzed: 07/02/21

C10-C28 (DRO)	ND	50	mg/kg
C28-C36 (ORO)	ND	50	"

LCS (BEG0045-BS1)

Prepared & Analyzed: 07/02/21

C10-C28 (DRO)	470	50	mg/kg	500	93.9	70-130
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Matrix Spike (BEG0045-MS1)

Source: 2106543-03

Prepared & Analyzed: 07/02/21

C10-C28 (DRO)	435	50	mg/kg	500	16.3	83.8	70-130
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Matrix Spike Dup (BEG0045-MSD1)

Source: 2106543-03

Prepared & Analyzed: 07/02/21

C10-C28 (DRO)	445	50	mg/kg	500	16.3	85.8	70-130	2.35	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: Booth 25-26 Wellheads
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/02/21 12:14

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

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

Batch BEG0072 - EPA 3050B

Blank (BEG0072-BLK1)

Prepared: 07/06/21 Analyzed: 07/07/21

Boron ND 0.0100 mg/L

LCS (BEG0072-BS1)

Prepared: 07/06/21 Analyzed: 07/07/21

Boron 5.03 0.0100 mg/L 5.00 101 80-120

Duplicate (BEG0072-DUP1)

Source: 2106519-01

Prepared: 07/06/21 Analyzed: 07/07/21

Boron 0.426 0.0100 mg/L 0.492 14.5 20

Matrix Spike (BEG0072-MS1)

Source: 2106519-01

Prepared: 07/06/21 Analyzed: 07/07/21

Boron 5.03 0.0100 mg/L 5.00 0.492 90.9 75-125

Matrix Spike Dup (BEG0072-MSD1)

Source: 2106519-01

Prepared: 07/06/21 Analyzed: 07/07/21

Boron 5.00 0.0100 mg/L 5.00 0.492 90.1 75-125 0.755 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: Booth 25-26 Wellheads

Project Number: [none]

Project Manager: Mark Longhurst

Reported:

08/02/21 12:14

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

Summit Scientific

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

Batch BEG0063 - General Preparation

Blank (BEG0063-BLK1)

Prepared: 07/05/21 Analyzed: 07/07/21

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

LCS (BEG0063-BS1)

Prepared: 07/05/21 Analyzed: 07/07/21

Calcium	5.54	0.0500	mg/L wet	5.00	111	70-130
Magnesium	5.67	0.0500	"	5.00	113	70-130
Sodium	5.29	0.0500	"	5.00	106	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: Booth 25-26 Wellheads

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/02/21 12:14

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

Summit Scientific

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

Batch BEG0157 - General Preparation

Duplicate (BEG0157-DUP1)		Source: 2106543-01		Prepared & Analyzed: 07/09/21						
% Solids	84.3		%		84.3			0.00	20	

Summit Scientific

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

Project: Booth 25-26 Wellheads

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/02/21 12:14

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

Summit Scientific

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

Batch BEG0096 - General Preparation

Blank (BEG0096-BLK1)

Prepared & Analyzed: 07/07/21

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BEG0096-BS1)

Prepared & Analyzed: 07/07/21

Specific Conductance (EC) 0.141 0.0100 mmhos/cm 0.150 93.9 90-110

Duplicate (BEG0096-DUP1)

Source: 2106525-02

Prepared & Analyzed: 07/07/21

Specific Conductance (EC) 0.310 0.0100 mmhos/cm 0.311 0.193 20

Summit Scientific

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

Project: Booth 25-26 Wellheads

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/02/21 12:14

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

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

Batch BEG0094 - General Preparation

LCS (BEG0094-BS1)

Prepared & Analyzed: 07/07/21

pH	9.24		pH Units	9.21	100	95-105
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Duplicate (BEG0094-DUP1)

Source: 2106525-02

Prepared & Analyzed: 07/07/21

pH	8.08		pH Units	8.09		0.124	20
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Batch BEG0525 - General Preparation

LCS (BEG0525-BS1)

Prepared & Analyzed: 07/29/21

pH	9.33		pH Units	9.21	101	95-105
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Duplicate (BEG0525-DUP1)

Source: 2107230-03

Prepared & Analyzed: 07/29/21

pH	8.60		pH Units	8.96		4.10	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: Booth 25-26 Wellheads

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/02/21 12:14

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