

TABLE 1
FORMER WILLIAMSON 44-12 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
FLR01 @ 4'	5/10/2021	4 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 extactable petroleum hydrocarbons - oil range organics

mg/kg = Milligrams per kilogram

TMB = Trimethylbenzene

ft. = Feet

bgs = Below ground surface

TABLE 2
FORMER WILLIAMSON 44-12 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 @ 2.5'	5/10/2021	2.5 ft. bgs	8.32	2.06	3.72	0.201

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

TABLE 3
FORMER WILLIAMSON 44-12 WELLHEAD
FIELD DATA SUMMARY TABLE

Sample ID	Date Sampled	Depth	GPS Data ⁽¹⁾ Latitude / Longitude		PDOP Value	VOC Concentration ⁽²⁾ (ppm)
FLR01 @ 4'	5/10/2021	4 ft. bgs	40.494406	-104.603991	1.3	0.1
WH01 @ 2.5'	5/10/2021	2.5 ft. bgs	40.494389	-104.603986	1.2	0.0
WHS01-N @ 0-6"	5/10/2021	0-6 in. bgs	40.494449	-104.604008	1.3	0.0
WHS01-W @ 0-6"	5/10/2021	0-6 in. bgs	40.494410	-104.604048	1.2	0.0
WHS01-S @ 0-6"	5/10/2021	0-6 in. bgs	40.494372	-104.603979	1.2	0.2
WHS01-E @ 0-6"	5/10/2021	0-6 in. bgs	40.494393	-104.603962	1.2	0.0
FL01-01 @ 4'	5/10/2021	4 ft. bgs	40.494105	-104.603932	1.2	0.0
FL01-02 @ 4'	5/10/2021	4 ft. bgs	40.493696	-104.603896	1.3	0.2
BKG01 @ 2.5'	5/10/2021	2.5 ft. bgs	40.494544	-104.603976	1.3	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

May 17, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000


Denver, CO 80203

RE: Williamson 44-12 Wellhead

Work Order #2105102

Enclosed are the results of analyses for samples received by Summit Scientific on 05/10/21 17:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "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: Williamson 44-12 Wellhead

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
05/17/21 14:55

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FLR01@4'	2105102-01	Soil	05/10/21 09:30	05/10/21 17:15
WH01@2.5'	2105102-02	Soil	05/10/21 09:35	05/10/21 17:15

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.

2105102

303-277-9310

Page 2 of 4

Project Manager: Mark Longhurst

E-Mail: mark.longhurst@PDCE.com


Phone: 970-481-6909

Project Name: Williamson 44-12 Wellhead

Sampler Name: Max Dahlgren

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	BTEX	TPH - (C6 - C36)	Naphthalene	1,2,4,1,3,5-TMB, ⁹¹⁵	pH, EC, SAR ⁹¹⁵	Boron-HW ⁹¹⁵				
1	FLR01 @ 4'	5/10/21	930	3			X			X			X	X	X	X						
2	WH01 @ 2.5'	+	935	1			X			X			X				X	X				
3	BKG01 @ 2.5'	+	1010	1			X			X										X		
4																						
5																						
6																						
7																						
8																						
9																						
10																						

Relinquished by:


Date/Time:
5/10/21
1415

Received by:
Tasman Lock Box

Date/Time:
5/10/21
1415

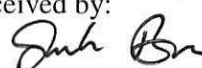
Turn Around Time (Check)
Same Day _____ 72 hours _____
24 hours _____ Standard ☒
48 hours _____

Sample Integrity:
Temperature Upon Receipt: 3
Samples Intact: ☒ Yes No

Notes:
No BTEX analysis
for sample WH01

Relinquished by:
Tasman Lockbox

Date/Time:
5/10/21 1715

Received by:


Date/Time:
5/10/21 1715

Relinquished by:

Date/Time:

Received by:

Date/Time:

Sample Receipt Checklist

S2 Work Order 2105102

Client: POL / Tasman

Client Project ID: Williamson 44-12 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>3</u>
-----------	----------

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>On ice.</u>
NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.				
Were all samples received intact ⁽¹⁾ ?	<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⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Record the pH in Comments.				
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

John B...
Signature of Custodian

5/10/21
Date/Time



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

Project: Williamson 44-12 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
05/17/21 14:55

FLR01@4'
2105102-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/10/21 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEE0173	05/11/21	05/11/21	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: **05/10/21 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		141 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.3 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/10/21 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEE0174	05/11/21	05/11/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/10/21 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		106 %	30-150		"	"	"	"	

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1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Williamson 44-12 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
05/17/21 14:55

WH01@2.5'
2105102-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/10/21 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.201	0.0100	mg/L	1	BEE0158	05/11/21	05/12/21	EPA 6020B	

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

Date Sampled: **05/10/21 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	156	0.0639	mg/L dry	1	BEE0171	05/11/21	05/13/21	EPA 6020B	
Magnesium	70.4	0.0639	"	"	"	"	"	"	
Sodium	223	0.0639	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/10/21 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.72	0.00100	units	1	BEE0229	05/13/21	05/13/21	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/10/21 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	78.3		%	1	BEE0180	05/12/21	05/12/21	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/10/21 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.06	0.0100	mmhos/cm	1	BEE0202	05/12/21	05/12/21	EPA 120.1	

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

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1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Williamson 44-12 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
05/17/21 14:55

WH01@2.5'
2105102-02 (Soil)

Summit Scientific

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

Date Sampled: **05/10/21 09:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.32			pH Units	1	BEE0203	05/12/21	05/12/21	EPA 9045D	

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

Project: Williamson 44-12 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
05/17/21 14:55

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 BEE0173 - EPA 5030 Soil MS

Blank (BEE0173-BLK1)

Prepared & Analyzed: 05/11/21

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	0.0526		"	0.0400		131	23-173			
Surrogate: Toluene-d8	0.0428		"	0.0400		107	20-170			
Surrogate: 4-Bromofluorobenzene	0.0402		"	0.0400		101	21-167			

LCS (BEE0173-BS1)

Prepared & Analyzed: 05/11/21

Benzene	0.0874	0.0020	mg/kg	0.100		87.4	70-130			
Toluene	0.0968	0.0050	"	0.100		96.8	70-130			
Ethylbenzene	0.0973	0.0050	"	0.100		97.3	70-130			
m,p-Xylene	0.191	0.010	"	0.200		95.5	70-130			
o-Xylene	0.0962	0.0050	"	0.100		96.2	70-130			
1,2,4-Trimethylbenzene	0.0963	0.0050	"	0.100		96.3	70-130			
1,3,5-Trimethylbenzene	0.0951	0.0050	"	0.100		95.1	70-130			
Naphthalene	0.0801	0.0038	"	0.100		80.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0420		"	0.0400		105	23-173			
Surrogate: Toluene-d8	0.0424		"	0.0400		106	20-170			
Surrogate: 4-Bromofluorobenzene	0.0406		"	0.0400		102	21-167			

Matrix Spike (BEE0173-MS1)

Source: 2105081-01

Prepared & Analyzed: 05/11/21

Benzene	0.0789	0.0020	mg/kg	0.100	ND	78.9	70-130			
Toluene	0.0839	0.0050	"	0.100	ND	83.9	70-130			
Ethylbenzene	0.0938	0.0050	"	0.100	ND	93.8	70-130			
m,p-Xylene	0.182	0.010	"	0.200	ND	90.8	70-130			
o-Xylene	0.0919	0.0050	"	0.100	ND	91.9	70-130			
1,2,4-Trimethylbenzene	0.0898	0.0050	"	0.100	ND	89.8	70-130			
1,3,5-Trimethylbenzene	0.0887	0.0050	"	0.100	ND	88.7	70-130			
Naphthalene	0.0862	0.0038	"	0.100	ND	86.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0384		"	0.0400		95.9	23-173			
Surrogate: Toluene-d8	0.0394		"	0.0400		98.5	20-170			
Surrogate: 4-Bromofluorobenzene	0.0381		"	0.0400		95.2	21-167			

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

Project: Williamson 44-12 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
05/17/21 14:55

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 BEE0173 - EPA 5030 Soil MS

Matrix Spike Dup (BEE0173-MSD1)	Source: 2105081-01			Prepared & Analyzed: 05/11/21						
Benzene	0.0890	0.0020	mg/kg	0.100	ND	89.0	70-130	12.0	30	
Toluene	0.0937	0.0050	"	0.100	ND	93.7	70-130	10.9	30	
Ethylbenzene	0.105	0.0050	"	0.100	ND	105	70-130	10.8	30	
m,p-Xylene	0.202	0.010	"	0.200	ND	101	70-130	10.7	30	
o-Xylene	0.101	0.0050	"	0.100	ND	101	70-130	9.90	30	
1,2,4-Trimethylbenzene	0.0990	0.0050	"	0.100	ND	99.0	70-130	9.76	30	
1,3,5-Trimethylbenzene	0.0984	0.0050	"	0.100	ND	98.4	70-130	10.3	30	
Naphthalene	0.0832	0.0038	"	0.100	ND	83.2	70-130	3.61	30	
Surrogate: 1,2-Dichloroethane-d4	0.0395		"	0.0400		98.7	23-173			
Surrogate: Toluene-d8	0.0388		"	0.0400		96.9	20-170			
Surrogate: 4-Bromofluorobenzene	0.0384		"	0.0400		96.1	21-167			

Summit Scientific

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

Project: Williamson 44-12 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
05/17/21 14:55

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BEE0174 - EPA 3550A

Blank (BEE0174-BLK1)

Prepared & Analyzed: 05/11/21

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

LCS (BEE0174-BS1)

Prepared & Analyzed: 05/11/21

C10-C28 (DRO)	413	50	mg/kg	500	82.5	70-130
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Matrix Spike (BEE0174-MS1)

Source: 2105081-01

Prepared & Analyzed: 05/11/21

C10-C28 (DRO)	478	50	mg/kg	500	13.1	93.0	70-130
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Matrix Spike Dup (BEE0174-MSD1)

Source: 2105081-01

Prepared & Analyzed: 05/11/21

C10-C28 (DRO)	409	50	mg/kg	500	13.1	79.2	70-130	15.6	20
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Summit Scientific

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

Project: Williamson 44-12 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
05/17/21 14:55

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 BEE0158 - EPA 3050B

Blank (BEE0158-BLK1)

Prepared: 05/11/21 Analyzed: 05/12/21

Boron ND 0.0100 mg/L

LCS (BEE0158-BS1)

Prepared: 05/11/21 Analyzed: 05/12/21

Boron 5.61 0.0100 mg/L 5.00 112 80-120

Duplicate (BEE0158-DUP1)

Source: 2105071-01

Prepared: 05/11/21 Analyzed: 05/12/21

Boron 0.417 0.0100 mg/L 0.427 2.42 20

Matrix Spike (BEE0158-MS1)

Source: 2105071-01

Prepared: 05/11/21 Analyzed: 05/12/21

Boron 5.69 0.0100 mg/L 5.00 0.427 105 75-125

Matrix Spike Dup (BEE0158-MSD1)

Source: 2105071-01

Prepared: 05/11/21 Analyzed: 05/12/21

Boron 5.73 0.0100 mg/L 5.00 0.427 106 75-125 0.794 25

Summit Scientific

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

Project: Williamson 44-12 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
05/17/21 14:55

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 BEE0171 - General Preparation

Blank (BEE0171-BLK1)

Prepared: 05/11/21 Analyzed: 05/13/21

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

LCS (BEE0171-BS1)

Prepared: 05/11/21 Analyzed: 05/13/21

Calcium	5.29	0.0500	mg/L wet	5.00	106	70-130
Magnesium	5.02	0.0500	"	5.00	100	70-130
Sodium	5.21	0.0500	"	5.00	104	70-130

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

Project: Williamson 44-12 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
05/17/21 14:55

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 BEE0180 - General Preparation

Duplicate (BEE0180-DUP1)

Source: 2105098-01

Prepared & Analyzed: 05/12/21

% Solids	81.6	%	81.8	0.251	20
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Summit Scientific

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

Project: Williamson 44-12 Wellhead

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
05/17/21 14:55

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 BEE0202 - General Preparation

Blank (BEE0202-BLK1)

Prepared & Analyzed: 05/12/21

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BEE0202-BS1)

Prepared & Analyzed: 05/12/21

Specific Conductance (EC) 0.156 0.0100 mmhos/cm 0.150 104 90-110

Duplicate (BEE0202-DUP1)

Source: 2105098-01

Prepared & Analyzed: 05/12/21

Specific Conductance (EC) 2.26 0.0100 mmhos/cm 2.28 0.484 20

Summit Scientific

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

Project: Williamson 44-12 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
05/17/21 14:55

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

Summit Scientific

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

Batch BEE0203 - General Preparation

LCS (BEE0203-BS1)

Prepared & Analyzed: 05/12/21

pH	9.29	pH Units	9.21	101	95-105
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Duplicate (BEE0203-DUP1)

Source: 2105098-01

Prepared & Analyzed: 05/12/21

pH	7.04	pH Units	7.05	0.142	20
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Summit Scientific

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

Project: Williamson 44-12 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
05/17/21 14:55

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