

**TABLE 1**  
**FORMER BAUER 5 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 <sup>(4)</sup> (mg/kg)
<b>Residential SSL <sup>(1,2)</sup></b>			<b>1.2</b>	<b>490</b>	<b>5.8</b>	<b>58</b>	<b>30</b>	<b>27</b>	<b>2</b>	<b>500</b>
<b>Protection of Groundwater SSL <sup>(1,2,3)</sup></b>			<b>0.0026</b>	<b>0.69</b>	<b>0.78</b>	<b>9.9</b>	<b>0.0081</b>	<b>0.0087</b>	<b>0.0038</b>	<b>500</b>
WH01 @ 6'	2/11/2022	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FLR01 @ 4'	2/11/2022	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FL01-01 @ 4'	2/11/2022	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FL01-02 @ 4'	2/11/2022	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FL01-03 @ 4'	2/11/2022	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FL01-04 @ 4'	2/11/2022	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FL01-05 @ 4'	2/11/2022	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FL01-06 @ 4'	2/11/2022	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 extractable petroleum hydrocarbons - oil range organics

mg/kg = Milligrams per kilogram

TMB = Trimethylbenzene

ft. = Feet

bgs = Below ground surface

**TABLE 2**  
**FORMER BAUER 5 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 <sup>(1)</sup>			6-8.3	<4	<6	2
WH01 @ 6'	2/11/2022	6 ft. bgs	<b>8.36</b>	0.524	0.0435	0.0996
FLR01 @ 4'	2/11/2022	4 ft. bgs	<b>8.35</b>	0.574	0.0579	0.162
BKG01 @ 4'	2/11/2022	4 ft. bgs	8.22	NA	NA	NA
BKG01 @ 6'	2/11/2022	6 ft. bgs	8.06	NA	NA	NA

**Notes:**

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

COGCC = Colorado Oil and Gas Conservation Commission

EC = Electrical conductivity

SAR = Sodium adsorption ratio

mmhos/cm = Millimhos per centimeter

mg/L = Milligrams per liter

ft. = Feet

bgs = Below ground surface

NA=Not Analyzed

**BOLD** = Analytical result is in exceedance of applicable standard.

**TABLE 3**  
**FORMER BAUER 5 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 <sup>(1,2)</sup>			360	1,800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
Protection of Groundwater SSL <sup>(1,2,3)</sup>			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'	2/11/2022	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'	2/11/2022	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) = Benzo(a)fluoranthene

Benzo(k) = Benzo(a)fluoranthene

A,H = Dibenzoanthracene

1,2,3-CD = Indenopyrene

M = Methylnaphthalene

mg/kg = Milligrams per kilogram

ft. = Feet

bgs = Below ground surface

**TABLE 4**  
**FORMER BAUER 5 WELLHEAD**  
**FIELD DATA SUMMARY TABLE**

Sample ID	Date Sampled	Depth	GPS Data <sup>(1)</sup> Latitude / Longitude		PDOP Value	VOC Concentration <sup>(2)</sup> (ppm)
WH01 @ 6'	2/11/2022	6 ft. bgs	40.432249	-104.560012	1.5	0.2
FLR01 @ 4'	2/11/2022	4 ft. bgs	40.432263	-104.560033	1.6	0.4
WHS01-N @ 0-6"	2/11/2022	0-6 in. bgs	40.432325	-104.559997	1.4	0.0
WHS01-W @ 0-6"	2/11/2022	0-6 in. bgs	40.432248	-104.560104	1.4	0.0
WHS01-S @ 0-6"	2/11/2022	0-6 in. bgs	40.432184	-104.560007	2.0	0.0
WHS01-E @ 0-6"	2/11/2022	0-6 in. bgs	40.432244	-104.559909	1.7	0.1
FL01-01 @ 4'	2/11/2022	4 ft. bgs	40.432267	-104.562334	1.8	0.4
FL01-02 @ 4'	2/11/2022	4 ft. bgs	40.433480	-104.562363	1.3	0.0
FL01-03 @ 4'	2/11/2022	4 ft. bgs	40.433472	-104.562828	1.6	0.1
FL01-04 @ 4'	2/11/2022	4 ft. bgs	40.433476	-104.562928	1.3	0.0
FL01-05 @ 4'	2/11/2022	4 ft. bgs	40.433521	-104.564359	2.1	0.0
FL01-06 @ 4'	2/11/2022	4 ft. bgs	40.433510	-104.564444	1.4	0.0
BKG01 @ 4'	2/11/2022	4 ft. bgs	40.432156	-104.560210	1.5	0.0
BKG01 @ 6'	2/11/2022	6 ft. bgs	40.432156	-104.560210	1.5	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

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 02, 2022

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Bauer 5 Wellhead

Work Order #2202141

Enclosed are the results of analyses for samples received by Summit Scientific on 02/11/22 17:00. 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 For Muri Premer  
Project Manager



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

Project: Bauer 5 Wellhead  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/22 12:04

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH01@6'	2202141-01	Soil	02/11/22 09:00	02/11/22 17:00
FLR01@4'	2202141-02	Soil	02/11/22 09:05	02/11/22 17:00
FL01-01@4'	2202141-03	Soil	02/11/22 09:30	02/11/22 17:00
FL01-02@4'	2202141-04	Soil	02/11/22 12:30	02/11/22 17:00
FL01-03@4'	2202141-05	Soil	02/11/22 12:35	02/11/22 17:00
FL01-04@4'	2202141-06	Soil	02/11/22 12:40	02/11/22 17:00
FL01-05@4'	2202141-07	Soil	02/11/22 12:45	02/11/22 17:00
FL01-06@4'	2202141-08	Soil	02/11/22 12:50	02/11/22 17:00
BKG01@4'	2202141-09	Soil	02/11/22 12:20	02/11/22 17:00
BKG01@6'	2202141-10	Soil	02/11/22 12:25	02/11/22 17:00

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.*

## 2202141

303-277-9310

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Project Number: N/A

					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	PAH - 915	On Hold			pH, EC, SAR by saturated paste
1	WHO1 @ 6'	2/11/22	900	3			X			X			X	X	X	X	X	X	X			
2	FLR01 @ 4'	↓	905	3			X			X			X	X	X	X	X	X	X			
3	FL01-01 @ 4'		930	2			X			X			X	X	X							
4	FL01-02 @ 4'		1230	3			X			X			X	X	X							
5	FL01-03 @ 4'		1235	3			X			X			X	X	X							
6	FL01-04 @ 4'		1240	3			X			X			X	X	X							
7	FL01-05 @ 4'		1245	3			X			X			X	X	X							
8	FL01-06 @ 4'		1250	3			X			X			X	X	X							
9	BKG01 @ 4'		1220	1			X			X											X	
10	BKG01 @ 6'		↓	1225	1			X		X											X	
Relinquished by:			Date/Time:		Received by:		Date/Time:		Turn Around Time		(Check)		Notes:									
M. [Signature]		2/11/22 1700		Tasman's Lock Box				Same Day		72 hours												
								24 hours		Standard												
Relinquished by:		Date/Time:		Received by:		Date/Time:		48 hours														
Tasman's Lock Box				[Signature]		2/11/22 1700																
Relinquished by:		Date/Time:		Received by:		Date/Time:		Sample Integrity:														
								Temperature Upon Receipt:		3.8												
								Samples Intact:		Yes No												



S<sub>2</sub>

2202141

## Sample Receipt Checklist

S2 Work Order#

Client: PBC TasmanClient Project ID: Bayer S 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)

3.8

Thermometer ID: G86A9201901378

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C <sup>(1)</sup> ? 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
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	<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) <sup>(1)</sup> ? Note the type of preservative in the Comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ? 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):

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

Custodian Printed Name or Initials

Date/Time



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

Project: Bauer 5 Wellhead  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/22 12:04

**WH01@6'**  
**2202141-01 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/11/22 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFB0147	02/14/22	02/18/22	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: **02/11/22 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		96.8 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		104 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	70-130		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/11/22 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFB0146	02/14/22	02/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/11/22 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		86.2 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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

Project: Bauer 5 Wellhead  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/22 12:04

**WH01@6'**  
**2202141-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **02/11/22 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFB0154	02/15/22	02/16/22	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: **02/11/22 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		61.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		67.4 %	40-150		"	"	"	"	

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

Date Sampled: **02/11/22 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	<b>48.4</b>	0.0636	mg/L dry	1	BFC0482	03/22/22	03/26/22	EPA 6020B	
Magnesium	<b>4.44</b>	0.0636	"	"	"	"	"	"	
Sodium	<b>1.18</b>	0.0636	"	"	"	"	"	"	

**Calculated Analysis**

Summit Scientific

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

Project: Bauer 5 Wellhead  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/22 12:04

**WH01@6'**  
**2202141-01 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **02/11/22 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0435	0.00100	units	1	BFC0618	03/26/22	03/26/22	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/11/22 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	78.6		%	1	BFB0134	02/14/22	02/14/22	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/11/22 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.524	0.0100	mmhos/cm	1	BFC0485	03/22/22	03/22/22	EPA 120.1	

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

Date Sampled: **02/11/22 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.36		pH Units	1	BFC0486	03/22/22	03/22/22	EPA 9045D	

Summit Scientific

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

Project: Bauer 5 Wellhead  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/22 12:04

**FLR01@4'**  
**2202141-02 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/11/22 09:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFB0147	02/14/22	02/18/22	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: **02/11/22 09:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		97.8 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		108 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	70-130		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/11/22 09:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFB0146	02/14/22	02/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/11/22 09:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		84.5 %	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: Bauer 5 Wellhead  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/22 12:04

**FLR01@4'**  
**2202141-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **02/11/22 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFB0154	02/15/22	02/16/22	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: **02/11/22 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		57.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		62.9 %	40-150		"	"	"	"	

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

Date Sampled: **02/11/22 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	<b>34.3</b>	0.0646	mg/L dry	1	BFC0482	03/22/22	03/26/22	EPA 6020B	
Magnesium	<b>6.12</b>	0.0646	"	"	"	"	"	"	
Sodium	<b>1.40</b>	0.0646	"	"	"	"	"	"	

**Calculated Analysis**

Summit Scientific

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

Project: Bauer 5 Wellhead  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/22 12:04

**FLR01@4'**  
**2202141-02 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **02/11/22 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0579	0.00100	units	1	BFC0618	03/26/22	03/26/22	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/11/22 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	77.4		%	1	BFB0134	02/14/22	02/14/22	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/11/22 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.574	0.0100	mmhos/cm	1	BFC0485	03/22/22	03/22/22	EPA 120.1	

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

Date Sampled: **02/11/22 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.35		pH Units	1	BFC0486	03/22/22	03/22/22	EPA 9045D	

Summit Scientific

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

Project: Bauer 5 Wellhead  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/22 12:04

**FL01-01@4'**  
**2202141-03 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/11/22 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFB0147	02/14/22	02/18/22	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: **02/11/22 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		93.7 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		106 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	70-130		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/11/22 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFB0146	02/14/22	02/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/11/22 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		80.2 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Bauer 5 Wellhead  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/22 12:04

**FL01-02@4'**  
**2202141-04 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/11/22 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFB0147	02/14/22	02/19/22	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: **02/11/22 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		110 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		91.6 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.6 %	70-130		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/11/22 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFB0146	02/14/22	02/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/11/22 12:30**

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

Summit Scientific

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

Project: Bauer 5 Wellhead  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/22 12:04

**FL01-03@4'**  
**2202141-05 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/11/22 12:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFB0147	02/14/22	02/19/22	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: **02/11/22 12:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		109 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		90.1 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.1 %	70-130		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/11/22 12:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFB0146	02/14/22	02/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/11/22 12:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		120 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Bauer 5 Wellhead  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/22 12:04

**FL01-04@4'**  
**2202141-06 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/11/22 12:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFB0147	02/14/22	02/19/22	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: **02/11/22 12:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		106 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		91.2 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.6 %	70-130		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/11/22 12:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFB0146	02/14/22	02/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/11/22 12:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		96.6 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Bauer 5 Wellhead  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/22 12:04

**FL01-05@4'**  
**2202141-07 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/11/22 12:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFB0147	02/14/22	02/19/22	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: **02/11/22 12:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		110 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		92.0 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.0 %	70-130		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/11/22 12:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFB0146	02/14/22	02/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/11/22 12:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		71.9 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Bauer 5 Wellhead  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/22 12:04

**FL01-06@4'**  
**2202141-08 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/11/22 12:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFB0147	02/14/22	02/19/22	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: **02/11/22 12:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		113 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		89.2 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.5 %	70-130		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/11/22 12:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFB0146	02/14/22	02/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/11/22 12:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		137 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Bauer 5 Wellhead  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/22 12:04

**BKG01@4'**  
**2202141-09 (Soil)**

**Summit Scientific**

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

Date Sampled: **02/11/22 12:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>pH</b>	<b>8.22</b>			pH Units	1	BFD0674	04/29/22	04/29/22	EPA 9045D	I-02

Summit Scientific

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

Project: Bauer 5 Wellhead  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/22 12:04

**BKG01@6'**  
**2202141-10 (Soil)**

**Summit Scientific**

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

Date Sampled: **02/11/22 12:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>pH</b>	<b>8.06</b>			pH Units	1	BFD0674	04/29/22	04/29/22	EPA 9045D	I-02

Summit Scientific

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

Project: Bauer 5 Wellhead  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/22 12:04

## 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 BFB0147 - EPA 5030 Soil MS

##### Blank (BFB0147-BLK1)

Prepared: 02/14/22 Analyzed: 02/18/22

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	0.0415		"	0.0400		104	70-130			
Surrogate: Toluene-d8	0.0364		"	0.0400		91.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.0364		"	0.0400		91.0	70-130			

##### LCS (BFB0147-BS1)

Prepared: 02/14/22 Analyzed: 02/19/22

Benzene	0.0813	0.0020	mg/kg	0.100		81.3	70-130			
Toluene	0.0760	0.0050	"	0.100		76.0	70-130			
Ethylbenzene	0.109	0.0050	"	0.100		109	70-130			
m,p-Xylene	0.218	0.010	"	0.200		109	70-130			
o-Xylene	0.106	0.0050	"	0.100		106	70-130			
1,2,4-Trimethylbenzene	0.111	0.0050	"	0.100		111	70-130			
1,3,5-Trimethylbenzene	0.109	0.0050	"	0.100		109	70-130			
Naphthalene	0.0853	0.0038	"	0.100		85.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0432		"	0.0400		108	70-130			
Surrogate: Toluene-d8	0.0369		"	0.0400		92.3	70-130			
Surrogate: 4-Bromofluorobenzene	0.0363		"	0.0400		90.8	70-130			

##### Matrix Spike (BFB0147-MS1)

Source: 2202139-01

Prepared: 02/14/22 Analyzed: 02/19/22

Benzene	0.0830	0.0020	mg/kg	0.100	ND	83.0	70-130			
Toluene	0.0787	0.0050	"	0.100	ND	78.7	70-130			
Ethylbenzene	0.112	0.0050	"	0.100	ND	112	70-130			
m,p-Xylene	0.224	0.010	"	0.200	ND	112	70-130			
o-Xylene	0.107	0.0050	"	0.100	ND	107	70-130			
1,2,4-Trimethylbenzene	0.115	0.0050	"	0.100	ND	115	70-130			
1,3,5-Trimethylbenzene	0.112	0.0050	"	0.100	ND	112	70-130			
Naphthalene	0.0883	0.0038	"	0.100	ND	88.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0422		"	0.0400		106	70-130			
Surrogate: Toluene-d8	0.0374		"	0.0400		93.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.0365		"	0.0400		91.4	70-130			

Summit Scientific

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





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

Project: Bauer 5 Wellhead  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/22 12:04

**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 BFB0147 - EPA 5030 Soil MS**

Matrix Spike Dup (BFB0147-MSD1)		Source: 2202139-01			Prepared: 02/14/22 Analyzed: 02/19/22					
Benzene	0.0811	0.0020	mg/kg	0.100	ND	81.1	70-130	2.27	30	
Toluene	0.0763	0.0050	"	0.100	ND	76.3	70-130	3.10	30	
Ethylbenzene	0.108	0.0050	"	0.100	ND	108	70-130	3.80	30	
m,p-Xylene	0.217	0.010	"	0.200	ND	108	70-130	3.16	30	
o-Xylene	0.104	0.0050	"	0.100	ND	104	70-130	2.30	30	
1,2,4-Trimethylbenzene	0.113	0.0050	"	0.100	ND	113	70-130	1.71	30	
1,3,5-Trimethylbenzene	0.109	0.0050	"	0.100	ND	109	70-130	2.60	30	
Naphthalene	0.0995	0.0038	"	0.100	ND	99.5	70-130	11.9	30	
<hr/>										
Surrogate: 1,2-Dichloroethane-d4	0.0434		"	0.0400		108	70-130			
Surrogate: Toluene-d8	0.0369		"	0.0400		92.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.0358		"	0.0400		89.6	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: Bauer 5 Wellhead  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/22 12:04

**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 BFB0146 - EPA 3550A**

**Blank (BFB0146-BLK1)**

Prepared: 02/14/22 Analyzed: 02/17/22

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

**LCS (BFB0146-BS1)**

Prepared: 02/14/22 Analyzed: 02/17/22

C10-C28 (DRO)	469	50	mg/kg	500	93.9	70-130
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**Matrix Spike (BFB0146-MS1)**

Source: 2202139-01

Prepared: 02/14/22 Analyzed: 02/17/22

C10-C28 (DRO)	461	50	mg/kg	500	31.8	85.9	70-130
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**Matrix Spike Dup (BFB0146-MSD1)**

Source: 2202139-01

Prepared: 02/14/22 Analyzed: 02/17/22

C10-C28 (DRO)	439	50	mg/kg	500	31.8	81.5	70-130	4.87	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: Bauer 5 Wellhead  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/22 12:04

## PAH by EPA Method 8270D SIM - Quality Control

### Summit Scientific

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

#### Batch BFB0154 - EPA 5030 Soil MS

##### Blank (BFB0154-BLK1)

Prepared & Analyzed: 02/15/22

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	0.0285		"	0.0333		85.4	40-150			
Surrogate: Fluoranthene-d10	0.0293		"	0.0333		87.9	40-150			

##### LCS (BFB0154-BS1)

Prepared & Analyzed: 02/15/22

Acenaphthene	0.0304	0.00500	mg/kg	0.0333		91.2	31-137			
Anthracene	0.0281	0.00500	"	0.0333		84.3	30-120			
Benzo (a) anthracene	0.0280	0.00500	"	0.0333		83.9	30-120			
Benzo (a) pyrene	0.0263	0.00500	"	0.0333		79.0	30-120			
Benzo (b) fluoranthene	0.0274	0.00500	"	0.0333		82.2	30-120			
Benzo (k) fluoranthene	0.0286	0.00500	"	0.0333		85.8	30-120			
Chrysene	0.0309	0.00500	"	0.0333		92.6	30-120			
Dibenz (a,h) anthracene	0.0239	0.00500	"	0.0333		71.7	30-120			
Fluoranthene	0.0275	0.00500	"	0.0333		82.5	30-120			
Fluorene	0.0289	0.00500	"	0.0333		86.7	30-120			
Indeno (1,2,3-cd) pyrene	0.0138	0.00500	"	0.0333		41.4	30-120			
Pyrene	0.0309	0.00500	"	0.0333		92.6	35-142			
1-Methylnaphthalene	0.0275	0.00500	"	0.0333		82.5	35-142			
2-Methylnaphthalene	0.0323	0.00500	"	0.0333		96.8	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0278		"	0.0333		83.3	40-150			
Surrogate: Fluoranthene-d10	0.0256		"	0.0333		76.8	40-150			

Summit Scientific

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

Project: Bauer 5 Wellhead  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/22 12:04

## PAH by EPA Method 8270D SIM - Quality Control

### Summit Scientific

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

#### Batch BFB0154 - EPA 5030 Soil MS

##### Matrix Spike (BFB0154-MS1)

Source: 2202138-02

Prepared & Analyzed: 02/15/22

Acenaphthene	0.0298	0.00500	mg/kg	0.0333	ND	89.4	31-137		
Anthracene	0.0285	0.00500	"	0.0333	ND	85.4	30-120		
Benzo (a) anthracene	0.0339	0.00500	"	0.0333	ND	102	30-120		
Benzo (a) pyrene	0.0266	0.00500	"	0.0333	ND	79.8	30-120		
Benzo (b) fluoranthene	0.0268	0.00500	"	0.0333	ND	80.4	30-120		
Benzo (k) fluoranthene	0.0250	0.00500	"	0.0333	ND	75.0	30-120		
Chrysene	0.0314	0.00500	"	0.0333	ND	94.1	30-120		
Dibenz (a,h) anthracene	0.0255	0.00500	"	0.0333	ND	76.6	30-120		
Fluoranthene	0.0297	0.00500	"	0.0333	ND	89.2	30-120		
Fluorene	0.0330	0.00500	"	0.0333	ND	99.1	30-120		
Indeno (1,2,3-cd) pyrene	0.0166	0.00500	"	0.0333	ND	49.7	30-120		
Pyrene	0.0330	0.00500	"	0.0333	ND	99.0	35-142		
1-Methylnaphthalene	0.0465	0.00500	"	0.0333	0.0207	77.6	15-130		
2-Methylnaphthalene	0.0838	0.00500	"	0.0333	0.0521	95.0	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0287		"	0.0333		86.2	40-150		
Surrogate: Fluoranthene-d10	0.0301		"	0.0333		90.2	40-150		

##### Matrix Spike Dup (BFB0154-MSD1)

Source: 2202138-02

Prepared & Analyzed: 02/15/22

Acenaphthene	0.0268	0.00500	mg/kg	0.0333	ND	80.4	31-137	10.6	30
Anthracene	0.0255	0.00500	"	0.0333	ND	76.6	30-120	10.9	30
Benzo (a) anthracene	0.0302	0.00500	"	0.0333	ND	90.6	30-120	11.6	30
Benzo (a) pyrene	0.0242	0.00500	"	0.0333	ND	72.6	30-120	9.45	30
Benzo (b) fluoranthene	0.0240	0.00500	"	0.0333	ND	71.9	30-120	11.1	30
Benzo (k) fluoranthene	0.0216	0.00500	"	0.0333	ND	64.7	30-120	14.8	30
Chrysene	0.0269	0.00500	"	0.0333	ND	80.8	30-120	15.2	30
Dibenz (a,h) anthracene	0.0220	0.00500	"	0.0333	ND	65.9	30-120	15.1	30
Fluoranthene	0.0271	0.00500	"	0.0333	ND	81.2	30-120	9.36	30
Fluorene	0.0279	0.00500	"	0.0333	ND	83.8	30-120	16.8	30
Indeno (1,2,3-cd) pyrene	0.0155	0.00500	"	0.0333	ND	46.4	30-120	6.76	30
Pyrene	0.0285	0.00500	"	0.0333	ND	85.5	35-142	14.6	30
1-Methylnaphthalene	0.0500	0.00500	"	0.0333	0.0207	88.0	15-130	7.20	50
2-Methylnaphthalene	0.0918	0.00500	"	0.0333	0.0521	119	15-130	9.11	50
Surrogate: 2-Methylnaphthalene-d10	0.0250		"	0.0333		75.0	40-150		
Surrogate: Fluoranthene-d10	0.0272		"	0.0333		81.6	40-150		

Summit Scientific

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

Project: Bauer 5 Wellhead  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/22 12:04

**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 BFC0482 - General Preparation**

**Blank (BFC0482-BLK1)**

Prepared: 03/22/22 Analyzed: 03/26/22

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

**LCS (BFC0482-BS1)**

Prepared: 03/22/22 Analyzed: 03/26/22

Calcium	5.95	0.0500	mg/L wet	5.00	119	70-130
Magnesium	5.70	0.0500	"	5.00	114	70-130
Sodium	5.53	0.0500	"	5.00	111	70-130

Summit Scientific

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

Project: Bauer 5 Wellhead  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/22 12:04

**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 BFB0134 - General Preparation**

**Duplicate (BFB0134-DUP1)**

**Source: 2201162-02**

**Prepared & Analyzed: 02/14/22**

% Solids	83.1	%	83.0	0.121	20
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Summit Scientific

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

Project: Bauer 5 Wellhead  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/22 12:04

**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 BFC0485 - General Preparation**

**Blank (BFC0485-BLK1)**

Prepared & Analyzed: 03/22/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BFC0485-BS1)**

Prepared & Analyzed: 03/22/22

Specific Conductance (EC) 0.155 0.0100 mmhos/cm 0.150 103 95-105

**Duplicate (BFC0485-DUP1)**

**Source: 2201361-01**

Prepared & Analyzed: 03/22/22

Specific Conductance (EC) 2.60 0.0100 mmhos/cm 2.60 0.154 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: Bauer 5 Wellhead  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/22 12:04

**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 BFC0486 - General Preparation**

**LCS (BFC0486-BS1)**

Prepared & Analyzed: 03/22/22

pH	9.09		pH Units	9.18	99.0	95-105
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**Duplicate (BFC0486-DUP1)**

**Source: 2201361-01**

Prepared & Analyzed: 03/22/22

pH	8.90		pH Units	8.92	0.224	20
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**Batch BFD0674 - General Preparation**

**LCS (BFD0674-BS1)**

Prepared & Analyzed: 04/29/22

pH	9.03		pH Units	9.18	98.4	95-105
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**Duplicate (BFD0674-DUP1)**

**Source: 2202085-03**

Prepared & Analyzed: 04/29/22

pH	10.0		pH Units	8.56	15.6	20
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Summit Scientific

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

Project: Bauer 5 Wellhead  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/02/22 12:04

### Notes and Definitions

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

DET      Analyte DETECTED

ND      Analyte NOT DETECTED at or above the reporting limit

NR      Not Reported

dry      Sample results reported on a dry weight basis

RPD      Relative Percent Difference



**Fremont**  
*Analytical*

3600 Fremont Ave. N.  
Seattle, WA 98103  
T: (206) 352-3790  
F: (206) 352-7178  
info@fremontanalytical.com

**Summit Scientific**  
Paul Shrewsbury  
4653 Table Mountain Dr  
Golden, CO 80403

**RE: 2202141**  
**Work Order Number: 2202337**

March 22, 2022

**Attention Paul Shrewsbury:**

Fremont Analytical, Inc. received 2 sample(s) on 2/15/2022 for the analyses presented in the following report.

***Total Metals by EPA Method 6020B***

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes  
Project Manager

**CC:**  
Muri Premer

*DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing  
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing  
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910*

Original

[www.fremontanalytical.com](http://www.fremontanalytical.com)

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**CLIENT:** Summit Scientific  
**Project:** 2202141  
**Work Order:** 2202337

---

**Work Order Sample Summary**

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Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2202337-001	WH01 @6'	02/11/2022 9:00 AM	02/15/2022 4:43 PM
2202337-001	WH01 @6'	02/11/2022 9:00 AM	02/15/2022 4:43 PM
2202337-002	FLR01 @4'	02/11/2022 9:05 AM	02/15/2022 4:43 PM

---

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

---

**CLIENT:** Summit Scientific**Project:** 2202141

---

**I. SAMPLE RECEIPT:**

Samples receipt information is recorded on the attached Sample Receipt Checklist.

**II. GENERAL REPORTING COMMENTS:**

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

**III. ANALYSES AND EXCEPTIONS:**

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

The following preparation methods were performed per client request:

Boron was prepared using Hot Water Soluble Method provided by client.

Conductivity, Sodium Adsorption Ratio, and pH were prepared using Saturated Paste Method provided by client.

**Qualifiers:**

- \* - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

**Acronyms:**

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- DUP - Sample Duplicate
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MCL - Maximum Contaminant Level
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- REP - Sample Replicate
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



## Analytical Report

Work Order: 2202337

Date Reported: 3/22/2022

CLIENT: Summit Scientific

Project: 2202141

Lab ID: 2202337-001

Client Sample ID: WH01@6'

Collection Date: 2/11/2022 9:00:00 AM

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Total Metals by EPA Method 6020B**

Batch ID: 35535

Analyst: EH

Boron	0.0996	0.00971		mg/L	1	3/16/2022 1:24:49 PM
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Lab ID: 2202337-002

Client Sample ID: FLR01@4'

Collection Date: 2/11/2022 9:05:00 AM

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Total Metals by EPA Method 6020B**

Batch ID: 35575

Analyst: EH

Boron	0.162	0.00987	B	mg/L	1	3/22/2022 8:48:51 AM
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**Work Order:** 2202337  
**CLIENT:** Summit Scientific  
**Project:** 2202141

## QC SUMMARY REPORT

### Total Metals by EPA Method 6020B

Sample ID: <b>MB-35535</b>		SampType: <b>MBLK</b>			Units: <b>mg/L</b>		Prep Date: <b>2/28/2022</b>			RunNo: <b>74025</b>		
Client ID: <b>MBLKS</b>		Batch ID: <b>35535</b>			Analysis Date: <b>3/16/2022</b>			SeqNo: <b>1517245</b>				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Boron	ND	0.0100									
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Sample ID: <b>LCS-35535</b>		SampType: <b>LCS</b>			Units: <b>mg/L</b>		Prep Date: <b>2/28/2022</b>			RunNo: <b>74025</b>		
Client ID: <b>LCSS</b>		Batch ID: <b>35535</b>			Analysis Date: <b>3/16/2022</b>			SeqNo: <b>1517246</b>				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Boron	4.50	0.0100	5.000	0	90.1	80	120				
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Sample ID: <b>2202268-007BDUP</b>		SampType: <b>DUP</b>			Units: <b>mg/L</b>		Prep Date: <b>2/28/2022</b>			RunNo: <b>74025</b>		
Client ID: <b>BATCH</b>		Batch ID: <b>35535</b>			Analysis Date: <b>3/16/2022</b>			SeqNo: <b>1517248</b>				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Boron	0.0343	0.00986						0.03721	8.12	20	
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Sample ID: <b>2202268-007BMS</b>		SampType: <b>MS</b>			Units: <b>mg/L</b>		Prep Date: <b>2/28/2022</b>			RunNo: <b>74025</b>		
Client ID: <b>BATCH</b>		Batch ID: <b>35535</b>			Analysis Date: <b>3/16/2022</b>			SeqNo: <b>1517249</b>				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Boron	1.19	0.00978	4.892	0.03721	23.5	75	125				S
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**NOTES:**

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: <b>2202268-007BMSD</b>		SampType: <b>MSD</b>			Units: <b>mg/L</b>		Prep Date: <b>2/28/2022</b>			RunNo: <b>74025</b>		
Client ID: <b>BATCH</b>		Batch ID: <b>35535</b>			Analysis Date: <b>3/16/2022</b>					SeqNo: <b>1517250</b>		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Boron	1.12	0.00978	4.888	0.03721	22.2	75	125	1.189	5.77	20	S
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**NOTES:**

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.



Date: 3/22/2022

Work Order: 2202337  
CLIENT: Summit Scientific  
Project: 2202141

**QC SUMMARY REPORT**  
**Total Metals by EPA Method 6020B**

Sample ID: <b>MB-35575</b>		SampType: <b>MBLK</b>		Units: <b>mg/L</b>		Prep Date: <b>3/3/2022</b>			RunNo: <b>74174</b>			
Client ID: <b>MBLKS</b>		Batch ID: <b>35575</b>					Analysis Date: <b>3/22/2022</b>			SeqNo: <b>1521196</b>		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Boron	0.0293	0.0100									
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Sample ID: <b>LCS-35575</b>		SampType: <b>LCS</b>			Units: <b>mg/L</b>		Prep Date: <b>3/3/2022</b>			RunNo: <b>74174</b>		
Client ID: <b>LCSS</b>		Batch ID: <b>35575</b>			Analysis Date: <b>3/22/2022</b>			SeqNo: <b>1521197</b>				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Boron	5.22	0.0100	5.000	0	104	80	120				
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Sample ID: <b>2202338-001BDUP</b>		SampType: <b>DUP</b>			Units: <b>mg/L</b>		Prep Date: <b>3/3/2022</b>			RunNo: <b>74174</b>		
Client ID: <b>BATCH</b>		Batch ID: <b>35575</b>			Analysis Date: <b>3/22/2022</b>				SeqNo: <b>1521199</b>			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Boron	0.0667	0.00990						0.06180	7.68	20	B
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Sample ID: <b>2202338-001BMS</b>		SampType: <b>MS</b>			Units: <b>mg/L</b>		Prep Date: <b>3/3/2022</b>			RunNo: <b>74174</b>		
Client ID: <b>BATCH</b>		Batch ID: <b>35575</b>			Analysis Date: <b>3/22/2022</b>				SeqNo: <b>1521200</b>			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Boron	1.97	0.0100	5.000	0.06180	38.1	75	125				S
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**NOTES:**

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: <b>2202338-001BMSD</b>		SampType: <b>MSD</b>			Units: <b>mg/L</b>		Prep Date: <b>3/3/2022</b>			RunNo: <b>74174</b>		
Client ID: <b>BATCH</b>		Batch ID: <b>35575</b>			Analysis Date: <b>3/22/2022</b>			SeqNo: <b>1521201</b>				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Boron	2.20	0.00991	4.955	0.06180	43.1	75	125	1.967	11.1	20	S
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**NOTES:**

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.



Client Name: **SUMSCI**  
 Logged by: **Gabrielle Coeuille**

Work Order Number: **2202337**  
 Date Received: **2/15/2022 4:43:00 PM**

### Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐  
 2. How was the sample delivered? FedEx

### Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐  
 4. Shipping container/cooler in good condition? Yes ☒ No ☐  
 5. Custody Seals present on shipping container/cooler?  
 (Refer to comments for Custody Seals not intact) Yes ☐ No ☐ Not Present ☒  
 6. Was an attempt made to cool the samples? Yes ☐ No ☒ NA ☐  
 7. Were all items received at a temperature of >2°C to 6°C \* Unknown prior to receipt Yes ☐ No ☐ NA ☒  
 8. Sample(s) in proper container(s)? Yes ☒ No ☐  
 9. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐  
 10. Are samples properly preserved? Yes ☒ No ☐  
 11. Was preservative added to bottles? Yes ☐ No ☒ NA ☐  
 12. Is there headspace in the VOA vials? Yes ☐ No ☐ NA ☒  
 13. Did all samples containers arrive in good condition(unbroken)? Yes ☒ No ☐  
 14. Does paperwork match bottle labels? Yes ☒ No ☐  
 15. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐  
 16. Is it clear what analyses were requested? Yes ☒ No ☐  
 17. Were all holding times able to be met? Yes ☒ No ☐

### Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:  Date:   
 By Whom:  Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person  
 Regarding:   
 Client Instructions:

19. Additional remarks:

### Item Information

Item #	Temp °C
Sample 1	13.9

\* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



**Fremont**  
Analytical

3600 Fremont Ave N.  
Seattle, WA 98103  
Tel: 206-352-3790  
Fax: 206-352-7178

# Chain of Custody Record & Laboratory Services Agreement

Date: 2-14-22 Page: 1 of 1 Laboratory Project No (Internal): 2002351

Project Name: 2202141 Special Remarks:

Client: Summit Scientific  
Address: 4653 Table Mountain Drive  
City, State, Zip: Golden, CO. 80403  
Telephone: 303-277-9310  
Project No:  
Collected by:  
Location:  
Report To (PM):  
PM Email: mpremer@s2scientific.com, pshrewsbury@s2scientific.com  
Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	Comments
1 WHO1061	2-11-22	900	S	Bb Hot Water Soluble
2 FLR01041	2-11-22	905	S	SAD ELUPH by Saturated Paste
3				
4				
5				
6				
7				
8				
9				
10				

\*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

Individual:

Received: x Date/Time: 2-14-22 1000  
Relinquished: x Date/Time: 2-15-22 16:43

Turn-around Time:  
☒ Standard  
☐ 3 Day  
☐ 2 Day  
☐ Next Day  
☐ Same Day (specify)



**Fremont**  
Analytical

3600 Fremont Ave N.  
Seattle, WA 98103  
Tel: 206-352-3790  
Fax: 206-352-7178

# Chain of Custody Record & Laboratory Services Agreement

Date: 2-14-22 Page: 1 of 1 Laboratory Project No (Internal): 2002351

Project Name: 2202141 Special Remarks:

Client: Summit Scientific  
Address: 4653 Table Mountain Drive  
City, State, Zip: Golden, CO. 80403  
Telephone: 303-277-9310  
Fax: 303-277-9310

Project No:  
Collected by:  
Location:  
Report To (PM):  
PM Email: mpremer@s2scientific.com, pshrewsbury@s2scientific.com

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	Comments
1 WHO1061	2-11-22	900	S	By Hot Water Soluble
2 FLR01041	2-11-22	905	S	SAD ELUPH by Saturated Paste
3				
4				
5				
6				
7				
8				
9				
10				

\*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

\*\*\*Metals (Circle): ☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ O-Phosphate ☐ Fluoride ☐ Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished: [Signature] Date/Time: 2-14-22 1000  
Received: [Signature] Date/Time: 2/15/22 16:43

Turn-around Time: ☒ Standard ☐ 3 Day ☐ 2 Day ☐ Next Day ☐ Same Day (specify)