

PDC Energy, Inc.
Second Quarter 2022 Groundwater Monitoring Summary

June 24, 2022

Former Anderson 12-13 Tank Battery
SENW Section 13 T6N R65W
Remediation # 17005

This groundwater monitoring summary has been prepared by Tasman, Inc. for the former Anderson 12-13 Tank Battery.

Site History and Background

On March 31, 2021, a historic hydrocarbon release was discovered beneath the former tank battery infrastructure. Following the discovery, mitigation activities were initiated and between March 31, and April 6, 2021, approximately 706 cubic yards of impacted material were removed from the former excavation. During excavation activities, groundwater was encountered within the excavation at approximately 6 feet below ground surface (bgs). On July 27, 2021, eight monitoring wells (BH01 – BH08) were installed within and adjacent to the former excavation extent to confirm the absence of dissolved phase hydrocarbon impacts.

Groundwater Monitoring Activities

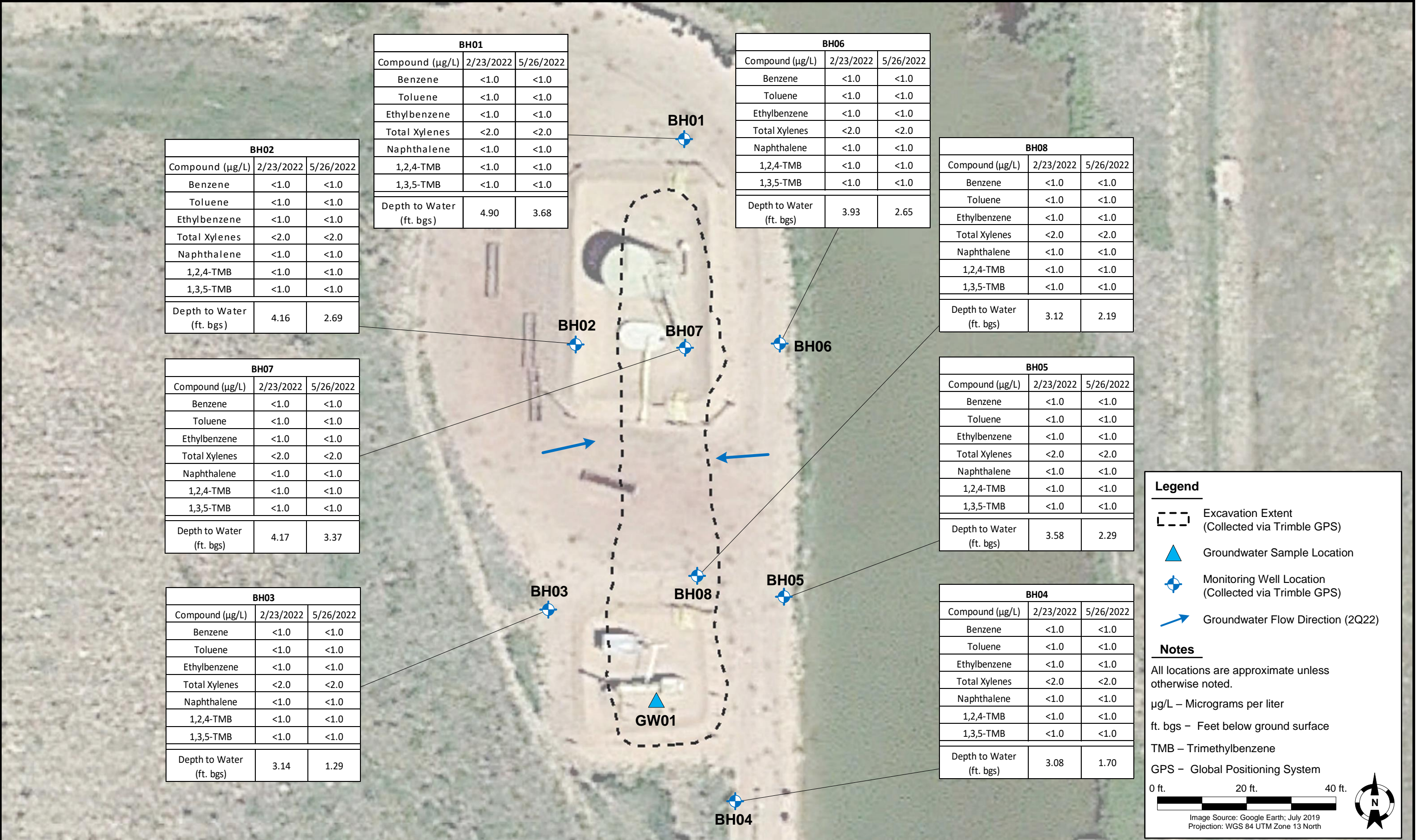
On May 26, 2022, groundwater monitoring was conducted at all eight monitoring wells (BH01 – BH08). Eight groundwater samples were submitted to Summit Scientific Laboratories for analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, 1,2,4-trimethylbenzene (TMB), and 1,3,5-TMB by EPA Method 8260B, chloride and sulfate anions by EPA Method 300.0, total dissolved solids (TDS) by Method SM 2540C, and dissolved selenium by EPA Method 200.8.

Second quarter 2022 analytical results indicated that organic compound concentrations were below the applicable COGCC Table 915-1 groundwater standards in all eight monitoring well locations. Additionally, TDS, chloride, and sulfate, were in compliance with the applicable regulatory standards or within 1.25x the background concentrations of the up- and cross-gradient monitoring wells (BH01 and BH03 – BH06) in all eight monitoring well locations. Dissolved selenium concentrations were below the applicable Colorado Department of Health and Environment (CDPHE) agricultural water supply standard in all monitoring well locations. Sample locations and corresponding analytical results are illustrated on Figures 1 and 2. Groundwater elevation data is illustrated on Figure 3. Groundwater analytical results are summarized in Tables 1 and 2. The laboratory analytical report is included as Attachment A.

Current Remediation Activities and Path Forward

Monitored natural attenuation (MNA) was selected as the remediation strategy for this site during the third quarter 2021 and will remain the selected remediation strategy through the third quarter 2022.

Third quarter 2022 groundwater sampling will be conducted in August 2022.



DATE:	June 24, 2022
DESIGNED BY:	C. Hamlin
DRAWN BY:	E. Wozniak



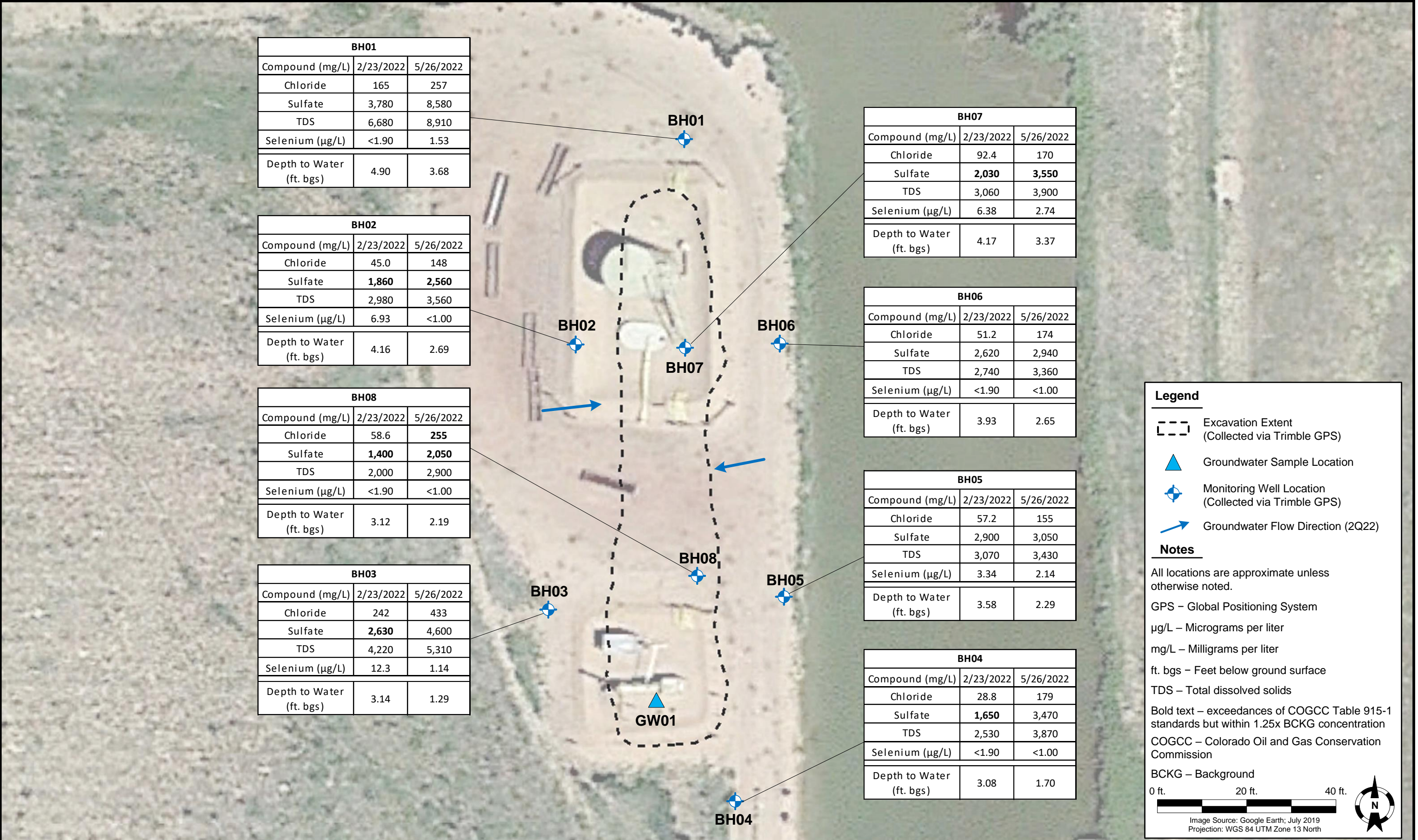
Tasman, Inc.
6855 W. 119th Ave.
Broomfield, CO 80020

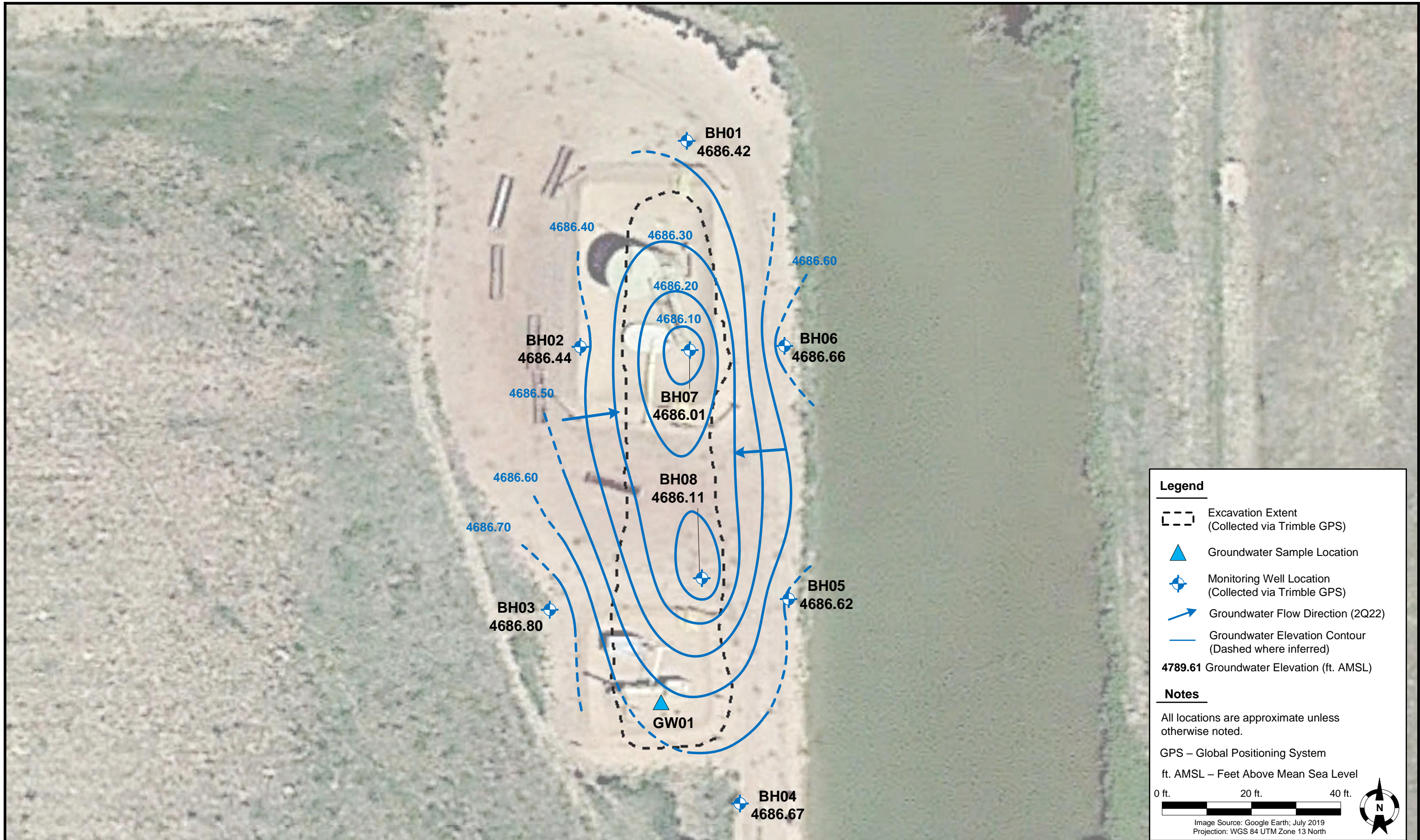
Red text denotes:

PDC Energy, Inc. – DJ Basin
Former Anderson 12-13 Tank Battery
SENW, Section 13 Township 6 North, Range 65 West
Weld County, Colorado

**GROUNDWATER
ANALYTICAL RESULTS
MAP**

**FIGURE
1**





Legend

- Excavation Extent (Collected via Trimble GPS)
- Groundwater Sample Location
- Monitoring Well Location (Collected via Trimble GPS)
- Groundwater Flow Direction (2Q22)
- Groundwater Elevation Contour (Dashed where inferred)
- 4789.61 Groundwater Elevation (ft. AMSL)

Notes

All locations are approximate unless otherwise noted.

GPS – Global Positioning System

ft. AMSL – Feet Above Mean Sea Level

0 ft. 20 ft. 40 ft.

Image Source: Google Earth; July 2019
Projection: WGS 84 UTM Zone 13 North

TABLE 1
FORMER ANDERSON 12-13 TANK BATTERY
GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE

Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Naphthalene (µg/L)	1,2,4-TMB (µg/L)	1,3,5-TMB (µg/L)	Depth to Water ⁽²⁾ (ft.)	Groundwater Elevation (ft. AMSL)
COGCC Table 915-1 Groundwater Standard (µg/L) ⁽¹⁾		5	560	700	1,400	140	67	67	-	-
BH01	8/23/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	4.52	4685.58
BH01	11/8/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	5.13	4684.97
BH01	2/23/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	4.90	4685.20
BH01	5/26/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.68	4686.42
BH02	8/23/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.20	4685.93
BH02	11/8/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	4.28	4684.85
BH02	2/23/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	4.16	4684.97
BH02	5/26/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.69	4686.44
BH03	11/8/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.28	4685.81
BH03	11/8/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.24	4684.85
BH03	2/23/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.14	4684.95
BH03	5/26/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1.29	4686.80
BH04	8/23/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.75	4685.62
BH04	11/8/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.32	4685.05
BH04	2/23/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.08	4685.29
BH04	5/26/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1.70	4686.67
BH05	8/23/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.41	4685.50
BH05	11/8/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.73	4685.18
BH05	2/23/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.58	4685.33
BH05	5/26/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.29	4686.62
BH06	8/23/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.86	4685.45
BH06	11/8/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	4.02	4685.29
BH06	2/23/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.93	4685.38
BH06	5/26/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.65	4686.66
BH07	8/23/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.38	4686.00
BH07	11/8/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	4.40	4684.98
BH07	2/23/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	4.17	4685.21
BH07	5/26/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.37	4686.01
BH08	8/23/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.36	4685.94
BH08	11/8/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.59	4684.71
BH08	2/23/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.12	4685.18
BH08	5/26/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.19	4686.11

Notes:

1. Groundwater standards referenced from 2 CCR 404-1, Table 915-1, January 15, 2021.

2. Depth to water measurements were measured from ground surface for excavation samples. Monitoring well measurements were collected from top of casing and adjusted using survey data to reflect depth of water from ground surface.

TMB = Trimethylbenzene

COGCC = Colorado Oil and Gas Conservation Commission

µg/L = Micrograms per liter

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

ft. = Feet

AMSL = Above Mean Sea Level

TABLE 2
FORMER ANDERSON 12-13 TANK BATTERY
GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE
INORGANIC PARAMETERS

Sample ID	Date Sampled	TDS (unit)	Chloride Ion (mg/L)	Sulfate Ion (mg/L)	Selenium ⁽²⁾ (µg/L)	Depth to Water ⁽³⁾ (ft.)	Groundwater Elevation (ft. AMSL)
COGCC Table 915-1 Groundwater Standard (mg/L) ⁽¹⁾		<1.25 x BCKG	250 or <1.25 x BCKG	250 or <1.25 x BCKG	20	-	-
BH01	8/23/2021	8,970	205	8,210	NA	4.52	4685.58
BH01	11/8/2022	11,100	235	9,810	19.0	5.13	4684.97
BH01	2/23/2022	6,680	165 ^(M)	3,780 ^(M)	<1.90	4.90	4685.20
BH01	5/26/2022	8,910	257	8,580	1.53	3.68	4686.42
BH02	11/8/2021	6,160	86.4	4,190	13.7	4.28	4684.85
BH02	2/23/2022	2,980	45.0	1,860	6.93	4.16	4684.97
BH02	5/26/2022	3,560	148	2,560	<1.00	2.69	4686.44
BH03	11/8/2021	12,600	403	7,330	43.8	3.24	4684.85
BH03	2/23/2022	4,220	242	2,630	12.3	3.14	4684.95
BH03	5/26/2022	5,310	433	4,600	1.14	1.29	4686.80
BH04	8/23/2021	3,980	105	3,700	NA	2.75	4685.62
BH04	11/8/2021	4,810	111	4,590	8.77	3.32	4685.05
BH04	2/23/2022	2,530	28.8	1,650	<1.90	3.08	4685.29
BH04	5/26/2022	3,870	179	3,470	<1.00	1.70	4686.67
BH05	11/8/2021	3,980	95.2	3,690	16.8	3.73	4685.18
BH05	2/23/2022	3,070	57.2	2,900	3.34	3.58	4685.33
BH05	5/26/2022	3,430	155	3,050	2.14	2.29	4686.62
BH06	11/8/2021	4,990	125	4,240	8.14	4.02	4685.29
BH06	2/23/2022	2,740	51.2	2,620	<1.90	3.93	4685.38
BH06	5/26/2022	3,360	174	2,940	<1.00	2.65	4686.66
BH07	8/23/2021	2,980	138	2,720	NA	3.38	4686.00
BH07	11/8/2021	4,040	145	3,750	1.97	4.40	4684.98
BH07	2/23/2022	3,060	92.4	2,030	6.38	4.17	4685.21
BH07	5/26/2022	3,900	170	3,550	2.74	3.37	4686.01
BH08	11/8/2021	3,730	80.2	3,400	40.9	3.59	4684.71
BH08	2/23/2022	2,000	58.6	1,400	<1.90	3.12	4685.18
BH08	5/26/2022	2,900	255	2,050	<1.00	2.19	4686.11

Notes:

1. Groundwater standards referenced from 2 CCR 404-1, Table 915-1, January 15, 2021.
2. Selenium groundwater standard referenced from the 5 CCR 1002-41, Regulation No. 41, Table 3, Agricultural Standards, January 31, 2013.
3. Depth to water measurements were measured from ground surface for excavation samples. Monitoring well measurements were collected from top of casing and adjusted using survey data to reflect depth of water from ground surface.

M = Possible matrix interference

TDS = Total dissolved solids

COGCC = Colorado Oil and Gas Conservation Commission

BCKG = Background

mg/L = Milligrams per liter

µg/L = Micrograms per liter

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

 = Up- / cross-gradient well location used for background concentration.

BOLD = Analytical result is in exceedance of applicable standard.

BOLD = Analytical result is in exceedance of applicable standard but within 1.25x background concentration.

ft. = Feet

AMSL = Above Mean Sea Level

NA = Constituent not analyzed

Attachment A

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

June 30, 2022

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Anderson 12-13

Work Order #2205411

Enclosed are the results of analyses for samples received by Summit Scientific on 05/26/22 16:34. 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: Anderson 12-13
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
06/30/22 14:23

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2205411-01	Water	05/26/22 13:12	05/26/22 16:34
BH02	2205411-02	Water	05/26/22 13:23	05/26/22 16:34
BH03	2205411-03	Water	05/26/22 14:27	05/26/22 16:34
BH04	2205411-04	Water	05/26/22 14:34	05/26/22 16:34
BH05	2205411-05	Water	05/26/22 14:01	05/26/22 16:34
BH06	2205411-06	Water	05/26/22 13:46	05/26/22 16:34
BH07	2205411-07	Water	05/26/22 13:34	05/26/22 16:34
BH08	2205411-08	Water	05/26/22 14:15	05/26/22 16:34

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.

2205411

Summit Scientific

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: Anderson 12-15Sampler Name: Dier 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	1,2,4 & 1,3,5-TMB	TDS, CL, SO ₄	Selenium	
1	BH01	5.26.22	1312	4	X				X				X	X	X	X	- Dissolved Selenium
2	BH02		1323	1													
3	BH03		1422	1													
4	BH04		1439	1													
5	BH05		1401	1													
6	BH06		1346	1													
7	BH07		1334	1													
8	BH08		1415	1													
9																	
10																	

Relinquished by: <u>[Signature]</u>	Date/Time: <u>5.26.22 1634</u>	Received by: <u>Tasman's Lock Box</u>	Date/Time: _____	Turn Around Time (Check)	Notes:
Relinquished by: <u>Tasman's Lock Box</u>	Date/Time: _____	Received by: <u>[Signature]</u>	Date/Time: <u>5/26/22 1845</u>	Same Day _____ 72 hours _____	
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____	24 hours _____ Standard <u>X</u>	
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____	48 hours _____	Sample Integrity:
				Temperature Upon Receipt: _____	
				Samples Intact: <u>(Yes)</u> No	

S₂

Sample Receipt Checklist

S2 Work Order# 2205411Client: PDC / DAsman Client Project ID: Anderson 12-13

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

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------	--------------------------

Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☒ Other ☐Temp (°C) 18.7 Thermometer # 02

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

Custodian Printed Name

Robert Connolly

Date/Time

5/26/22 1845



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

Project: Anderson 12-13
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
06/30/22 14:23

BH01
2205411-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/26/22 13:12**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	BFE0659	05/27/22	05/28/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **05/26/22 13:12**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	9.73	73.0 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.2	91.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	12.4	92.8 %	21-167		"	"	"	"	

Dissolved Metals by EPA Method 200.8

Date Sampled: **05/26/22 13:12**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Selenium	1.53	1.00	ug/l	1	BFE0640	05/27/22	05/27/22	EPA 200.8	

Anions by EPA Method 300.0

Date Sampled: **05/26/22 13:12**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chloride	257	12.0	mg/L	200	BFF0019	06/01/22	06/01/22	EPA 300.0	
Sulfate	8580	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

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: Anderson 12-13
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
06/30/22 14:23

BH01
2205411-01 (Water)

Summit Scientific

Total Dissolved Solids by SM2540C

Date Sampled: **05/26/22 13:12**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	8910	10.0		mg/L	1	BFE0744	05/31/22	05/31/22	SM2540C	

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: Anderson 12-13
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
06/30/22 14:23

BH02
2205411-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/26/22 13:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFE0659	05/27/22	05/28/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **05/26/22 13:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	8.89	66.7 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.1	90.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	11.6	86.6 %	21-167		"	"	"	"	

Dissolved Metals by EPA Method 200.8

Date Sampled: **05/26/22 13:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Selenium	ND	1.00	ug/l	1	BFE0640	05/27/22	05/27/22	EPA 200.8	

Anions by EPA Method 300.0

Date Sampled: **05/26/22 13:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	148	12.0	mg/L	200	BFF0019	06/01/22	06/01/22	EPA 300.0	
Sulfate	2560	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Summit Scientific

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

Project: Anderson 12-13
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
06/30/22 14:23

BH02
2205411-02 (Water)

Summit Scientific

Total Dissolved Solids by SM2540C

Date Sampled: **05/26/22 13:23**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	3560	10.0		mg/L	1	BFE0744	05/31/22	05/31/22	SM2540C	

Summit Scientific

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

Project: Anderson 12-13

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
06/30/22 14:23

BH03
2205411-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/26/22 14:27**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFE0659	05/27/22	05/28/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **05/26/22 14:27**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	9.42	70.7 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.5	93.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	11.4	85.4 %	21-167		"	"	"	"	

Dissolved Metals by EPA Method 200.8

Date Sampled: **05/26/22 14:27**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Selenium	1.14	1.00	ug/l	1	BFE0640	05/27/22	05/27/22	EPA 200.8	

Anions by EPA Method 300.0

Date Sampled: **05/26/22 14:27**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	433	12.0	mg/L	200	BFF0019	06/01/22	06/01/22	EPA 300.0	
Sulfate	4600	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Summit Scientific

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

Project: Anderson 12-13
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
06/30/22 14:23

BH03
2205411-03 (Water)

Summit Scientific

Total Dissolved Solids by SM2540C

Date Sampled: **05/26/22 14:27**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	5310	10.0		mg/L	1	BFE0744	05/31/22	05/31/22	SM2540C	

Summit Scientific

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

Project: Anderson 12-13
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
06/30/22 14:23

BH04
2205411-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/26/22 14:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFE0659	05/27/22	05/28/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **05/26/22 14:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	8.43	63.2 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	11.7	88.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	10.9	81.7 %	21-167		"	"	"	"	

Dissolved Metals by EPA Method 200.8

Date Sampled: **05/26/22 14:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Selenium	ND	1.00	ug/l	1	BFE0640	05/27/22	05/27/22	EPA 200.8	

Anions by EPA Method 300.0

Date Sampled: **05/26/22 14:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	179	12.0	mg/L	200	BFF0019	06/01/22	06/01/22	EPA 300.0	
Sulfate	3470	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Summit Scientific

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

Project: Anderson 12-13
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
06/30/22 14:23

BH04
2205411-04 (Water)

Summit Scientific

Total Dissolved Solids by SM2540C

Date Sampled: **05/26/22 14:34**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	3870	10.0		mg/L	1	BFE0744	05/31/22	05/31/22	SM2540C	

Summit Scientific

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

Project: Anderson 12-13
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
06/30/22 14:23

BH05
2205411-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/26/22 14:01**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFE0659	05/27/22	05/28/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **05/26/22 14:01**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	8.78	65.9 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.2	91.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	11.3	84.9 %	21-167		"	"	"	"	

Dissolved Metals by EPA Method 200.8

Date Sampled: **05/26/22 14:01**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Selenium	2.14	1.00	ug/l	1	BFE0640	05/27/22	05/27/22	EPA 200.8	

Anions by EPA Method 300.0

Date Sampled: **05/26/22 14:01**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	155	12.0	mg/L	200	BFF0019	06/01/22	06/01/22	EPA 300.0	
Sulfate	3050	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Summit Scientific

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

Project: Anderson 12-13
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
06/30/22 14:23

BH05
2205411-05 (Water)

Summit Scientific

Total Dissolved Solids by SM2540C

Date Sampled: **05/26/22 14:01**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	3430	10.0		mg/L	1	BFE0744	05/31/22	05/31/22	SM2540C	

Summit Scientific

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

Project: Anderson 12-13
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
06/30/22 14:23

BH06
2205411-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/26/22 13:46**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFE0659	05/27/22	05/28/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **05/26/22 13:46**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	8.62	64.7 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	11.9	89.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	11.0	82.2 %	21-167		"	"	"	"	

Dissolved Metals by EPA Method 200.8

Date Sampled: **05/26/22 13:46**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Selenium	ND	1.00	ug/l	1	BFE0640	05/27/22	05/27/22	EPA 200.8	

Anions by EPA Method 300.0

Date Sampled: **05/26/22 13:46**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	174	12.0	mg/L	200	BFF0019	06/01/22	06/01/22	EPA 300.0	
Sulfate	2940	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Summit Scientific

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

Project: Anderson 12-13
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
06/30/22 14:23

BH06
2205411-06 (Water)

Summit Scientific

Total Dissolved Solids by SM2540C

Date Sampled: **05/26/22 13:46**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	3360	10.0		mg/L	1	BFE0744	05/31/22	05/31/22	SM2540C	

Summit Scientific

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

Project: Anderson 12-13
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
06/30/22 14:23

BH07
2205411-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/26/22 13:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFE0659	05/27/22	05/28/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **05/26/22 13:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	9.01	67.6 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.0	89.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	10.9	82.0 %	21-167		"	"	"	"	

Dissolved Metals by EPA Method 200.8

Date Sampled: **05/26/22 13:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Selenium	2.74	1.00	ug/l	1	BFE0640	05/27/22	05/27/22	EPA 200.8	

Anions by EPA Method 300.0

Date Sampled: **05/26/22 13:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	170	12.0	mg/L	200	BFF0019	06/01/22	06/01/22	EPA 300.0	
Sulfate	3550	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Summit Scientific

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

Project: Anderson 12-13
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
06/30/22 14:23

BH07
2205411-07 (Water)

Summit Scientific

Total Dissolved Solids by SM2540C

Date Sampled: **05/26/22 13:34**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	3900	10.0		mg/L	1	BFE0744	05/31/22	05/31/22	SM2540C	

Summit Scientific

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

Project: Anderson 12-13
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
06/30/22 14:23

BH08
2205411-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/26/22 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	BFE0659	05/27/22	05/29/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **05/26/22 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	8.72	65.4 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.2	91.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	11.4	85.7 %	21-167		"	"	"	"	

Dissolved Metals by EPA Method 200.8

Date Sampled: **05/26/22 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Selenium	ND	1.00	ug/l	1	BFE0640	05/27/22	05/27/22	EPA 200.8	

Anions by EPA Method 300.0

Date Sampled: **05/26/22 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	255	12.0	mg/L	200	BFF0019	06/01/22	06/01/22	EPA 300.0	
Sulfate	2050	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Summit Scientific

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

Project: Anderson 12-13
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
06/30/22 14:23

BH08
2205411-08 (Water)

Summit Scientific

Total Dissolved Solids by SM2540C

Date Sampled: **05/26/22 14:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	2900	10.0		mg/L	1	BFE0744	05/31/22	05/31/22	SM2540C	

Summit Scientific

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

Project: Anderson 12-13

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
06/30/22 14:23

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 BFE0659 - EPA 5030 Water MS

Blank (BFE0659-BLK1)

Prepared: 05/27/22 Analyzed: 05/28/22

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Naphthalene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	8.99		"	13.3		67.4	23-173			
Surrogate: Toluene-d8	12.1		"	13.3		90.9	20-170			
Surrogate: 4-Bromofluorobenzene	11.3		"	13.3		84.8	21-167			

LCS (BFE0659-BS1)

Prepared: 05/27/22 Analyzed: 05/28/22

Benzene	24.3	1.0	ug/l	33.3		73.0	51-132			
Toluene	30.7	1.0	"	33.3		92.2	51-138			
Ethylbenzene	35.2	1.0	"	33.3		106	58-146			
m,p-Xylene	73.9	2.0	"	66.7		111	57-144			
o-Xylene	37.0	1.0	"	33.3		111	53-146			
Naphthalene	33.8	1.0	"	33.3		101	70-130			
1,2,4-Trimethylbenzene	36.6	1.0	"	33.3		110	70-130			
1,3,5-Trimethylbenzene	38.0	1.0	"	33.3		114	70-130			
Surrogate: 1,2-Dichloroethane-d4	9.82		"	13.3		73.7	23-173			
Surrogate: Toluene-d8	12.3		"	13.3		92.3	20-170			
Surrogate: 4-Bromofluorobenzene	11.4		"	13.3		85.7	21-167			

Matrix Spike (BFE0659-MS1)

Source: 2205403-01

Prepared: 05/27/22 Analyzed: 05/28/22

Benzene	23.6	1.0	ug/l	33.3	ND	70.9	34-141			
Toluene	30.4	1.0	"	33.3	ND	91.3	27-151			
Ethylbenzene	35.8	1.0	"	33.3	ND	107	29-160			
m,p-Xylene	73.8	2.0	"	66.7	ND	111	20-166			
o-Xylene	37.4	1.0	"	33.3	ND	112	33-159			
Naphthalene	37.4	1.0	"	33.3	ND	112	70-130			
1,2,4-Trimethylbenzene	37.1	1.0	"	33.3	ND	111	70-130			
1,3,5-Trimethylbenzene	38.1	1.0	"	33.3	ND	114	70-130			
Surrogate: 1,2-Dichloroethane-d4	9.36		"	13.3		70.2	23-173			
Surrogate: Toluene-d8	12.0		"	13.3		90.0	20-170			
Surrogate: 4-Bromofluorobenzene	11.8		"	13.3		88.5	21-167			

Summit Scientific

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

Project: Anderson 12-13

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
06/30/22 14:23

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 BFE0659 - EPA 5030 Water MS

Matrix Spike Dup (BFE0659-MSD1)	Source: 2205403-01			Prepared: 05/27/22 Analyzed: 05/28/22						
Benzene	22.6	1.0	ug/l	33.3	ND	68.0	34-141	4.24	30	
Toluene	28.5	1.0	"	33.3	ND	85.6	27-151	6.45	30	
Ethylbenzene	33.9	1.0	"	33.3	ND	102	29-160	5.49	30	
m,p-Xylene	71.2	2.0	"	66.7	ND	107	20-166	3.67	30	
o-Xylene	36.5	1.0	"	33.3	ND	109	33-159	2.44	30	
Naphthalene	38.8	1.0	"	33.3	ND	116	70-130	3.57	30	
1,2,4-Trimethylbenzene	36.9	1.0	"	33.3	ND	111	70-130	0.432	30	
1,3,5-Trimethylbenzene	37.7	1.0	"	33.3	ND	113	70-130	1.16	30	
Surrogate: 1,2-Dichloroethane-d4	10.0		"	13.3		75.1	23-173			
Surrogate: Toluene-d8	12.1		"	13.3		90.7	20-170			
Surrogate: 4-Bromofluorobenzene	11.9		"	13.3		89.4	21-167			

Summit Scientific

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

Project: Anderson 12-13

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
06/30/22 14:23

Dissolved Metals by EPA Method 200.8 - Quality Control
Summit Scientific

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

Batch BFE0640 - EPA 200.8

Blank (BFE0640-BLK1)

Prepared & Analyzed: 05/27/22

Selenium ND 1.00 ug/l

LCS (BFE0640-BS1)

Prepared & Analyzed: 05/27/22

Selenium 49.0 1.00 ug/l 50.0 97.9 85-115

Duplicate (BFE0640-DUP1)

Source: 2205373-01

Prepared & Analyzed: 05/27/22

Selenium 6.92 1.00 ug/l 7.67 10.2 20

Matrix Spike (BFE0640-MS1)

Source: 2205373-01

Prepared & Analyzed: 05/27/22

Selenium 58.6 1.00 ug/l 50.0 7.67 102 70-130

Matrix Spike Dup (BFE0640-MSD1)

Source: 2205373-01

Prepared & Analyzed: 05/27/22

Selenium 57.7 1.00 ug/l 50.0 7.67 100 70-130 1.53 25

Summit Scientific

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

Project: Anderson 12-13

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
06/30/22 14:23

Anions by EPA Method 300.0 - Quality Control

Summit Scientific

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

Batch BFF0019 - General Preparation

Blank (BFF0019-BLK1)

Prepared & Analyzed: 06/01/22

Chloride	ND	0.0600	mg/L
Sulfate	ND	0.300	"

LCS (BFF0019-BS1)

Prepared & Analyzed: 06/01/22

Chloride	3.18	0.0600	mg/L	3.00	106	90-110
Sulfate	15.6	0.300	"	15.0	104	90-110

Duplicate (BFF0019-DUP1)

Source: 2205411-01

Prepared & Analyzed: 06/01/22

Chloride	255	12.0	mg/L	257	0.937	20
Sulfate	7590	60.0	"	8580	12.3	20

Matrix Spike (BFF0019-MS1)

Source: 2205411-01

Prepared & Analyzed: 06/01/22

Chloride	934	12.0	mg/L	600	257	113	80-120
Sulfate	10900	60.0	"	3000	8580	76.3	80-120

QM-02

Summit Scientific

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

Project: Anderson 12-13

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
06/30/22 14:23

Total Dissolved Solids by SM2540C - Quality Control

Summit Scientific

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

Batch BFE0744 - General Preparation

Blank (BFE0744-BLK1)

Prepared & Analyzed: 05/31/22

Total Dissolved Solids ND 10.0 mg/L

Duplicate (BFE0744-DUP1)

Source: 2205376-01

Prepared & Analyzed: 05/31/22

Total Dissolved Solids 1390 10.0 mg/L 1300 6.31 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: Anderson 12-13

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
06/30/22 14:23

Notes and Definitions

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