

TABLE 1
BAUER 5; 12, 21-4 TANK BATTERY
GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE

Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth to Water ⁽²⁾ (ft.)	Groundwater Elevation (ft. AMSL)
COGCC Table 910-1 Groundwater Standard (µg/L) ⁽¹⁾		5	560	700	1,400		
GW01	7/3/2019	3.5	<1.0	1.6	16	~16	NM
BH01	10/31/2019	<1.0	<1.0	<1.0	<2.0	15.52	4612.68
BH01	1/23/2020	<1.0	<1.0	<1.0	<2.0	16.64	4611.56
BH01	4/21/2020	<1.0	<1.0	<1.0	<2.0	17.06	4611.14
BH01	7/20/2020	<1.0	<1.0	<1.0	<2.0	14.20	4614.00
BH02	10/31/2019	<1.0	<1.0	<1.0	<2.0	16.00	4612.22
BH02	1/23/2020	<1.0	<1.0	<1.0	<2.0	17.22	4611.00
BH02	4/21/2020	<1.0	<1.0	<1.0	<2.0	17.65	4610.57
BH02	7/20/2020	<1.0	<1.0	<1.0	<2.0	14.74	4613.48
BH03	10/31/2019	<1.0	<1.0	<1.0	<2.0	14.21	4613.61
BH03	1/23/2020	<1.0	<1.0	<1.0	<2.0	15.55	4612.27
BH03	4/21/2020	<1.0	<1.0	<1.0	<2.0	15.44	4612.38
BH03	7/20/2020	<1.0	<1.0	<1.0	<2.0	12.34	4615.48
BH04	10/31/2019	<1.0	<1.0	<1.0	<2.0	13.94	4613.81
BH04	1/23/2020	<1.0	<1.0	<1.0	<2.0	14.97	4612.78
BH04	4/21/2020	<1.0	<1.0	<1.0	<2.0	15.32	4612.43
BH04	7/20/2020	<1.0	<1.0	<1.0	<2.0	12.71	4615.04
BH05	10/31/2019	<1.0	<1.0	<1.0	<2.0	13.70	4613.71
BH05	1/23/2020	<1.0	<1.0	<1.0	<2.0	14.78	4612.63
BH05	4/21/2020	<1.0	<1.0	<1.0	<2.0	15.19	4612.22
BH05 ⁽³⁾	7/20/2020	<1.0	<1.0	<1.0	<2.0	12.23	NM

Notes:

1. Groundwater standards referenced from 2 CCR 404-1, Table 910-1, effective May 1, 2018.
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.
3. Depth to water is not corrected to reflect actual depth to groundwater from ground surface.

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

NM = Not measured

Attachment A

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 27, 2020

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Bauer 5; 12, 21-4

Work Order #2007182

Enclosed are the results of analyses for samples received by Summit Scientific on 07/20/20 14:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury

President



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

Project: Bauer 5; 12, 21-4

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
07/27/20 11:24

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2007182-01	Water	07/20/20 11:39	07/20/20 14:00
BH02	2007182-02	Water	07/20/20 11:30	07/20/20 14:00
BH03	2007182-03	Water	07/20/20 11:57	07/20/20 14:00
BH04	2007182-04	Water	07/20/20 11:48	07/20/20 14:00
BH05	2007182-05	Water	07/20/20 11:18	07/20/20 14:00

Summit Scientific

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Summit Scientific

2007182

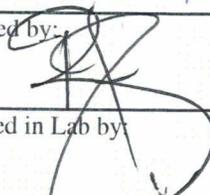
741 Corporate Circle Suite I ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933 Fax

Page 1 of 1

Client: PDC/Tasman
Address: 6855 W 119th Ave
City/State/Zip: Broomfield CO 80020
Phone: 303-487-1228 Fax:
Sampler Name: J Marcus

Project Manager: Mark Longhurst
E-Mail: mark.longhurst@PDCE.com
Project Name: Bauer S: 12, 21-4
Project Number: n/a

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:						Special Instructions	
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)							
BH01	7/20/20	1139	3			X		X										
BH02	7/20/20	1130	3			X		X										
BH03	7/20/20	1157	3			X		X										
BH04	7/20/20	1148	3			X		X										
BH05	7/20/20	1118	3			X		X										

Relinquished by: 	Date/Time: <u>7/20/20 1542</u>	Received by: <u>Tasman Lock Box</u>	Date/Time: <u>7/20/20 1542</u>	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 Hours <input type="checkbox"/> Sample Integrity: Temperature Upon Receipt: <u>21.6</u> Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Notes:
Relinquished by: <u>Tasman Lock Box</u>	Date/Time: <u>07/20/2020 1200</u>	Received by: 	Date/Time: <u>07/20/2020</u>		
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:		

Sample Receipt Checklist

S2 Work Order 2007182

Client: DOC HANUMAN Client Project ID: BAVEL 5; 12, 21-4

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

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

Temp (°C)	<u>2.6</u>
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Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>			
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 with holding times due within 48 hours sample due within 48 hours present?		<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, H2SO4, NaOH, HNO3, ect			<input checked="" type="checkbox"/>	
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.				

KE
Custodian Printed Name or Initials

[Signature]
Signature of Custodian

01/20/07
Date/Time



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

Project: Bauer 5; 12, 21-4

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 07/27/20 11:24

BH01
2007182-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/20/20 11:39**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	2007211	07/22/20	07/23/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **07/20/20 11:39**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		127 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		110 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %		21-167		"	"	"	"	

Summit Scientific

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

Project: Bauer 5; 12, 21-4

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 07/27/20 11:24

BH02
2007182-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/20/20 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	2007211	07/22/20	07/23/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **07/20/20 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		127 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		108 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %		21-167		"	"	"	"	

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

Project: Bauer 5; 12, 21-4

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 07/27/20 11:24

BH03
2007182-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/20/20 11:57**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	2007211	07/22/20	07/23/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **07/20/20 11:57**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		127 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		108 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %		21-167		"	"	"	"	

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

Project: Bauer 5; 12, 21-4

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 07/27/20 11:24

BH04
2007182-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/20/20 11:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	2007211	07/22/20	07/23/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **07/20/20 11:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		125 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		110 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %		21-167		"	"	"	"	

Summit Scientific

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

Project: Bauer 5; 12, 21-4

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 07/27/20 11:24

BH05
2007182-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/20/20 11:18**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	2007211	07/22/20	07/23/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **07/20/20 11:18**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		125 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		107 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.6 %		21-167		"	"	"	"	

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

Project: Bauer 5; 12, 21-4

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/27/20 11:24

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 2007211 - EPA 5030 Water MS

Blank (2007211-BLK1)

Prepared: 07/22/20 Analyzed: 07/23/20

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Surrogate: 1,2-Dichloroethane-d4	17.8		"	13.3		133		23-173		
Surrogate: Toluene-d8	14.6		"	13.3		109		20-170		
Surrogate: 4-Bromofluorobenzene	14.0		"	13.3		105		21-167		

LCS (2007211-BS1)

Prepared: 07/22/20 Analyzed: 07/23/20

Benzene	17.6	1.0	ug/l	25.0		70.4		51-132		
Toluene	23.0	1.0	"	25.0		91.8		51-138		
Ethylbenzene	27.2	1.0	"	25.0		109		58-146		
m,p-Xylene	47.8	2.0	"	50.0		95.5		57-144		
o-Xylene	24.4	1.0	"	25.0		97.4		53-146		
Surrogate: 1,2-Dichloroethane-d4	16.7		"	13.3		125		23-173		
Surrogate: Toluene-d8	14.2		"	13.3		107		20-170		
Surrogate: 4-Bromofluorobenzene	13.9		"	13.3		104		21-167		

Matrix Spike (2007211-MS1)

Source: 2007182-01

Prepared: 07/22/20 Analyzed: 07/23/20

Benzene	18.8	1.0	ug/l	25.0	ND	75.2		34-141		
Toluene	24.4	1.0	"	25.0	ND	97.4		27-151		
Ethylbenzene	28.2	1.0	"	25.0	ND	113		29-160		
m,p-Xylene	50.4	2.0	"	50.0	ND	101		20-166		
o-Xylene	24.7	1.0	"	25.0	ND	98.9		33-159		
Surrogate: 1,2-Dichloroethane-d4	17.0		"	13.3		128		23-173		
Surrogate: Toluene-d8	14.8		"	13.3		111		20-170		
Surrogate: 4-Bromofluorobenzene	13.8		"	13.3		103		21-167		

Summit Scientific

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

Project: Bauer 5; 12, 21-4

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
 07/27/20 11:24

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 2007211 - EPA 5030 Water MS

Matrix Spike Dup (2007211-MSD1)

Source: 2007182-01

Prepared: 07/22/20 Analyzed: 07/23/20

Benzene	18.4	1.0	ug/l	25.0	ND	73.7	34-141	2.10	30	
Toluene	23.7	1.0	"	25.0	ND	94.7	27-151	2.83	30	
Ethylbenzene	27.1	1.0	"	25.0	ND	108	29-160	3.76	30	
m,p-Xylene	48.5	2.0	"	50.0	ND	97.0	20-166	3.94	30	
o-Xylene	24.6	1.0	"	25.0	ND	98.3	33-159	0.568	30	
Surrogate: 1,2-Dichloroethane-d4	17.9		"	13.3		134	23-173			
Surrogate: Toluene-d8	14.5		"	13.3		109	20-170			
Surrogate: 4-Bromofluorobenzene	13.8		"	13.3		103	21-167			

Summit Scientific

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

Project: Bauer 5; 12, 21-4

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/27/20 11:24

Notes and Definitions

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