

TABLE 1
FORMER KRISTIN 1 WELLHEAD
GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE
ORGANIC COMPOUNDS

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	-	-
GW01	5/12/2021	280	83	110	1,900	43	160	130	3.5	NA
BH01	7/8/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.31	4706.52
BH01	10/5/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	4.56	4704.62
BH01	1/4/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.90	4705.80
BH01	4/5/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.95	4702.44
BH02	7/8/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.31	4706.48
BH02	10/5/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	4.56	4704.57
BH02	1/4/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.61	4706.02
BH02	4/5/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	4.01	4702.35
BH03	7/8/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.05	4706.50
BH03	10/5/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	4.36	4704.58
BH03	1/4/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.41	4706.07
BH03	4/5/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.80	4702.39
BH04	7/8/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.07	4706.55
BH04	10/5/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	4.33	4704.65
BH04	1/4/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.76	4705.66
BH04	4/5/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.78	4702.42
BH05	7/8/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.82	4706.81
BH05	10/5/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	4.32	4704.57
BH05	1/4/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.72	4705.67
BH05	4/5/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.71	4702.40

Notes:

- Groundwater standards referenced from 2 CCR 404-1, Table 915-1, January 15, 2021.
 - 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
NA = Not applicable
BOLD = Analytical result is in exceedance of applicable standard.

Attachment A

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

April 13, 2022

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Kristin 1 Wellhead

Work Order #2204074

Enclosed are the results of analyses for samples received by Summit Scientific on 04/05/22 17:42. 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', written in a cursive style.

Paul Shrewsbury

President



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

Project: Kristin 1 Wellhead

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
04/13/22 10:41

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2204074-01	Water	04/05/22 11:05	04/05/22 17:42
BH02	2204074-02	Water	04/05/22 11:20	04/05/22 17:42
BH03	2204074-03	Water	04/05/22 11:22	04/05/22 17:42
BH04	2204074-04	Water	04/05/22 11:25	04/05/22 17:42
BH05	2204074-05	Water	04/05/22 11:27	04/05/22 17:42

Summit Scientific

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

Summit Scientific

S₂

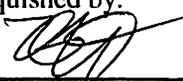
2204074

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310

Page 1 of 1

Client: PDC / Tasman Geosciences 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: Kritsm 1 Wellhead
 Sampler Name: Ben Wagner Project Number: N/A

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested						Special Instructions		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEX	Naphthalene	1,2,4-TMB	1,3,5-TMB	TDS	Chloride		Sulfate	
1	BH01	4/5/22	1105	3	3				X					X	X	X	X				
2	BH02		1120																		
3	BH03		1122																		
4	BH04		1125																		
5	BH05		1127																		
6																					
7																					
8																					
9																					
10																					

Relinquished by: 	Date/Time: <u>4/5/22</u> <u>1440</u>	Received by: <u>Tasman's Lock Box</u>	Date/Time: <u>4/5/22</u> <u>1440</u>	Turn Around Time (Check) <input type="checkbox"/> Same Day 72 hours <input checked="" type="checkbox"/> 24 hours Standard <input type="checkbox"/> 48 hours Sample Integrity: Temperature Upon Receipt: <u>2.1</u> Samples Intact: <input checked="" type="checkbox"/> Yes No	Notes:
Relinquished by: <u>Tasman's Lock Box</u>	Date/Time: <u>4522</u> <u>1742</u>	Received by: 	Date/Time: <u>4522</u> <u>1742</u>		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

S₂

Sample Receipt Checklist

S2 Work Order# 2204074

Client: Doc Hoasman Client Project ID: Krikm Wellhead

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

-

Matrix (Check all that apply) Air Soil/Solid Water Other

Temp (°C) Thermometer #

	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.	-			on ICE
Were all samples received intact ⁽¹⁾ ?	-			
Was adequate sample volume provided ⁽¹⁾ ?	-			
If custody seals are present, are they intact ⁽¹⁾ ?	-			
Are samples due within 48 hours present?		-		
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			-	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	-			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	-			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	-			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	-			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.		-		
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.	-			HCl
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.			-	
If dissolved metals are requested, were samples field filtered?			-	
Additional Comments (if any):				

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

[Signature]
Custodian Printed Name

4.5.22
Date/Time



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

Project: Kristin 1 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 04/13/22 10:41

BH01
2204074-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/05/22 11:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BFD0155	04/08/22	04/08/22	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: **04/05/22 11:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		105 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		109 %		21-167		"	"	"	"	

Summit Scientific

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



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

Project: Kristin 1 Wellhead

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
 04/13/22 10:41

BH02
2204074-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/05/22 11:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	BFD0155	04/08/22	04/08/22	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: **04/05/22 11:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		111 %	21-167		"	"	"	"	

Summit Scientific

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



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

Project: Kristin 1 Wellhead

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
 04/13/22 10:41

BH03
2204074-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/05/22 11:22**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	BFD0155	04/08/22	04/08/22	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: **04/05/22 11:22**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		111 %	21-167		"	"	"	"	

Summit Scientific

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



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

Project: Kristin 1 Wellhead
 Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 04/13/22 10:41

BH04
2204074-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/05/22 11:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	BFD0155	04/08/22	04/08/22	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: **04/05/22 11:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		111 %	21-167		"	"	"	"	

Summit Scientific

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



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

Project: Kristin 1 Wellhead
 Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 04/13/22 10:41

BH05
2204074-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/05/22 11:27**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	BFD0155	04/08/22	04/09/22	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: **04/05/22 11:27**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		111 %	21-167		"	"	"	"	

Summit Scientific

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



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

Project: Kristin 1 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
04/13/22 10:41

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BFD0155 - EPA 5030 Water MS

Blank (BFD0155-BLK1)

Prepared: 04/08/22 Analyzed: 04/11/22

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	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	13.0		"	13.3		97.6		23-173			
<i>Surrogate: Toluene-d8</i>	13.7		"	13.3		103		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	14.8		"	13.3		111		21-167			

LCS (BFD0155-BS1)

Prepared: 04/08/22 Analyzed: 04/11/22

Benzene	36.3	1.0	ug/l	33.3		109		51-132			
Toluene	36.6	1.0	"	33.3		110		51-138			
Ethylbenzene	30.6	1.0	"	33.3		91.9		58-146			
m,p-Xylene	58.7	2.0	"	66.7		88.0		57-144			
o-Xylene	30.0	1.0	"	33.3		90.1		53-146			
Naphthalene	27.7	1.0	"	33.3		83.0		70-130			
1,2,4-Trimethylbenzene	31.3	1.0	"	33.3		93.8		70-130			
1,3,5-Trimethylbenzene	30.0	1.0	"	33.3		90.1		70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	12.4		"	13.3		92.9		23-173			
<i>Surrogate: Toluene-d8</i>	13.9		"	13.3		105		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	14.2		"	13.3		106		21-167			

Matrix Spike (BFD0155-MS1)

Source: 2204074-01

Prepared: 04/08/22 Analyzed: 04/12/22

Benzene	38.2	1.0	ug/l	33.3	ND	115		34-141			
Toluene	38.5	1.0	"	33.3	ND	116		27-151			
Ethylbenzene	31.4	1.0	"	33.3	ND	94.3		29-160			
m,p-Xylene	59.7	2.0	"	66.7	ND	89.5		20-166			
o-Xylene	30.7	1.0	"	33.3	ND	92.2		33-159			
Naphthalene	28.1	1.0	"	33.3	ND	84.4		70-130			
1,2,4-Trimethylbenzene	31.4	1.0	"	33.3	ND	94.4		70-130			
1,3,5-Trimethylbenzene	30.6	1.0	"	33.3	ND	91.8		70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	12.9		"	13.3		96.7		23-173			
<i>Surrogate: Toluene-d8</i>	14.4		"	13.3		108		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	14.1		"	13.3		106		21-167			

Summit Scientific

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



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

Project: Kristin 1 Wellhead
 Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 04/13/22 10:41

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

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

Batch BFD0155 - EPA 5030 Water MS

Matrix Spike Dup (BFD0155-MSD1)	Source: 2204074-01			Prepared: 04/08/22 Analyzed: 04/12/22					
Benzene	39.8	1.0	ug/l	33.3	ND	119	34-141	4.00	30
Toluene	40.2	1.0	"	33.3	ND	120	27-151	4.12	30
Ethylbenzene	32.3	1.0	"	33.3	ND	97.0	29-160	2.82	30
m,p-Xylene	61.8	2.0	"	66.7	ND	92.7	20-166	3.52	30
o-Xylene	31.5	1.0	"	33.3	ND	94.6	33-159	2.60	30
Naphthalene	29.4	1.0	"	33.3	ND	88.3	70-130	4.48	30
1,2,4-Trimethylbenzene	32.8	1.0	"	33.3	ND	98.3	70-130	4.14	30
1,3,5-Trimethylbenzene	31.7	1.0	"	33.3	ND	95.0	70-130	3.41	30
Surrogate: 1,2-Dichloroethane-d4	13.3		"	13.3		99.5	23-173		
Surrogate: Toluene-d8	14.4		"	13.3		108	20-170		
Surrogate: 4-Bromofluorobenzene	14.4		"	13.3		108	21-167		

Summit Scientific

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



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

Project: Kristin 1 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
04/13/22 10:41

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