

PDC Energy, Inc.
Third Quarter 2021 Groundwater Monitoring Summary

August 19, 2021

Former Kristin 1 Wellhead
NENE Section 24 T4N R67W
Remediation # 16917

This groundwater monitoring summary has been prepared by Tasman Geosciences, Inc. for the former Kristin 1 Wellhead. On July 7, 2021, five temporary monitoring wells (BH01 – BH05) were advanced via hand auger to confirm the absence of dissolved-phase hydrocarbon impacts within and adjacent to the former excavation extent. Lithologic descriptions and volatile organic compound (VOC) concentrations measured using a photoionization detector (PID) were recorded for each soil borings. Per the Condition of Approval (COA) issued by the COGCC, confirmation soil samples will be collected from the native material adjacent to and below the former excavation to confirm the absence of hydrocarbon impacts. In addition, one sample was collected from the source soil boring SB06, adjacent to the cut and capped well casing. The samples were submitted for laboratory analysis benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, 1, 2, 4-trimethylbenzene (TMB), 1, 3, 5-TMB, total petroleum hydrocarbons (TPH) [C6-C36], pH, electrical conductivity (EC), sodium adsorption ratio (SAR), boron, anthracene, chrysene, fluorene, fluoranthene, pyrene, arsenic, and selenium. Well completion and boring logs are included in Attachment A.

Soil analytical results collected during the drilling investigation indicated that organic compound concentrations were in compliance with the applicable COGCC Table 915-1 Protection of Groundwater SSLs. Arsenic and selenium concentrations were above the applicable regulatory standards in all five samples collected. Soil analytical results are summarized in Tables 1 through 3. The laboratory report is included in Attachment B.

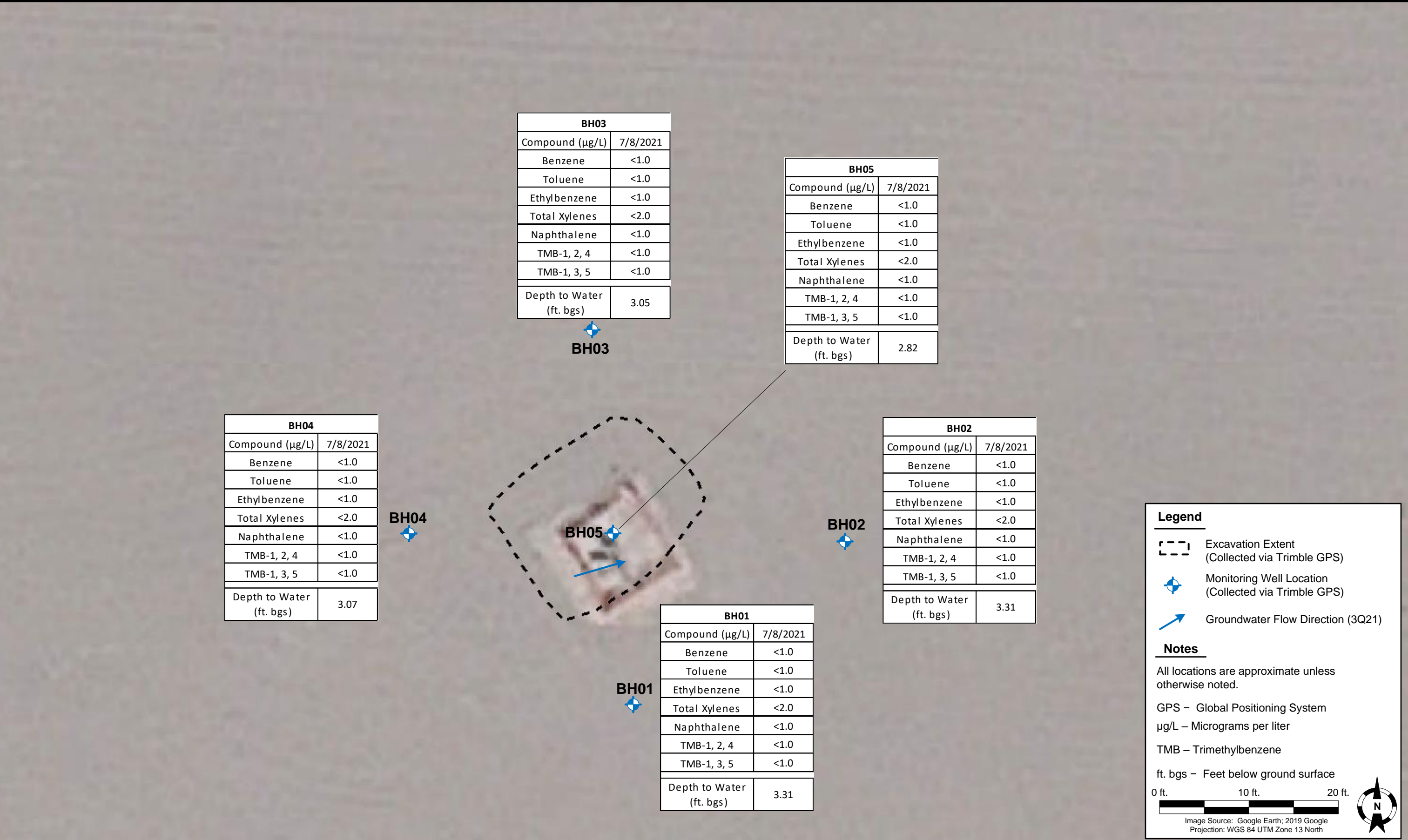
On July 8, 2021, groundwater monitoring was conducted at all five monitoring wells (BH01 – BH05). Five groundwater samples were submitted to Summit for analysis of BTEX, naphthalene, 1,2,4-TMB, and 1,3,5-TMB by EPA Method 8260B. Additionally, three monitoring wells (BH02, BH04, and BH05) were submitted to Summit for analysis of total dissolved solids (TDS) by Method SM 2540C, chloride, and sulfate anions by EPA Method 300.0.

Third quarter 2021 analytical results indicated that organic compound concentrations were below the applicable COGCC Table 915-1 groundwater standards in all five monitoring wells. Inorganic analytical results indicated that concentrations were below the applicable COGCC Table 9-15 groundwater standards or below 1.25x the background concentration of the up-gradient well (BH04). Sample locations and corresponding analytical results are illustrated on Figure 1.

Groundwater elevation data is illustrated on Figure 2. Analytical results are summarized in Table 4 and Table 5. The laboratory analytical report is included in Attachment B.

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 fourth quarter 2021.

Fourth quarter 2021 groundwater sampling will be conducted in October 2021.



DATE: August 19, 2021

DESIGNED BY: C. Hamlin

DRAWN BY: T. Murrel



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

PDC Energy, Inc. – DJ Basin
Former Kristin 1 Wellhead
NENE, Section 24, Township 4 North, Range 67 West
Weld County, Colorado

GROUNDWATER
ANALYTICAL RESULTS
MAP

FIGURE
1



Legend

- Monitoring Well Location (Collected via Trimble GPS)
- Groundwater Elevation Contour (Dashed where inferred)
- 4716.24** Groundwater Elevation (ft. AMSL)
- Groundwater Flow Direction (3Q21)

Notes

All locations are approximate unless otherwise noted.

GPS - Global Positioning System

* - well not used for contouring purposes

0 ft. 10 ft. 20 ft.

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

TABLE 1
FORMER KRISTIN 1 WELLHEAD
SOIL ANALYTICAL RESULTS SUMMARY TABLE
CONTAMINANTS OF CONCERN

Sample ID	Date Sampled	Depth	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1, 2, 4-TMB (mg/kg)	1, 3, 5-TMB (mg/kg)	Naphthalene (mg/kg)	TPH ⁽⁴⁾ (mg/kg)	Anthracene (mg/kg)	Chrysene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Pyrene (mg/kg)
Residential SSL ^(1,2)			1.2	490	5.8	58	30	27	2	500	1,800	110	240	240	180
Protection of Groundwater SSL ^(1,2,3)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500	5.8	9	8.9	0.54	1.3
WH01 @ 3'	5/12/2021	3 ft. bgs	0.097	0.35	0.034	<0.010	0.049	0.032	<0.0038	7.0	0.216	0.00828	0.0139	0.113	0.0533
SS01 @ 2'	5/14/2021	2 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	NA	NA	NA	NA	NA
SS02 @ 4'	5/14/2021	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS03 @ 2'	5/14/2021	2 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS04 @ 4'	5/14/2021	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS05 @ 5'	5/14/2021	5 ft. bgs	<0.0020	0.0054	<0.0050	0.023	<0.0050	0.011	<0.0038	1.7	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS06 @ 2'	5/14/2021	2 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS07 @ 4'	5/14/2021	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS08 @ 2'	5/14/2021	2 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS09 @ 4'	5/14/2021	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS11 @ 5.5'	5/17/2021	5.5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
BH01 @ 3'	7/8/2021	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
BH02 @ 3'	7/8/2021	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
BH03 @ 3'	7/8/2021	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
BH04 @ 3'	7/8/2021	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
BH05 @ 6'	7/8/2021	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

Notes:

- Compounds referenced from the COGCC 2 CCR 404-1, Table 915-1, effective January 15, 2021.
- Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
- SSLs are applicable if a pathway for communication with groundwater is present.
- 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

Benzo(k) = Benzo(k)fluoranthene

 = Source material characterization sample

ft. = Feet

bgs = Below ground surface

BOLD = Analytical result is in exceedance of applicable standard.

NA = Constituent not analyzed

TABLE 2
FORMER KRISTIN 1 WELLHEAD
SOIL ANALYTICAL RESULTS SUMMARY TABLE
INORGANIC COMPOUNDS

Sample ID	Date Sampled	Depth	pH (units)	EC (mmhos/cm)	SAR (units)	Boron (mg/L)
Soil Suitability for Reclamation Standard ⁽¹⁾			6-8.3	<4	<6	2
WH01 @ 3'	5/12/2021	3 ft. bgs	8.33	3.24	4.66	0.464
BH01 @ 3'	7/8/2021	3 ft. bgs	8.23	0.836	2.83	0.103
BH02 @ 3'	7/8/2021	3 ft. bgs	8.26	0.896	2.67	0.203
BH03 @ 3'	7/8/2021	3 ft. bgs	8.22	0.837	3.17	0.0647
BH04 @ 3'	7/8/2021	3 ft. bgs	8.25	0.454	2.17	0.0570
BH05 @ 6'	7/8/2021	6 ft. bgs	8.04	2.68	3.68	0.371

Notes:

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

COGCC = Colorado Oil and Gas Conservation Commission

EC = Electrical conductivity

SAR = Sodium adsorption ratio

mmhos/cm = millimhos per centimeter

mg/L = milligram per liter

 = Source material characterization sample

ft. = Feet

bgs = Below ground surface

BOLD = Analytical result is in exceedance of applicable standard.

TABLE 3
FORMER KRISTIN 1 WELLHEAD
SOIL ANALYTICAL RESULTS SUMMARY TABLE
METALS

Sample ID	Date Sampled	Depth	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
Residential SSL ^(1,2)			0.68	15,000	71	0.3	3,100	400	1,500	390	390	23,000
Protection of Groundwater SSL ^(1,2,3)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
WH01 @ 3'	5/12/2021	3 ft. bgs	1.56	71.9	0.246	<0.30 ⁽⁴⁾	14.4	13.8	4.69	0.584	0.130	47.9
BH01 @ 3'	7/8/2021	3 ft. bgs	1.12	NA	NA	NA	NA	NA	NA	0.633	NA	NA
BH02 @ 3'	7/8/2021	3 ft. bgs	0.413	NA	NA	NA	NA	NA	NA	0.747	NA	NA
BH03 @ 3'	7/8/2021	3 ft. bgs	0.344	NA	NA	NA	NA	NA	NA	0.591	NA	NA
BH04 @ 3'	7/8/2021	3 ft. bgs	0.344	NA	NA	NA	NA	NA	NA	0.383	NA	NA
BH05 @ 6'	7/8/2021	6 ft. bgs	3.62	NA	NA	NA	NA	NA	NA	1.01	NA	NA
BHKG02 @ 3'	7/8/2021	3 ft. bgs	<0.210	NA	NA	NA	NA	NA	NA	0.344	NA	NA

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. Compound falls within COGCC Table 915-1 Footnote 9.

COGCC = Colorado Oil and Gas Conservation Commission

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

mg/kg = Milligrams per kilogram

Source material characterization sample

ft. = Feet

bgs = Below ground surface

BOLD = Analytical result is in exceedance of applicable standard.

TABLE 4
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
BH02	7/8/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.31	4706.48
BH03	7/8/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.05	4706.50
BH04	7/8/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.07	4706.55
BH05	7/8/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.82	4706.81

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

TABLE 5
FORMER KRISTIN 1 WELLHEAD
GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE
INORGANIC PARAMETERS

Sample ID	Date Sampled	TDS (unit)	Chloride Ion (mg/L)	Sulfate Ion (mg/L)
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
BH02	7/8/2021	680	98.2	582
BH04	7/8/2021	864	145	610
BH05	7/8/2021	658	139	572

Notes:

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

TDS = Total dissolved solids

COGCC = Colorado Oil and Gas Conservation Commission

BCKG = Background

mg/L = Milligrams per liter

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

 = Up-gradient well location used for background concentration.

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

BOLD = Analytical result is in exceedance of applicable standard.

Attachment A

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

September 14, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Kristin 1 Wellhead

Work Order #2107097

Enclosed are the results of analyses for samples received by Summit Scientific on 07/08/21 17:45. 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: Kristin 1 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
09/14/21 08:16

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01@3'	2107097-01	Soil	07/08/21 11:42	07/08/21 17:45
BH02@3'	2107097-02	Soil	07/08/21 11:45	07/08/21 17:45
BH03@3'	2107097-03	Soil	07/08/21 11:25	07/08/21 17:45
BH04@3'	2107097-04	Soil	07/08/21 11:22	07/08/21 17:45
BH05@6'	2107097-05	Soil	07/08/21 12:00	07/08/21 17:45
BKG02@3'	2107097-06	Soil	07/08/21 12:06	07/08/21 17:45

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

303-277-9310

Page | of

Project Manager: Mark Longhurst

E-Mail: mark.longhurst@PDCE.com

Project Name: Kristin I Wellhead

Project Number:

Sampler Name: Cody Miller

Sampler Name: Cody Miller					Project Number:					Analysis Requested										Special Instructions					
ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested										Special Instructions		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	⁹¹⁵ GBTEXN - 8260B	⁴¹⁵ TPH - (C6 - C36)	⁹¹⁵ pH, EC, SAR	⁹¹⁵ Boron - HWS	VOC - 915	PAH - 8260B ⁹¹⁵	Metals - 915	^{714B, 112A, 113F} ⁹¹⁵	pH, EC, SAR by saturated paste	PAHs = anthracene, chrysene, fluorene, fluoranthene, pyrene			
1	BH01 23'	7/18/21	1142	3			X			X				X	X	X	X		X		X		X	X	
2	BH02 23'		1145	3			X			X				X	X	X	X		X		X		X	X	
3	BH03 23'		1125	3			X			X				X	X	X	X		X		X		X	X	
4	BH04 23'		1122	3			X			X				X	X	X	X		X		X		X	X	
5	BH05 26'		1200	3			X			X				X	X	X	X		X		X		X	X	
6	BK602 23'		1206	1			X			X									X						
7	BK602 26'	✓	1216	1			X			X											X				
8																									
9																									
10																									

Relinquished by: Cody Miller

Date/Time: 7/18/21 | 1555

Relinquished by: Tasman's Lock Box

Date/Time: 7/18/21 1745

Relinquished by:

Date/Time:

Received by: Tasman's Lock Box

Date/Time: 7/18/21 | 1555

Received by: [Signature]

Date/Time: 7/18/21 1745

Received by:

Date/Time:

Turn Around Time (Check)

Same Day X 72 hours

24 hours Standard

48 hours

Sample Integrity:

Temperature Upon Receipt: 4

Samples Intact: Yes No

Notes:

Sample Receipt Checklist

S2 Work Order 2107097

Client: PDL / Tasman Client Project ID: Kristin I Wellhead

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

☐ ☒ ☐ ☐ ☐

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

Temp (°C)	<u>4</u>
-----------	----------

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>On ice.</u>
NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.				
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Same day.</u>
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

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

JB
Custodian Printed Name or Initials

[Signature]
Signature of Custodian

7/8/21
Date/Time



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

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

Reported:
09/14/21 08:16

BH01@3'
2107097-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/08/21 11:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEG0150	07/08/21	07/08/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/08/21 11:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		98.6 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/08/21 11:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEG0151	07/08/21	07/08/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/08/21 11:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		85.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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:
09/14/21 08:16

BH01@3'
2107097-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/08/21 11:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BEG0200	07/13/21	07/15/21	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: **07/08/21 11:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		55.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		62.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/08/21 11:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.103	0.0100	mg/L	1	BEG0159	07/09/21	07/10/21	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/08/21 11:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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 I Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
09/14/21 08:16

BH01@3'
2107097-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.12	0.200	mg/kg dry	1	BEG0164	07/09/21	07/10/21	EPA 6020B
Selenium	0.633	0.260	"	"	"	"	"	"

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

Date Sampled: **07/08/21 11:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	35.2	0.0518	mg/L dry	1	BEG0160	07/09/21	07/13/21	EPA 6020B	
Magnesium	14.0	0.0518	"	"	"	"	"	"	
Sodium	78.4	0.0518	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/08/21 11:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.83	0.00100	units	1	BEG0213	07/13/21	07/13/21	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/08/21 11:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.6		%	1	BEG0157	07/09/21	07/09/21	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/08/21 11:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.836	0.0100	mmhos/cm	1	BEG0175	07/12/21	07/12/21	EPA 120.1	

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

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:
09/14/21 08:16

BH01@3'
2107097-01 (Soil)

Summit Scientific

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

Date Sampled: **07/08/21 11:42**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.23			pH Units	1	BEG0174	07/12/21	07/12/21	EPA 9045D	

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:
09/14/21 08:16

BH02@3'
2107097-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/08/21 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEG0150	07/08/21	07/08/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/08/21 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		100 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/08/21 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEG0151	07/08/21	07/08/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/08/21 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		93.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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:
09/14/21 08:16

BH02@3'
2107097-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/08/21 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BEG0200	07/13/21	07/16/21	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: **07/08/21 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		52.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		42.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/08/21 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.203	0.0100	mg/L	1	BEG0159	07/09/21	07/10/21	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/08/21 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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 I Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
09/14/21 08:16

BH02@3'
2107097-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	0.413	0.200	mg/kg dry	1	BEG0164	07/09/21	07/10/21	EPA 6020B
Selenium	0.747	0.260	"	"	"	"	"	"

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

Date Sampled: **07/08/21 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	52.8	0.0522	mg/L dry	1	BEG0160	07/09/21	07/13/21	EPA 6020B	
Magnesium	22.7	0.0522	"	"	"	"	"	"	
Sodium	92.0	0.0522	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/08/21 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.67	0.00100	units	1	BEG0213	07/13/21	07/13/21	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/08/21 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.8		%	1	BEG0157	07/09/21	07/09/21	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/08/21 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.896	0.0100	mmhos/cm	1	BEG0175	07/12/21	07/12/21	EPA 120.1	

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

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:
09/14/21 08:16

BH02@3'
2107097-02 (Soil)

Summit Scientific

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

Date Sampled: **07/08/21 11:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.26			pH Units	1	BEG0174	07/12/21	07/12/21	EPA 9045D	

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:
09/14/21 08:16

BH03@3'
2107097-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/08/21 11:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEG0150	07/08/21	07/08/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/08/21 11:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		98.0 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/08/21 11:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEG0151	07/08/21	07/08/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/08/21 11:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		87.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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:
09/14/21 08:16

BH03@3'
2107097-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/08/21 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BEG0200	07/13/21	07/16/21	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: **07/08/21 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		65.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		48.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/08/21 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0647	0.0100	mg/L	1	BEG0159	07/09/21	07/10/21	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/08/21 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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 I Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
09/14/21 08:16

BH03@3'
2107097-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	0.344	0.200	mg/kg dry	1	BEG0164	07/09/21	07/10/21	EPA 6020B
Selenium	0.591	0.260	"	"	"	"	"	"

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

Date Sampled: **07/08/21 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	40.0	0.0546	mg/L dry	1	BEG0160	07/09/21	07/13/21	EPA 6020B	
Magnesium	18.6	0.0546	"	"	"	"	"	"	
Sodium	96.7	0.0546	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/08/21 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.17	0.00100	units	1	BEG0213	07/13/21	07/13/21	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/08/21 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.5		%	1	BEG0157	07/09/21	07/09/21	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/08/21 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.837	0.0100	mmhos/cm	1	BEG0175	07/12/21	07/12/21	EPA 120.1	

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

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 I Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
09/14/21 08:16

BH03@3'
2107097-03 (Soil)

Summit Scientific

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

Date Sampled: **07/08/21 11:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.22			pH Units	1	BEG0174	07/12/21	07/12/21	EPA 9045D	

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:
09/14/21 08:16

BH04@3'
2107097-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/08/21 11:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEG0150	07/08/21	07/08/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/08/21 11:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/08/21 11:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEG0151	07/08/21	07/08/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/08/21 11:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		88.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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:
09/14/21 08:16

BH04@3'
2107097-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/08/21 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BEG0200	07/13/21	07/16/21	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: **07/08/21 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		64.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		53.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/08/21 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0570	0.0100	mg/L	1	BEG0159	07/09/21	07/10/21	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/08/21 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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 I Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
09/14/21 08:16

BH04@3'
2107097-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	0.344	0.200	mg/kg dry	1	BEG0164	07/09/21	07/10/21	EPA 6020B
Selenium	0.383	0.260	"	"	"	"	"	"

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

Date Sampled: **07/08/21 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	23.4	0.0531	mg/L dry	1	BEG0160	07/09/21	07/13/21	EPA 6020B	
Magnesium	9.83	0.0531	"	"	"	"	"	"	
Sodium	49.7	0.0531	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/08/21 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.17	0.00100	units	1	BEG0213	07/13/21	07/13/21	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/08/21 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.1		%	1	BEG0157	07/09/21	07/09/21	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/08/21 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.454	0.0100	mmhos/cm	1	BEG0175	07/12/21	07/12/21	EPA 120.1	

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

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:
09/14/21 08:16

BH04@3'
2107097-04 (Soil)

Summit Scientific

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

Date Sampled: **07/08/21 11:22**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.25			pH Units	1	BEG0174	07/12/21	07/12/21	EPA 9045D	

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:
09/14/21 08:16

BH05@6'
2107097-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/08/21 12:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEG0150	07/08/21	07/08/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/08/21 12:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/08/21 12:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEG0151	07/08/21	07/08/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/08/21 12:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		89.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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:
09/14/21 08:16

BH05@6'
2107097-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/08/21 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BEG0200	07/13/21	07/16/21	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.00866	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.00932	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.00695	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/08/21 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		52.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		40.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/08/21 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.371	0.0100	mg/L	1	BEG0159	07/09/21	07/10/21	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/08/21 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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 I Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
09/14/21 08:16

BH05@6'
2107097-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	3.62	0.200	mg/kg dry	1	BEG0164	07/09/21	07/10/21	EPA 6020B
Selenium	1.01	0.260	"	"	"	"	"	"

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

Date Sampled: **07/08/21 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	309	0.0612	mg/L dry	1	BEG0160	07/09/21	07/13/21	EPA 6020B	
Magnesium	75.1	0.0612	"	"	"	"	"	"	
Sodium	278	0.0612	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/08/21 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.68	0.00100	units	1	BEG0213	07/13/21	07/13/21	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/08/21 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.7		%	1	BEG0157	07/09/21	07/09/21	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/08/21 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.68	0.0100	mmhos/cm	1	BEG0175	07/12/21	07/12/21	EPA 120.1	

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

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:
09/14/21 08:16

BH05@6'
2107097-05 (Soil)

Summit Scientific

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

Date Sampled: **07/08/21 12:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.04			pH Units	1	BEG0174	07/12/21	07/12/21	EPA 9045D	

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 I Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
09/14/21 08:16

BKG02@3'
2107097-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **07/08/21 12:06**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	ND	0.210	mg/kg dry	1	BEG0164	07/09/21	07/10/21	EPA 6020B	
Barium	23.3	0.419	"	"	"	"	"	"	
Cadmium	ND	0.210	"	"	"	"	"	"	
Copper	1.00	0.419	"	"	"	"	"	"	
Lead	1.64	0.210	"	"	"	"	"	"	
Nickel	1.08	0.419	"	"	"	"	"	"	
Selenium	0.344	0.273	"	"	"	"	"	"	
Silver	ND	0.0210	"	"	"	"	"	"	
Zinc	5.85	0.419	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/08/21 12:06**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BEG0195	07/12/21	07/12/21	EPA 7196A	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/08/21 12:06**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	95.4		%	1	BEG0157	07/09/21	07/09/21	Calculation	

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:
09/14/21 08:16

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 BEG0150 - EPA 5030 Soil MS

Blank (BEG0150-BLK1)

Prepared & Analyzed: 07/08/21

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0465		"	0.0400		116	23-173			
Surrogate: Toluene-d8	0.0332		"	0.0400		83.0	20-170			
Surrogate: 4-Bromofluorobenzene	0.0331		"	0.0400		82.7	21-167			

LCS (BEG0150-BS1)

Prepared & Analyzed: 07/08/21

Benzene	0.120	0.0020	mg/kg	0.125		96.0	70-130			
Toluene	0.119	0.0050	"	0.125		95.3	70-130			
Ethylbenzene	0.133	0.0050	"	0.125		106	70-130			
m,p-Xylene	0.262	0.010	"	0.250		105	70-130			
o-Xylene	0.121	0.0050	"	0.125		96.9	70-130			
1,2,4-Trimethylbenzene	0.129	0.0050	"	0.125		103	70-130			
1,3,5-Trimethylbenzene	0.130	0.0050	"	0.125		104	70-130			
Naphthalene	0.143	0.0038	"	0.125		114	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0464		"	0.0400		116	23-173			
Surrogate: Toluene-d8	0.0333		"	0.0400		83.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0326		"	0.0400		81.4	21-167			

Matrix Spike (BEG0150-MS1)

Source: 2107097-01

Prepared & Analyzed: 07/08/21

Benzene	0.118	0.0020	mg/kg	0.125	ND	94.2	70-130			
Toluene	0.116	0.0050	"	0.125	ND	93.2	70-130			
Ethylbenzene	0.125	0.0050	"	0.125	ND	99.7	70-130			
m,p-Xylene	0.247	0.010	"	0.250	ND	98.6	70-130			
o-Xylene	0.117	0.0050	"	0.125	ND	93.6	70-130			
1,2,4-Trimethylbenzene	0.121	0.0050	"	0.125	ND	96.8	70-130			
1,3,5-Trimethylbenzene	0.120	0.0050	"	0.125	ND	96.1	70-130			
Naphthalene	0.140	0.0038	"	0.125	ND	112	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0476		"	0.0400		119	23-173			
Surrogate: Toluene-d8	0.0333		"	0.0400		83.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0330		"	0.0400		82.6	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:
09/14/21 08:16

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 BEG0150 - EPA 5030 Soil MS

Matrix Spike Dup (BEG0150-MSD1)	Source: 2107097-01			Prepared & Analyzed: 07/08/21						
Benzene	0.120	0.0020	mg/kg	0.125	ND	96.0	70-130	1.92	30	
Toluene	0.118	0.0050	"	0.125	ND	94.7	70-130	1.61	30	
Ethylbenzene	0.128	0.0050	"	0.125	ND	102	70-130	2.42	30	
m,p-Xylene	0.252	0.010	"	0.250	ND	101	70-130	2.30	30	
o-Xylene	0.120	0.0050	"	0.125	ND	96.2	70-130	2.71	30	
1,2,4-Trimethylbenzene	0.125	0.0050	"	0.125	ND	99.9	70-130	3.15	30	
1,3,5-Trimethylbenzene	0.124	0.0050	"	0.125	ND	99.0	70-130	3.00	30	
Naphthalene	0.158	0.0038	"	0.125	ND	127	70-130	12.0	30	
Surrogate: 1,2-Dichloroethane-d4	0.0479		"	0.0400		120	23-173			
Surrogate: Toluene-d8	0.0330		"	0.0400		82.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0329		"	0.0400		82.2	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:
09/14/21 08:16

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BEG0151 - EPA 3550A

Blank (BEG0151-BLK1)

Prepared & Analyzed: 07/08/21

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

LCS (BEG0151-BS1)

Prepared & Analyzed: 07/08/21

C10-C28 (DRO)	497	50	mg/kg	500	99.3	70-130
---------------	-----	----	-------	-----	------	--------

Matrix Spike (BEG0151-MS1)

Source: 2107095-01

Prepared & Analyzed: 07/08/21

C10-C28 (DRO)	482	50	mg/kg	500	27.3	90.9	70-130
---------------	-----	----	-------	-----	------	------	--------

Matrix Spike Dup (BEG0151-MSD1)

Source: 2107095-01

Prepared & Analyzed: 07/08/21

C10-C28 (DRO)	479	50	mg/kg	500	27.3	90.4	70-130	0.555	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: Kristin 1 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
09/14/21 08:16

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEG0200 - EPA 5030 Soil MS

Blank (BEG0200-BLK1)

Prepared: 07/13/21 Analyzed: 07/15/21

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	0.0188		"	0.0333		56.3	40-150			
Surrogate: Fluoranthene-d10	0.0235		"	0.0333		70.5	40-150			

LCS (BEG0200-BS1)

Prepared: 07/13/21 Analyzed: 07/15/21

Acenaphthene	0.0277	0.00500	mg/kg	0.0333		83.0	31-137			
Anthracene	0.0269	0.00500	"	0.0333		80.6	30-120			
Benzo (a) anthracene	0.0255	0.00500	"	0.0333		76.5	30-120			
Benzo (a) pyrene	0.0253	0.00500	"	0.0333		76.0	30-120			
Benzo (b) fluoranthene	0.0363	0.00500	"	0.0333		109	30-120			
Benzo (k) fluoranthene	0.0388	0.00500	"	0.0333		117	30-120			
Chrysene	0.0276	0.00500	"	0.0333		82.7	30-120			
Dibenz (a,h) anthracene	0.0229	0.00500	"	0.0333		68.7	30-120			
Fluoranthene	0.0219	0.00500	"	0.0333		65.6	30-120			
Fluorene	0.0290	0.00500	"	0.0333		87.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0226	0.00500	"	0.0333		67.8	30-120			
Pyrene	0.0455	0.00500	"	0.0333		137	35-142			
1-Methylnaphthalene	0.0267	0.00500	"	0.0333		80.0	35-142			
2-Methylnaphthalene	0.0236	0.00500	"	0.0333		70.7	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0275		"	0.0333		82.6	40-150			
Surrogate: Fluoranthene-d10	0.0232		"	0.0333		69.7	40-150			

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:
09/14/21 08:16

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 BEG0200 - EPA 5030 Soil MS

Matrix Spike (BEG0200-MS1)

Source: 2107034-01

Prepared: 07/13/21 Analyzed: 07/15/21

Acenaphthene	0.0307	0.00500	mg/kg	0.0333	ND	92.1	31-137		
Anthracene	0.0313	0.00500	"	0.0333	ND	94.0	30-120		
Benzo (a) anthracene	0.0283	0.00500	"	0.0333	ND	85.0	30-120		
Benzo (a) pyrene	0.0290	0.00500	"	0.0333	ND	87.0	30-120		
Benzo (b) fluoranthene	0.0278	0.00500	"	0.0333	ND	83.5	30-120		
Benzo (k) fluoranthene	0.0304	0.00500	"	0.0333	ND	91.1	30-120		
Chrysene	0.0300	0.00500	"	0.0333	ND	90.0	30-120		
Dibenz (a,h) anthracene	0.0266	0.00500	"	0.0333	ND	79.8	30-120		
Fluoranthene	0.0240	0.00500	"	0.0333	ND	71.9	30-120		
Fluorene	0.0322	0.00500	"	0.0333	ND	96.6	30-120		
Indeno (1,2,3-cd) pyrene	0.0267	0.00500	"	0.0333	ND	80.1	30-120		
Pyrene	0.0236	0.00500	"	0.0333	ND	70.9	35-142		
1-Methylnaphthalene	0.0302	0.00500	"	0.0333	ND	90.5	15-130		
2-Methylnaphthalene	0.0274	0.00500	"	0.0333	ND	82.3	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0295		"	0.0333		88.4	40-150		
Surrogate: Fluoranthene-d10	0.0260		"	0.0333		78.1	40-150		

Matrix Spike Dup (BEG0200-MSD1)

Source: 2107034-01

Prepared: 07/13/21 Analyzed: 07/15/21

Acenaphthene	0.0281	0.00500	mg/kg	0.0333	ND	84.2	31-137	8.98	30
Anthracene	0.0306	0.00500	"	0.0333	ND	91.8	30-120	2.42	30
Benzo (a) anthracene	0.0311	0.00500	"	0.0333	ND	93.2	30-120	9.17	30
Benzo (a) pyrene	0.0292	0.00500	"	0.0333	ND	87.6	30-120	0.743	30
Benzo (b) fluoranthene	0.0303	0.00500	"	0.0333	ND	91.0	30-120	8.58	30
Benzo (k) fluoranthene	0.0254	0.00500	"	0.0333	ND	76.2	30-120	17.8	30
Chrysene	0.0288	0.00500	"	0.0333	ND	86.5	30-120	4.02	30
Dibenz (a,h) anthracene	0.0345	0.00500	"	0.0333	ND	103	30-120	25.7	30
Fluoranthene	0.0279	0.00500	"	0.0333	ND	83.8	30-120	15.2	30
Fluorene	0.0288	0.00500	"	0.0333	ND	86.5	30-120	11.1	30
Indeno (1,2,3-cd) pyrene	0.0351	0.00500	"	0.0333	ND	105	30-120	27.2	30
Pyrene	0.0284	0.00500	"	0.0333	ND	85.1	35-142	18.2	30
1-Methylnaphthalene	0.0278	0.00500	"	0.0333	ND	83.4	15-130	8.21	50
2-Methylnaphthalene	0.0253	0.00500	"	0.0333	ND	75.9	15-130	7.99	50
Surrogate: 2-Methylnaphthalene-d10	0.0280		"	0.0333		84.0	40-150		
Surrogate: Fluoranthene-d10	0.0306		"	0.0333		91.7	40-150		

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:
09/14/21 08:16

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

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

Batch BEG0159 - EPA 3050B

Blank (BEG0159-BLK1)

Prepared: 07/09/21 Analyzed: 07/10/21

Boron ND 0.0100 mg/L

LCS (BEG0159-BS1)

Prepared: 07/09/21 Analyzed: 07/10/21

Boron 5.38 0.0100 mg/L 5.00 108 80-120

Duplicate (BEG0159-DUP1)

Source: 2107090-04

Prepared: 07/09/21 Analyzed: 07/10/21

Boron 0.160 0.0100 mg/L 0.219 31.3 20 QR-03

Matrix Spike (BEG0159-MS1)

Source: 2107090-04

Prepared: 07/09/21 Analyzed: 07/10/21

Boron 5.31 0.0100 mg/L 5.00 0.219 102 75-125

Matrix Spike Dup (BEG0159-MSD1)

Source: 2107090-04

Prepared: 07/09/21 Analyzed: 07/10/21

Boron 5.87 0.0100 mg/L 5.00 0.219 113 75-125 10.1 25

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:
09/14/21 08:16

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BEG0164 - EPA 3050B

Blank (BEG0164-BLK1)

Prepared: 07/09/21 Analyzed: 07/10/21

Arsenic	ND	0.200	mg/kg wet
Arsenic	ND	0.200	"
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Selenium	ND	0.260	"
Selenium	ND	0.260	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"

LCS (BEG0164-BS1)

Prepared: 07/09/21 Analyzed: 07/10/21

Arsenic	42.4	0.200	mg/kg wet	40.0	106	80-120
Arsenic	42.4	0.200	"	40.0	106	80-120
Barium	42.2	0.400	"	40.0	106	80-120
Cadmium	2.08	0.200	"	2.00	104	80-120
Copper	40.9	0.400	"	40.0	102	80-120
Lead	19.8	0.200	"	20.0	99.0	80-120
Nickel	40.3	0.400	"	40.0	101	80-120
Selenium	3.84	0.260	"	4.00	96.1	80-120
Selenium	3.84	0.260	"	4.00	96.1	80-120
Silver	2.01	0.0200	"	2.00	100	80-120
Zinc	42.4	0.400	"	40.0	106	80-120

Duplicate (BEG0164-DUP1)

Source: 2107085-01

Prepared: 07/09/21 Analyzed: 07/10/21

Arsenic	4.23	0.219	mg/kg dry	4.41	4.25	20	
Arsenic	4.23	0.200	"	4.41	4.25	20	
Barium	24.0	0.437	"	31.8	28.1	20	QR-04
Cadmium	0.0630	0.219	"	0.0788	22.3	20	QR-04
Copper	5.59	0.437	"	6.55	15.8	20	
Lead	8.36	0.219	"	8.83	5.49	20	
Nickel	8.08	0.437	"	9.44	15.5	20	
Selenium	0.944	0.260	"	1.14	18.8	20	
Selenium	0.944	0.284	"	1.14	18.8	20	
Silver	0.0165	0.0219	"	0.0206	22.1	20	QR-04
Zinc	38.0	0.437	"	40.3	5.83	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: Kristin 1 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
09/14/21 08:16

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BEG0164 - EPA 3050B

Matrix Spike (BEG0164-MS1)

Source: 2107085-01

Prepared: 07/09/21 Analyzed: 07/10/21

Arsenic	50.7	0.219	mg/kg dry	43.7	4.41	106	75-125
Arsenic	50.7	0.200	"	43.7	4.41	106	75-125
Barium	72.5	0.437	"	43.7	31.8	93.1	75-125
Cadmium	2.52	0.219	"	2.19	0.0788	111	75-125
Copper	52.5	0.437	"	43.7	6.55	105	75-125
Lead	31.0	0.219	"	21.9	8.83	102	75-125
Nickel	54.5	0.437	"	43.7	9.44	103	75-125
Selenium	5.01	0.284	"	4.37	1.14	88.4	75-125
Selenium	5.01	0.260	"	4.37	1.14	88.4	75-125
Silver	2.34	0.0219	"	2.19	0.0206	106	75-125
Zinc	85.2	0.437	"	43.7	40.3	103	75-125

Matrix Spike Dup (BEG0164-MSD1)

Source: 2107085-01

Prepared: 07/09/21 Analyzed: 07/10/21

Arsenic	50.4	0.219	mg/kg dry	43.7	4.41	105	75-125	0.500	25
Arsenic	50.4	0.200	"	43.7	4.41	105	75-125	0.500	25
Barium	81.3	0.437	"	43.7	31.8	113	75-125	11.3	25
Cadmium	2.52	0.219	"	2.19	0.0788	111	75-125	0.0330	25
Copper	52.8	0.437	"	43.7	6.55	106	75-125	0.638	25
Lead	31.9	0.219	"	21.9	8.83	106	75-125	2.84	25
Nickel	54.2	0.437	"	43.7	9.44	102	75-125	0.495	25
Selenium	4.91	0.284	"	4.37	1.14	86.3	75-125	1.88	25
Selenium	4.91	0.260	"	4.37	1.14	86.3	75-125	1.88	25
Silver	2.34	0.0219	"	2.19	0.0206	106	75-125	0.210	25
Zinc	88.4	0.437	"	43.7	40.3	110	75-125	3.68	25

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:
09/14/21 08:16

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BEG0195 - 3060A Mod

Blank (BEG0195-BLK1)

Prepared & Analyzed: 07/12/21

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BEG0195-BS1)

Prepared & Analyzed: 07/12/21

Chromium, Hexavalent 27.0 0.30 mg/kg wet 25.0 108 80-120

Duplicate (BEG0195-DUP1)

Source: 2107097-06

Prepared & Analyzed: 07/12/21

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BEG0195-MS1)

Source: 2107097-06

Prepared & Analyzed: 07/12/21

Chromium, Hexavalent 27.3 0.30 mg/kg dry 26.2 ND 104 75-125

Matrix Spike Dup (BEG0195-MSD1)

Source: 2107097-06

Prepared & Analyzed: 07/12/21

Chromium, Hexavalent 27.3 0.30 mg/kg dry 26.2 ND 104 75-125 0.00 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: Kristin 1 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
09/14/21 08:16

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 BEG0160 - General Preparation

Blank (BEG0160-BLK1)

Prepared: 07/09/21 Analyzed: 07/13/21

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

LCS (BEG0160-BS1)

Prepared: 07/09/21 Analyzed: 07/13/21

Calcium	5.04	0.0500	mg/L wet	5.00	101	70-130
Magnesium	5.25	0.0500	"	5.00	105	70-130
Sodium	4.50	0.0500	"	5.00	90.0	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: Kristin 1 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
09/14/21 08:16

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 BEG0157 - General Preparation

Duplicate (BEG0157-DUP1)		Source: 2106543-01			Prepared & Analyzed: 07/09/21					
% Solids	84.3		%		84.3		0.00		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: Kristin 1 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
09/14/21 08:16

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 BEG0175 - General Preparation

Blank (BEG0175-BLK1)

Prepared & Analyzed: 07/12/21

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BEG0175-BS1)

Prepared & Analyzed: 07/12/21

Specific Conductance (EC) 0.141 0.0100 mmhos/cm 0.150 93.9 90-110

Duplicate (BEG0175-DUP1)

Source: 2107097-01

Prepared & Analyzed: 07/12/21

Specific Conductance (EC) 0.836 0.0100 mmhos/cm 0.836 0.0718 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: Kristin 1 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
09/14/21 08:16

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

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

Batch BEG0174 - General Preparation

LCS (BEG0174-BS1)

Prepared & Analyzed: 07/12/21

pH	9.31	pH Units	9.21	101	95-105
----	------	----------	------	-----	--------

Duplicate (BEG0174-DUP1)

Source: 2107097-01

Prepared & Analyzed: 07/12/21

pH	8.23	pH Units	8.23	0.00	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: Kristin 1 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
09/14/21 08:16

Notes and Definitions

QR-04	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 16, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

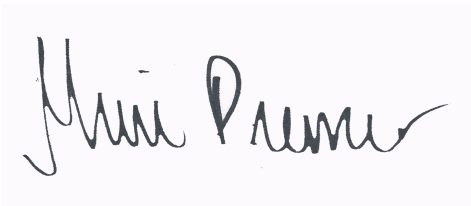
Denver, CO 80203

RE: Kristin 1 Wellhead

Work Order #2107107

Enclosed are the results of analyses for samples received by Summit Scientific on 07/08/21 17:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Muri Premier", is displayed on a light purple rectangular background.

Muri Premier For Paul Shrewsbury
President



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

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

Reported:
07/16/21 15:49

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2107107-01	Water	07/08/21 13:40	07/08/21 17:45
BH02	2107107-02	Water	07/08/21 13:54	07/08/21 17:45
BH03	2107107-03	Water	07/08/21 13:35	07/08/21 17:45
BH04	2107107-04	Water	07/08/21 13:50	07/08/21 17:45
BH05	2107107-05	Water	07/08/21 14:02	07/08/21 17:45

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

2107107

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: Kristin I Wellhead
Sampler Name: Cody Miller Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested										Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	915 BTEXN - 8260B	415 TPH - (C6 - C36)	915 pH, EC, SAR	415 Boron - HWS	VOC - 915	PAH - 915	Metals - 915	714B5, 012, 013, 015			
1	BH01	7/8/21	1340	4	X				X					X								X	pH, EC, SAR by saturated paste
2	BH02		1354	4	X				X					X							X		
3	BH03		1335	4	X				X					X							X		
4	BH04		1350	4	X				X					X							X		
5	BH05		1402	4	X				X					X							X		
6																							
7																							
8																							
9																							
10																							

Relinquished by: Cody Miller	Date/Time: 7/8/21 1555	Received by: Tasman's Lock Box	Date/Time: 7/8/21 1555	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours 24 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/>	Notes:
Relinquished by: Tasman's Lock Box	Date/Time: 7/8/21 1745	Received by: 	Date/Time: 7/8/21 1745	Sample Integrity: Temperature Upon Receipt: <u>4</u>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	

2107107

Sample Receipt Checklist

S2 Work Order _____

Client: PDC / Tasman Client Project ID: Kristin 1 WellhadShipped Via: ☐ H.D./P.U./FedEx/UPS/USPS/Other _____ Airbill #: _____Matrix (check all that apply): ☐ Air ☐ Soil/Solid ☒ Water ☐ Other: _____
(Describe)

Temp (°C)	4
-----------	---

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	On ice.
NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.				
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HCl
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.JB
Custodian Printed Name or InitialsJohn Brown
Signature of Custodian7/8/21
Date/Time



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

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

Reported:
07/16/21 15:49

BH01
2107107-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/08/21 13:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	BEG0166	07/09/21	07/10/21	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: **07/08/21 13:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		95.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	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:
07/16/21 15:49

BH02
2107107-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/08/21 13:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BEG0166	07/09/21	07/10/21	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: **07/08/21 13:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		93.9 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		109 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **07/08/21 13:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	98.2	12.0	mg/L	200	BEG0236	07/14/21	07/15/21	EPA 300.0	
Sulfate	582	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **07/08/21 13:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	680	10.0	mg/L	1	BEG0226	07/14/21	07/14/21	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: Kristin 1 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/16/21 15:49

BH03
2107107-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/08/21 13:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BEG0166	07/09/21	07/10/21	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: **07/08/21 13:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		93.5 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	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:
07/16/21 15:49

BH04
2107107-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/08/21 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEG0166	07/09/21	07/10/21	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: **07/08/21 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		96.2 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		99.1 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.2 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **07/08/21 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	145	12.0		mg/L	200	BEG0236	07/14/21	07/15/21	EPA 300.0	
Sulfate	610	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **07/08/21 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	864	10.0		mg/L	1	BEG0226	07/14/21	07/14/21	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: Kristin 1 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/16/21 15:49

BH05
2107107-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/08/21 14:02**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEG0166	07/09/21	07/10/21	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: **07/08/21 14:02**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		95.8 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		98.9 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.4 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **07/08/21 14:02**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	139	12.0		mg/L	200	BEG0236	07/14/21	07/15/21	EPA 300.0	
Sulfate	572	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **07/08/21 14:02**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	658	10.0		mg/L	1	BEG0226	07/14/21	07/14/21	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: Kristin 1 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/16/21 15:49

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 BEG0166 - EPA 5030 Water MS

Blank (BEG0166-BLK1)

Prepared: 07/09/21 Analyzed: 07/10/21

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	12.2		"	13.3		91.9	23-173			
Surrogate: Toluene-d8	13.1		"	13.3		98.2	20-170			
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3		99.7	21-167			

LCS (BEG0166-BS1)

Prepared: 07/09/21 Analyzed: 07/10/21

Benzene	41.9	1.0	ug/l	41.7		100	51-132			
Toluene	41.0	1.0	"	41.7		98.5	51-138			
Ethylbenzene	41.2	1.0	"	41.7		98.9	58-146			
m,p-Xylene	81.6	2.0	"	83.3		97.9	57-144			
o-Xylene	39.9	1.0	"	41.7		95.7	53-146			
Naphthalene	36.6	1.0	"	41.7		87.8	70-130			
1,2,4-Trimethylbenzene	34.6	1.0	"	41.7		83.1	70-130			
1,3,5-Trimethylbenzene	42.5	1.0	"	41.7		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	12.8		"	13.3		95.8	23-173			
Surrogate: Toluene-d8	13.4		"	13.3		101	20-170			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.8	21-167			

Matrix Spike (BEG0166-MS1)

Source: 2107042-01

Prepared: 07/09/21 Analyzed: 07/10/21

Benzene	41.8	1.0	ug/l	41.7	ND	100	34-141			
Toluene	42.0	1.0	"	41.7	ND	101	27-151			
Ethylbenzene	42.7	1.0	"	41.7	ND	102	29-160			
m,p-Xylene	84.3	2.0	"	83.3	ND	101	20-166			
o-Xylene	40.5	1.0	"	41.7	ND	97.2	33-159			
Naphthalene	42.2	1.0	"	41.7	6.40	85.8	70-130			
1,2,4-Trimethylbenzene	36.1	1.0	"	41.7	ND	86.7	70-130			
1,3,5-Trimethylbenzene	44.4	1.0	"	41.7	ND	107	70-130			
Surrogate: 1,2-Dichloroethane-d4	12.9		"	13.3		96.8	23-173			
Surrogate: Toluene-d8	13.3		"	13.3		99.8	20-170			
Surrogate: 4-Bromofluorobenzene	13.1		"	13.3		98.3	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:
07/16/21 15:49

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 BEG0166 - EPA 5030 Water MS

Matrix Spike Dup (BEG0166-MSD1)	Source: 2107042-01			Prepared: 07/09/21 Analyzed: 07/10/21						
Benzene	41.8	1.0	ug/l	41.7	ND	100	34-141	0.120	30	
Toluene	41.4	1.0	"	41.7	ND	99.3	27-151	1.49	30	
Ethylbenzene	43.1	1.0	"	41.7	ND	103	29-160	0.910	30	
m,p-Xylene	86.2	2.0	"	83.3	ND	103	20-166	2.21	30	
o-Xylene	42.0	1.0	"	41.7	ND	101	33-159	3.61	30	
Naphthalene	44.1	1.0	"	41.7	6.40	90.4	70-130	4.43	30	
1,2,4-Trimethylbenzene	36.3	1.0	"	41.7	ND	87.0	70-130	0.359	30	
1,3,5-Trimethylbenzene	44.6	1.0	"	41.7	ND	107	70-130	0.382	30	
Surrogate: 1,2-Dichloroethane-d4	12.6		"	13.3		94.7	23-173			
Surrogate: Toluene-d8	12.9		"	13.3		96.8	20-170			
Surrogate: 4-Bromofluorobenzene	13.2		"	13.3		99.0	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:
07/16/21 15:49

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 BEG0236 - General Preparation

Blank (BEG0236-BLK1)

Prepared: 07/14/21 Analyzed: 07/15/21

Chloride	ND	0.0600	mg/L
Sulfate	ND	0.300	"

LCS (BEG0236-BS1)

Prepared: 07/14/21 Analyzed: 07/15/21

Chloride	3.22	0.0600	mg/L	3.00	108	90-110
Sulfate	16.1	0.300	"	15.0	108	90-110

Duplicate (BEG0236-DUP1)

Source: 2107107-02

Prepared: 07/14/21 Analyzed: 07/15/21

Chloride	91.6	12.0	mg/L	98.2	6.95	20
Sulfate	551	60.0	"	582	5.43	20

Matrix Spike (BEG0236-MS1)

Source: 2107107-02

Prepared: 07/14/21 Analyzed: 07/15/21

Chloride	663	12.0	mg/L	600	98.2	94.1	80-120
Sulfate	3600	60.0	"	3000	582	101	80-120

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:
07/16/21 15:49

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 BEG0226 - General Preparation

Blank (BEG0226-BLK1)

Prepared & Analyzed: 07/14/21

Total Dissolved Solids ND 10.0 mg/L

Duplicate (BEG0226-DUP1)

Source: 2107107-02

Prepared & Analyzed: 07/14/21

Total Dissolved Solids 681 10.0 mg/L 680 0.0588 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: Kristin 1 Wellhead
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/16/21 15:49

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

Attachment B



Borehole Logging Form

BOREHOLE ID: BHO1		SITE NAME: Kristin 2 Wellhead		CLIENT NAME: PDC ENERGY				
Date Completed: 7/8/21		Location: S POC						
Drilling Company: Tasman		Surface Completion: N/A		DTW: 3' TD: 5'				
Type of Drill: Hand Auger		Geologist: M. Dahlgren		Project Manager: B. Nelson				
Bit Size 2 3/8"		Logging Method:						
Well Const. Material: Diameter: 1" Screen: Sch 40 PVC Slotted 0.01 Riser: Sch 40 PVC Blank								
Depth (feet)	Well Completion	Sample Type	% Recovery	PID (ppm)	Laboratory Sample	USCS	Description	
1		↑	↑	0.2		SM	Brown Silty Sand, moderately sorted, fine-med grain, dry, nodular	
2		↑	↑	0.0		SM	Tan Silty Sand, poorly sorted, fine-coarse grain, dry, nodular	
3		HA	90%	0.0	BHO1@3'			↓
4		↓	↓	0.0	11.42	SM	- Same as above, saturated	
5		↓	↓	0.0				↓
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								



Borehole Logging Form

BOREHOLE ID: BH02 SITE NAME: Kristine Wellhead CLIENT NAME: PDC ENERGY
Date Completed: 7/8/21 Location: E POC
Drilling Company: Tasman Surface Completion: N/A DTW: 3' TD: 5'
Type of Drill: Hand Auger Geologist: M. Dahlgren Project Manager: B. Nelson
Bit Size 2 3/8" Logging Method:

Well Const. Material: Diameter: 1" Screen: Sch 40 PVC Slotted 0.0 Riser: Sch 40 PVC Blank

Depth (feet)	Well Completion	Sample Type	% Recovery	PID (ppm)	Laboratory Sample	USCS	Description
1		↑	↑	0.2		SM	-Brown Silty Sand, moderately sorted, fine-med grain, dry, no odor
2		↑	↑	0.0		SM	-Tan Silty Sand, poorly sorted, fine-coarse grain, dry, no odor
3		HA	100%	0.0	BH0203		↓
4		↓	↓	0.0	11:45	SM	Same as above, Saturated
5		↓	↓	0.2			↓
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							



Borehole Logging Form

BOREHOLE ID: BH03	SITE NAME: Kristin 1 wellhead	CLIENT NAME: PDC ENERGY
Date Completed: 7/8/21	Location: N POC	
Drilling Company: Tasman	Surface Completion: N/A	DTW: 3' TD: 5'
Type of Drill: Hand Auger	Geologist: M. Dahlgren	Project Manager: B. Nelson
Bit Size 2 3/8"	Logging Method:	
Well Const. Material: Diameter: 1" Screen: Sch 40 PVC Slotted 0.01Riser: Sch 40 PVC Blank		

Depth (feet)	Well Completion	Sample Type	% Recovery	PID (ppm)	Laboratory Sample	USCS	Description
1		↑	↑	0.0		SM	Brown Silty Sand, moderately sorted Fine-Med grain, Dry, no odor
2		↑	↑	0.0		SM	Tan Silty Sand, poorly sorted Fine-Coarse grain, Dry, no odor
3		HA	90%	0.0	BH03@3 11.25	SM	↓ Same as above, moist
4		↓	↓	0.2			Same as above, saturated
5		↓	↓	0.0			↓
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							



Borehole Logging Form

BOREHOLE ID: BH04		SITE NAME: Kristin 1 Wellhead		CLIENT NAME: PDC ENERGY				
Date Completed: 7/8/21		Location: W POL						
Drilling Company: Tasman		Surface Completion: N/A		DTW: 3' TD: 5'				
Type of Drill: Hand Auger		Geologist: M. Dahlgren		Project Manager: B. Nelson				
Bit Size 2 3/8"		Logging Method:						
Well Const. Material: Diameter: 4" Screen: Sch 40 PVC Slotted Riser: Sch 40 PVC Blank								
Depth (feet)	Well Completion	Sample Type	% Recovery	PID (ppm)	Laboratory Sample	USCS	Description	
1		↑	↑	0.0		SM	Brown Silty Sand, Moderately Sorted	
2		↑	↑	0.0		SM	Fine-Med grain Dry, no odor	
3		HA	90%	0.0	BH04-23	SM	Tan Silty Sand, Poorly Sorted	
4		↓	↓	0.2	11.22			Fine-coarse grain, Dry, no odor
5		↓	↓	0.2				↓
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								



Borehole Logging Form

BOREHOLE ID: BH05		SITE NAME: Kristin 1 Wellhead		CLIENT NAME: PDC ENERGY				
Date Completed: 4/8/21		Location: SOURCE						
Drilling Company: Tasman		Surface Completion: N/A		DTW: 3.5' TD: 6'				
Type of Drill: Hand Auger		Geologist: M. Dahlgren		Project Manager: B. Nelson				
Bit Size 2 3/8"		Logging Method:						
Well Const. Material: Diameter: 4" Screen: Sch 40 PVC Slotted 0.01 Riser: Sch 40 PVC Blank								
Depth (feet)	Well Completion	Sample Type	% Recovery	PID (ppm)	Laboratory Sample	USCS	Description	
1		↑	↑	0.2		SM	Brown Silty Sand, moderately sorted Fine-Med grain, Dry, No odor	
2				0.1		SM	Brown Silty Sand, poorly sorted, Fine-Coarse grain, Dry, No odor	
3		HA	90%	0.0				Same as above, moist
4				0.4		SM	Same as above, saturated, some black organic staining, no odor	
5				0.5		SM	Same as above, No staining	
6			↓	↓	0.7	BH05 @ 6' 12:00		↓
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								