

State of Colorado  
Oil and Gas Conservation Commission



1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303) 894-2100 Fax 894-2109

FOR OGCC USE ONLY

**SITE INVESTIGATION AND REMEDIATION WORKPLAN**

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

OGCC Employee:

Spill  Complaint  
 Inspection  NOAV

Tracking No:

**CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED**

Spill or Release  Plug & Abandon  Central Facility Closure  Site/Facility Closure  Other (describe): \_\_\_\_\_

**GENERAL INFORMATION**

<b>OGCC Operator Number:</b> 69175		<b>Contact Name and Telephone</b>	
Name of Operator: PDC Energy, Inc.		Name: Charity Fleenor	
Address: 1775 Sherman Street, Suite 3000		No: (303) 860-5800	
City: Denver State: CO Zip: 80203		Fax: (303) 860-5838	
API/Facility No: 05-123-09920	County: Weld		
Facility Name: Ursula #2	Facility Number: 333219		
Well Name: Ursula #2	Well Number: Ursula #2		
Location (QtrQtr, Sec, Twp, Rng, Meridian): NENE S28 T2N R66W		Latitude: 40.112893	Longitude: -104.77705

**TECHNICAL CONDITIONS**

Type of Waste Causing Impact (crude oil, condensate, produced water, etc.): Produced Water

Site Conditions: Is location within a sensitive area (according to Rule 901e)?  Y  N If yes, attach evaluation. \*\* Please see 'Potential Receptors' section below.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): Cropland

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Olney loamy sand, 1 to 3 percent slopes

Potential receptors (water wells within 1/4 mi, surface waters, etc.): A residence is located approximately 690' southeast of the location. The nearest surface water is 660' north and the nearest water well is 625' southeast of the site. 6 water wells are located within a 1/4-mile radius. Depth to shallow groundwater is about 6 feet.

**Description of Impact** (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
<input checked="" type="checkbox"/> Soils	Refer to the attached Figure 4 and Table 1	Excavation and soil sampling
<input type="checkbox"/> Vegetation		
<input checked="" type="checkbox"/> Groundwater	Refer to the attached Figure 5 and Table 2	Excavation and groundwater sampling
<input type="checkbox"/> Surface water		

**REMEDIATION WORKPLAN**

Describe initial action taken (if previously provided, refer to that form or document):  
On March 23, 2015, a historic release was discovered below the produced water vessel during plug and abandonment activities. Excavation activities were summarized in an Initial Form 19 submitted on March 24, 2015 (Document # 400813993) and in a Supplemental Form 19 submitted on April 9, 2015 (Document # 400819286). A topographic map of the site is included as Figure 1.

Describe how source is to be removed:  
Excavation activities were completed between March 19 and March 23, 2015. Approximately 130 cubic yards of impacted material were removed and transported to the Waste Management Facility in Ault, Colorado for disposal under PDC waste manifests. Groundwater was encountered in the excavation area at approximately 8 feet below ground surface (bgs). The groundwater sample (GW01) collected from the excavation area exhibited benzene and ethylbenzene concentrations in exceedance of COGCC Table 910-1 groundwater standards. The excavation extent and groundwater sample location are illustrated on Figure 2. Groundwater analytical data is summarized in Table 2 and the laboratory analytical report is included as Attachment A.

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:  
Between April 6 and April 10, 2015, site investigation activities were completed to delineate the lateral extent of remaining hydrocarbon impacts in soil and groundwater. Fifteen (15) boreholes were advanced using direct push drilling methods to approximately 10 feet below ground surface (bgs). Soil encountered in the boreholes was field screened for volatile organic compound (VOC) concentrations using a photoionization detector (PID). Soil samples were collected from eleven (11) boreholes at depths ranging between 2 feet and 7 feet bgs. Soil samples were not collected from the remaining four (4) boreholes as elevated VOC concentrations were not detected during field screening activities. Soil samples were submitted Summit Scientific Laboratories (Summit) in Golden, Colorado for analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX), naphthalene, and total petroleum hydrocarbons (TPH) - gasoline range organics (GRO) by USEPA Method 8260, and TPH - diesel range organics (DRO) by USEPA Method 8015. Analytical results indicated TPH concentrations were in exceedance of COGCC Table 910-1 standards in the soil samples collected from three (3) borehole locations (BH07, BH10, and SB01). Groundwater was encountered in the boreholes between 5-6 feet bgs. Consequently, temporary monitoring wells were installed at fourteen borehole locations (BH01 - BH14). Groundwater samples were collected from the temporary wells and submitted to Summit for laboratory analysis of BTEX. Analytical results indicated BTEX concentrations were in exceedance of COGCC Table 910-1 groundwater standards at six (6) temporary well locations. Temporary monitoring wells were abandoned following site investigation and sampling activities. Soil analytical results are summarized in Table 1 and illustrated on Figure 4. Groundwater analytical results are summarized in Table 2 and illustrated on Figure 5. Laboratory analytical reports are included as Attachment A and boring logs are included as Attachment B.

Based on the analytical data collected during investigation activities, PDC selected excavation and chemical treatment to address remaining petroleum hydrocarbon impacts in soil and groundwater within the source area. Impacted material will be excavated and chemically treated on-site using hydrogen peroxide. The proposed excavation extent is illustrated on Figure 6. Confirmation soil samples will be collected for every 100 cubic yards of treated material to confirm constituent concentrations decreased below regulatory standards and material may be used for backfilling. Soil samples will be collected from the sidewalls of the final excavation extent to confirm remaining soil impacts were successfully removed. A summary of remediation and sampling activities will be provided in a supplemental report.

State of Colorado Oil and Gas Conservation Commission

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REMEDIATION WORKPLAN (CONT.)

OGCC Employee: \_\_\_\_\_

Tracking Number: \_\_\_\_\_ Name of Operator: PDC Energy, Inc. OGCC Operator No: 69175 Received Date: \_\_\_\_\_ Well Name & No: Ursula #2 Facility Name & No.: Ursula #2

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.): Groundwater was encountered during excavation and investigation activities between 5-8 feet below ground surface (bgs). Groundwater samples were collected from fourteen (14) temporary monitoring well locations (BH01 - BH14) and submitted to Summit Scientific Laboratories for analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX) by USEPA Method 8260. Analytical results indicated BTEX concentrations were in exceedance of COGCC Table 910-1 groundwater standards at six (6) temporary well locations. PDC will complete open excavation chemical treatment of impacted groundwater in the source area using hydrogen peroxide. A groundwater monitoring plan and final remedial strategy to address remaining off-site dissolved phase hydrocarbon impacts will be provided in a supplemental report.

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required. The excavation will be backfilled and compacted with clean material and the ground surface will be re-contoured to match pre-existing conditions.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing. Is further site investigation required? [X] Y [ ] N If yes, describe: Petroleum hydrocarbon impacts in soil and groundwater remain on site, as determined during site investigation activities. Based on general groundwater flow to the west, point of compliance (POC) for remaining dissolved phase hydrocarbon impacts has not been established off-site. Consequently, additional drilling and site investigation will be completed following excavation and chemical treatment activities. A groundwater elevation contour map is included as Figure 3. Soil analytical results are summarized in Table 1 and groundwater analytical results are summarized on Table 2. The laboratory analytical reports are included as Attachment A.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.): Soil removed during initial excavation activities was disposed of at the Waste Management Facility in Ault, Colorado under PDC waste manifests.

IMPLEMENTATION SCHEDULE

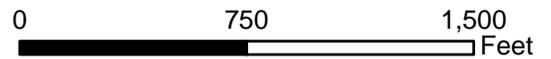
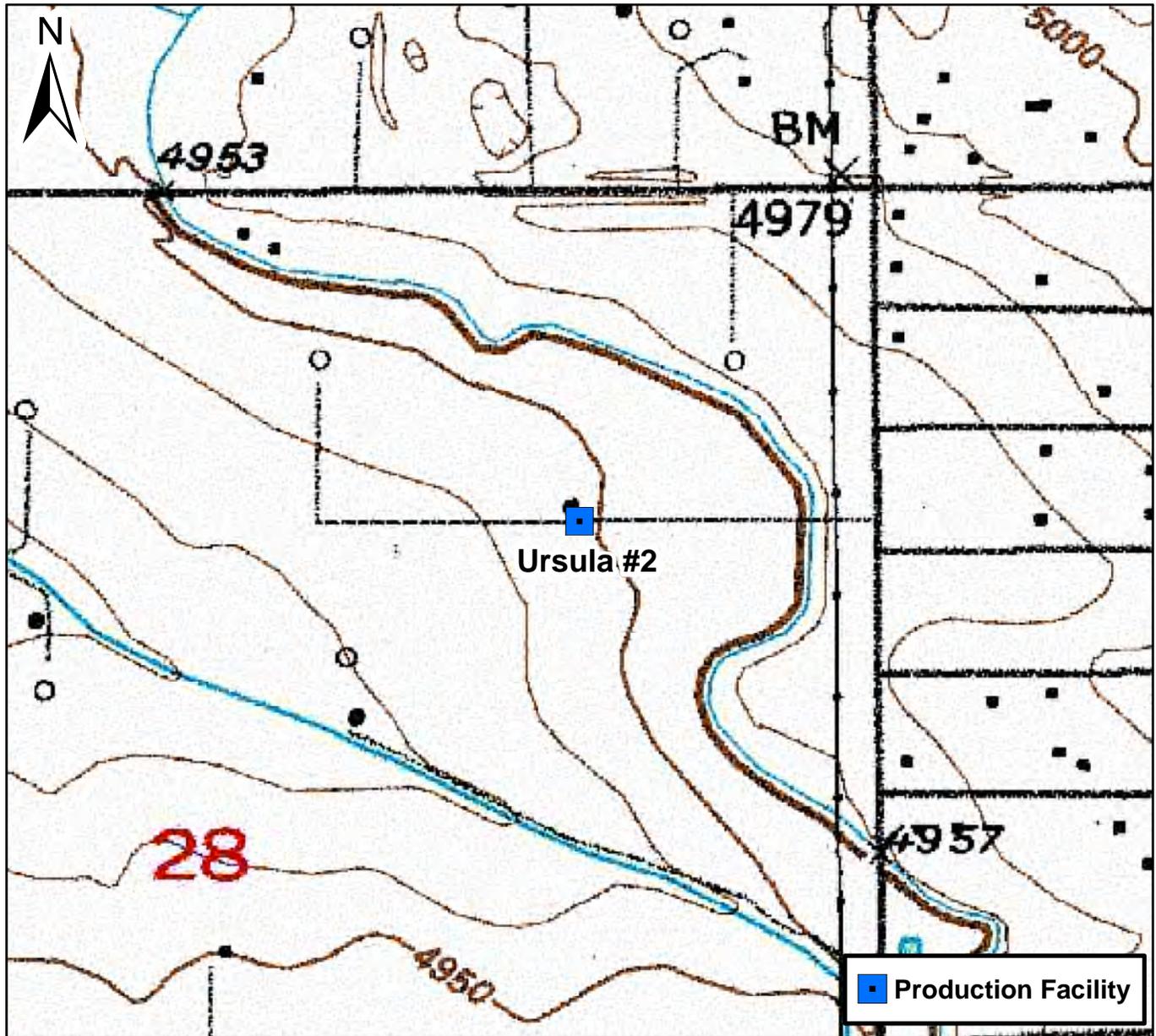
Date Site Investigation Began: 3/19/2015 Date Site Investigation Completed: NA Remediation Plan Submitted: \_\_\_\_\_ Remediation Start Date: 10/1/2015 Anticipated Completion Date: NA Actual Completion Date: TBD

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Charity Fleenor

Signed: \_\_\_\_\_ Title: EHS Director Date: \_\_\_\_\_

OGCC Approved: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_



### Figure 1

Site Location Map  
 Ursula #2  
 NENE S28 T2N R66W  
 Weld County, Colorado





DATE: April 2015  
 DESIGNED BY: C. Wasko  
 DRAWN BY: D. Arnold



**PDC Energy, Inc. - DJ Basin**  
**Ursula #2**  
 NENE Section 28, Township 2 North, Range 66 West  
 Weld County, Colorado

Site Overview  
 Map

Figure  
 2



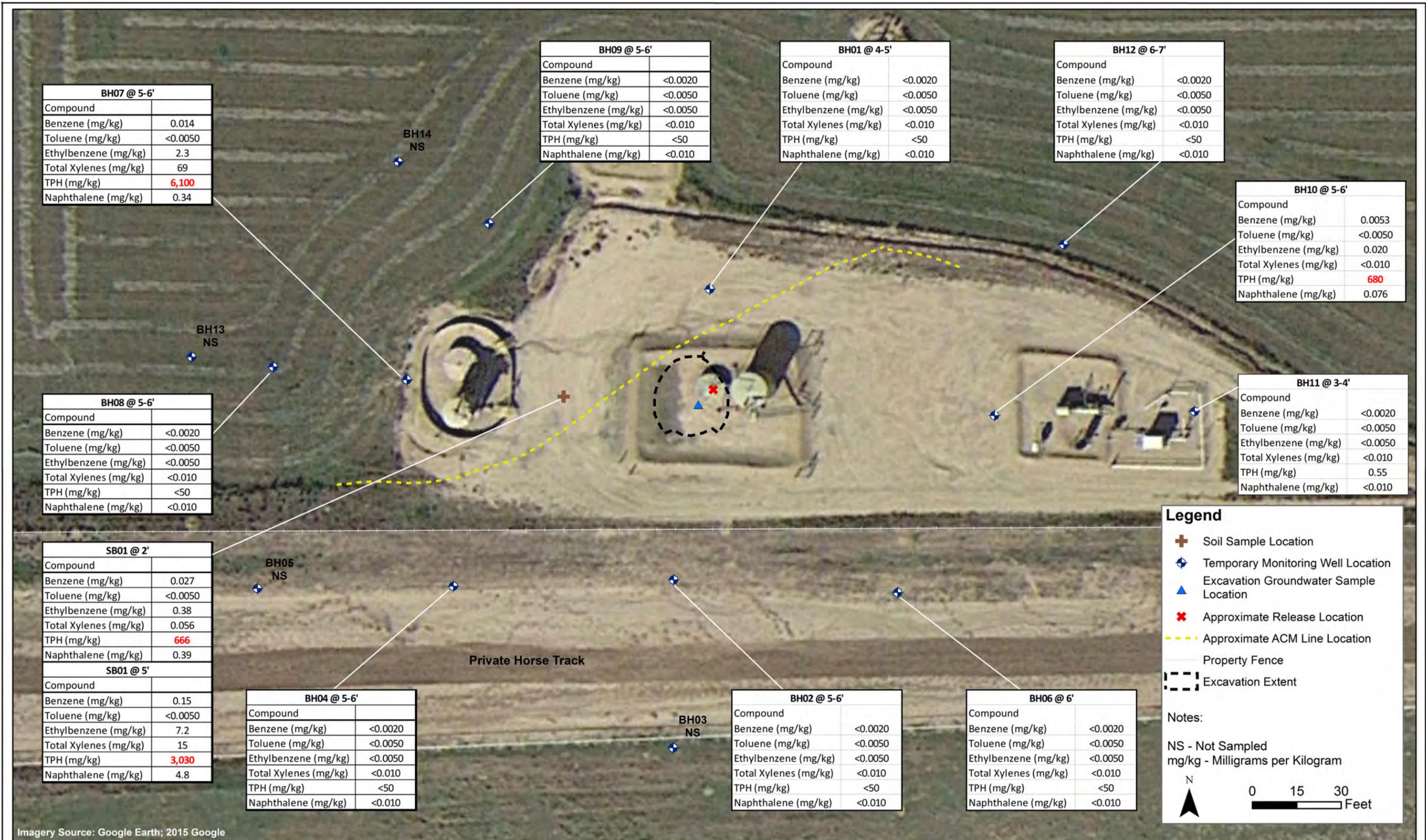
DATE: April 2015  
 DESIGNED BY: C. Wasko  
 DRAWN BY: D. Arnold



**PDC Energy, Inc. - DJ Basin**  
**Ursula #2**  
 NENE Section 28, Township 2 North, Range 66 West  
 Weld County, Colorado

Groundwater Elevation  
 Contour Map

Figure  
 3



BH07 @ 5-6'	
Compound	
Benzene (mg/kg)	0.014
Toluene (mg/kg)	<0.0050
Ethylbenzene (mg/kg)	2.3
Total Xylenes (mg/kg)	69
TPH (mg/kg)	<b>6,100</b>
Naphthalene (mg/kg)	0.34

BH09 @ 5-6'	
Compound	
Benzene (mg/kg)	<0.0020
Toluene (mg/kg)	<0.0050
Ethylbenzene (mg/kg)	<0.0050
Total Xylenes (mg/kg)	<0.010
TPH (mg/kg)	<50
Naphthalene (mg/kg)	<0.010

BH01 @ 4-5'	
Compound	
Benzene (mg/kg)	<0.0020
Toluene (mg/kg)	<0.0050
Ethylbenzene (mg/kg)	<0.0050
Total Xylenes (mg/kg)	<0.010
TPH (mg/kg)	<50
Naphthalene (mg/kg)	<0.010

BH12 @ 6-7'	
Compound	
Benzene (mg/kg)	<0.0020
Toluene (mg/kg)	<0.0050
Ethylbenzene (mg/kg)	<0.0050
Total Xylenes (mg/kg)	<0.010
TPH (mg/kg)	<50
Naphthalene (mg/kg)	<0.010

BH10 @ 5-6'	
Compound	
Benzene (mg/kg)	0.0053
Toluene (mg/kg)	<0.0050
Ethylbenzene (mg/kg)	0.020
Total Xylenes (mg/kg)	<0.010
TPH (mg/kg)	<b>680</b>
Naphthalene (mg/kg)	0.076

BH11 @ 3-4'	
Compound	
Benzene (mg/kg)	<0.0020
Toluene (mg/kg)	<0.0050
Ethylbenzene (mg/kg)	<0.0050
Total Xylenes (mg/kg)	<0.010
TPH (mg/kg)	0.55
Naphthalene (mg/kg)	<0.010

BH08 @ 5-6'	
Compound	
Benzene (mg/kg)	<0.0020
Toluene (mg/kg)	<0.0050
Ethylbenzene (mg/kg)	<0.0050
Total Xylenes (mg/kg)	<0.010
TPH (mg/kg)	<50
Naphthalene (mg/kg)	<0.010

SB01 @ 2'	
Compound	
Benzene (mg/kg)	0.027
Toluene (mg/kg)	<0.0050
Ethylbenzene (mg/kg)	0.38
Total Xylenes (mg/kg)	0.056
TPH (mg/kg)	<b>666</b>
Naphthalene (mg/kg)	0.39

SB01 @ 5'	
Compound	
Benzene (mg/kg)	0.15
Toluene (mg/kg)	<0.0050
Ethylbenzene (mg/kg)	7.2
Total Xylenes (mg/kg)	15
TPH (mg/kg)	<b>3,030</b>
Naphthalene (mg/kg)	4.8

BH04 @ 5-6'	
Compound	
Benzene (mg/kg)	<0.0020
Toluene (mg/kg)	<0.0050
Ethylbenzene (mg/kg)	<0.0050
Total Xylenes (mg/kg)	<0.010
TPH (mg/kg)	<50
Naphthalene (mg/kg)	<0.010

BH02 @ 5-6'	
Compound	
Benzene (mg/kg)	<0.0020
Toluene (mg/kg)	<0.0050
Ethylbenzene (mg/kg)	<0.0050
Total Xylenes (mg/kg)	<0.010
TPH (mg/kg)	<50
Naphthalene (mg/kg)	<0.010

BH06 @ 6'	
Compound	
Benzene (mg/kg)	<0.0020
Toluene (mg/kg)	<0.0050
Ethylbenzene (mg/kg)	<0.0050
Total Xylenes (mg/kg)	<0.010
TPH (mg/kg)	<50
Naphthalene (mg/kg)	<0.010

DATE:	April 2015
DESIGNED BY:	C. Wasko
DRAWN BY:	D. Arnold



**PDC Energy, Inc. - DJ Basin**  
**Ursula #2**  
 NENE Section 28, Township 2 North, Range 66 West  
 Weld County, Colorado

Soil Analytical Results  
 Map

Figure  
 4



BH14	
Compound	
Benzene (µg/l)	<1.0
Toluene (µg/l)	<1.0
Ethylbenzene (µg/l)	<1.0
Total Xylenes (µg/l)	<1.0

BH09	
Compound	
Benzene (µg/l)	28
Toluene (µg/l)	200
Ethylbenzene (µg/l)	130
Total Xylenes (µg/l)	2,700

BH01	
Compound	
Benzene (µg/l)	<1.0
Toluene (µg/l)	<1.0
Ethylbenzene (µg/l)	<1.0
Total Xylenes (µg/l)	<1.0

BH12	
Compound	
Benzene (µg/l)	<1.0
Toluene (µg/l)	<1.0
Ethylbenzene (µg/l)	<1.0
Total Xylenes (µg/l)	<1.0

BH13	
Compound	
Benzene (µg/l)	<1.0
Toluene (µg/l)	<1.0
Ethylbenzene (µg/l)	<1.0
Total Xylenes (µg/l)	<1.0

BH10	
Compound	
Benzene (µg/l)	2.5
Toluene (µg/l)	1.6
Ethylbenzene (µg/l)	2.5
Total Xylenes (µg/l)	5.0

BH08	
Compound	
Benzene (µg/l)	15
Toluene (µg/l)	<1.0
Ethylbenzene (µg/l)	4.0
Total Xylenes (µg/l)	3.5

BH11	
Compound	
Benzene (µg/l)	<1.0
Toluene (µg/l)	<1.0
Ethylbenzene (µg/l)	<1.0
Total Xylenes (µg/l)	<1.0

BH07	
Compound	
Benzene (µg/l)	450
Toluene (µg/l)	<1.0
Ethylbenzene (µg/l)	12
Total Xylenes (µg/l)	540

BH05	
Compound	
Benzene (µg/l)	1,100
Toluene (µg/l)	7.0
Ethylbenzene (µg/l)	1,200
Total Xylenes (µg/l)	9,400

GW01	
Compound	
Benzene (µg/L)	800
Toluene (µg/L)	<1.0
Ethylbenzene (µg/L)	750
Total Xylenes (µg/L)	420

BH02	
Compound	
Benzene (µg/l)	24
Toluene (µg/l)	<1.0
Ethylbenzene (µg/l)	1,600
Total Xylenes (µg/l)	13,000

BH03	
Compound	
Benzene (µg/l)	<1.0
Toluene (µg/l)	<1.0
Ethylbenzene (µg/l)	<1.0
Total Xylenes (µg/l)	5.0

BH06	
Compound	
Benzene (µg/l)	<1.0
Toluene (µg/l)	<1.0
Ethylbenzene (µg/l)	<1.0
Total Xylenes (µg/l)	<1.0

BH04	
Compound	
Benzene (µg/l)	1,100
Toluene (µg/l)	6.4
Ethylbenzene (µg/l)	920
Total Xylenes (µg/l)	8,900

Imagery Source: Google Earth; 2015 Google

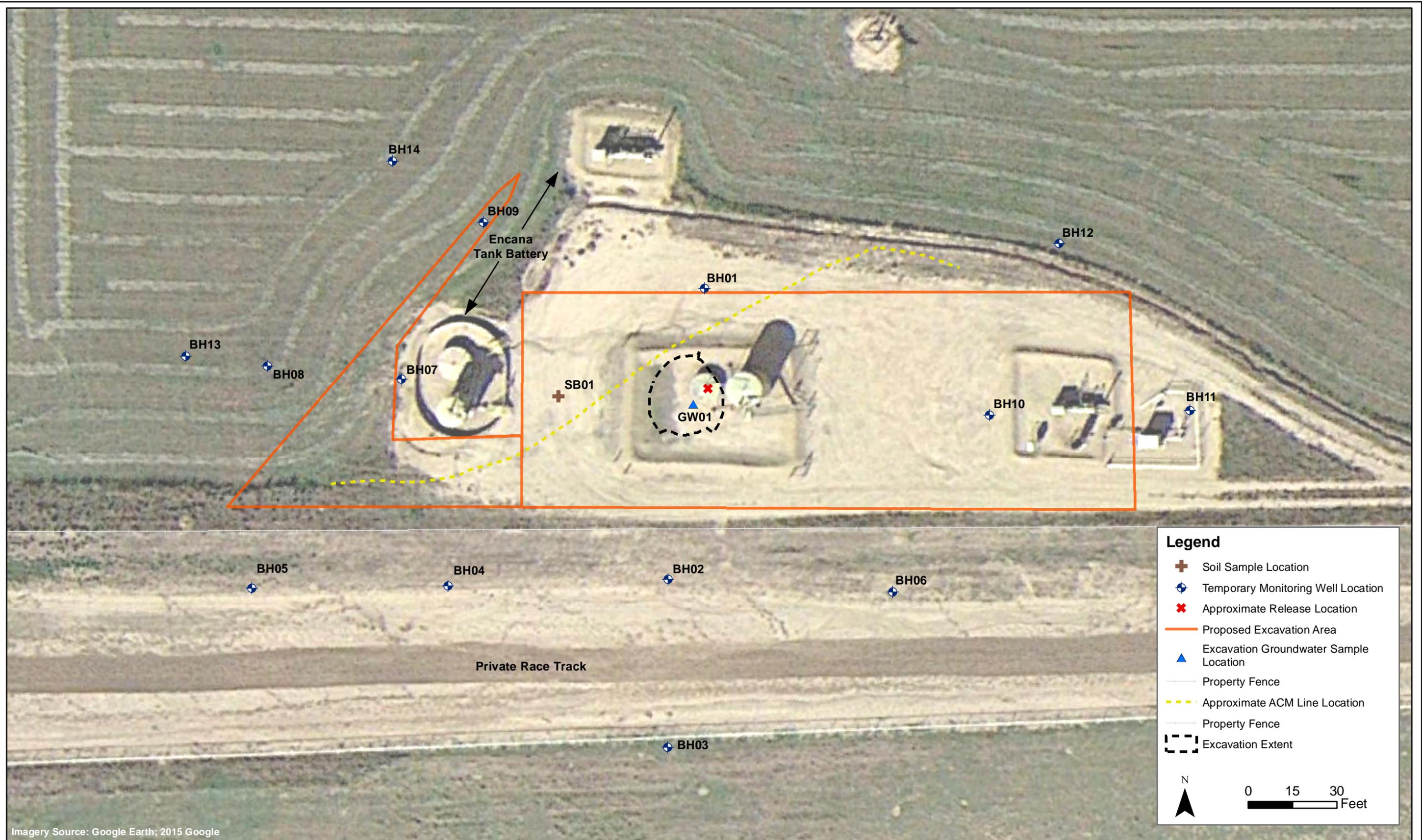
DATE: April 2015  
 DESIGNED BY: C. Wasko  
 DRAWN BY: D. Arnold



PDC Energy, Inc. - DJ Basin  
 Ursula #2  
 NENE Section 28, Township 2 North, Range 66 West  
 Weld County, Colorado

Groundwater Analytical Results  
 Map

Figure  
 5



DATE: April 2015  
 DESIGNED BY: C. Wasko  
 DRAWN BY: D. Arnold



**PDC Energy, Inc. - DJ Basin**  
**Ursula #2**  
 NENE Section 28, Township 2 North, Range 66 West  
 Weld County, Colorado

Proposed Excavation Area

Figure 6

**TABLE 1**  
**URSULA #2 TANK BATTERY**  
**SOIL ANALYTICAL RESULTS SUMMARY TABLE**

Sample ID	Date Sampled	Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Naphthalene mg/kg	TPH <sup>(2)</sup> (mg/kg)
<b>COGCC standards for soil (mg/kg) <sup>(1)</sup></b>			<b>0.17</b>	<b>85</b>	<b>100</b>	<b>175</b>	<b>23</b>	<b>500</b>
BH01 @ 4-5	4/6/2015	4-5	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
BH02 @ 5-6	4/6/2015	5-6	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
BH04 @ 5-6	4/6/2015	5-6	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
BH06 @ 6	4/6/2015	6	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
BH07 @ 5-6	4/6/2015	5-6	0.014	<0.0050	2.3	69	0.34	<b>6,100</b>
BH08 @ 5-6	4/6/2015	5-6	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
BH09 @ 5-6	4/6/2015	5-6	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
BH10 @ 5-6	4/6/2015	5-6	0.0053	<0.0050	0.020	<0.010	0.076	<b>680</b>
BH11 @ 3-4	4/10/2015	3-4	<0.0020	<0.0050	<0.0050	<0.010	<0.010	0.55
BH12 @ 6-7	4/10/2015	6-7	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SB01 @ 2	4/10/2015	2	0.027	<0.0050	0.38	0.056	0.39	<b>666</b>
SB01 @ 5	4/10/2015	5	0.15	<0.0050	7.2	15	4.8	<b>3,030</b>

**Notes:**

- Standards for soil are taken from 2 CCR 404-1, Table 910-1, effective February 1, 2014.
- TPH - Total volatile and extractable petroleum hydrocarbons. Value calculated by adding GRO and DRO concentrations.

COGCC = Colorado Oil and Gas Conservation Commission

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

GRO = Total volatile petroleum hydrocarbons - gasoline range organics

DRO = Total extractable petroleum hydrocarbons - diesel range organics

mg/kg = Milligrams per kilogram

bgs = Below ground surface

**BOLD** = Analytical result is in exceedance of COGCC Table 910-1 soil standards.

**TABLE 2**  
**URSULA #2 TANK BATTERY**  
**GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE**

Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
<b>COGCC Table 910-1 Groundwater Standard (µg/L) <sup>(1)</sup></b>		<b>5</b>	<b>560</b>	<b>700</b>	<b>1,400</b>
GW01	3/23/2015	<b>800</b>	<1.0	<b>750</b>	420
BH01	4/6/2015	<1.0	<1.0	<1.0	<1.0
BH02	4/6/2015	<b>24</b>	<1.0	<b>1,600</b>	<b>13,000</b>
BH03	4/6/2015	<1.0	<1.0	<1.0	5.0
BH04	4/6/2015	<b>1,100</b>	6.4	<b>920</b>	<b>8,900</b>
BH05	4/6/2015	<b>1,100</b>	7.0	<b>1,200</b>	<b>9,400</b>
BH06	4/6/2015	<1.0	<1.0	<1.0	<1.0
BH07	4/6/2015	<b>450</b>	<1.0	12	540
BH08	4/6/2015	<b>15</b>	<1.0	4.0	3.5
BH09	4/6/2015	<b>28</b>	200	130	<b>2,700</b>
BH10	4/6/2015	2.5	1.6	2.5	5.0
BH11	4/10/2015	<1.0	<1.0	<1.0	<1.0
BH12	4/10/2015	<1.0	<1.0	<1.0	<1.0
BH13	4/10/2015	<1.0	<1.0	<1.0	<1.0
BH14	4/10/2015	<1.0	<1.0	<1.0	<1.0

**Notes:**

1. Groundwater standards referenced from 2 CCR 404-1, Table 910-1, effective February 1, 2014.

COGCC = Colorado Oil and Gas Conservation Commission

µg/L= Micrograms per liter

NM = Not Measured

**BOLD** = Analytical result is in exceedance of COGCC groundwater standards.

**ATTACHMENT A**

# Summit Scientific

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741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

March 24, 2015

Brandon Bruns  
PDC Energy  
1775 Sherman St. STE. 3000  
Denver, CO 80203  
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 03/23/15 18:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury  
President





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

Project: Ursula 2  
 Project Number: [none]  
 Project Manager: Brandon Bruns

**Reported:**  
 03/24/15 07:50

**GW01**  
**1503195-01 (Water)**

**Summit Scientific**

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

Date Sampled: **03/23/15 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>800</b>	100	ug/l	100	1503265	03/23/15	03/23/15	EPA 8260B	
Toluene	ND	1.0	"	1	"	"	03/23/15	"	
<b>Ethylbenzene</b>	<b>750</b>	100	"	100	"	"	03/23/15	"	
<b>Xylenes (total)</b>	<b>420</b>	1.0	"	1	"	"	03/23/15	"	

Date Sampled: **03/23/15 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		92.7 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		114 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		105 %	45-146		"	"	"	"	

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: Ursula 2  
Project Number: [none]  
Project Manager: Brandon Brunns

Reported:  
03/24/15 07:50

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

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

**Batch 1503265 - EPA 5030 Water MS**

**Blank (1503265-BLK1)**

Prepared & Analyzed: 03/23/15

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	11.0		"	13.2		83.0	37-154			
Surrogate: Toluene-d8	12.7		"	13.3		95.3	45-149			
Surrogate: 4-Bromofluorobenzene	15.2		"	13.3		114	45-146			

**LCS (1503265-BS1)**

Prepared & Analyzed: 03/23/15

Benzene	31.3	1.0	ug/l	33.3		93.9	51-132			
Toluene	29.5	1.0	"	33.3		88.6	51-138			
Ethylbenzene	31.4	1.0	"	33.1		94.8	58-146			
m,p-Xylene	64.6	2.0	"	66.5		97.2	57-144			
o-Xylene	30.6	1.0	"	32.8		93.2	53-146			
Surrogate: 1,2-Dichloroethane-d4	11.5		"	13.2		87.0	37-154			
Surrogate: Toluene-d8	13.0		"	13.3		97.7	45-149			
Surrogate: 4-Bromofluorobenzene	13.8		"	13.3		103	45-146			

**Matrix Spike (1503265-MS1)**

Source: 1503186-01

Prepared & Analyzed: 03/23/15

Benzene	31.4	1.0	ug/l	33.3	ND	94.3	34-141			
Toluene	29.6	1.0	"	33.3	ND	88.7	27-151			
Ethylbenzene	32.4	1.0	"	33.1	ND	97.8	29-160			
m,p-Xylene	65.9	2.0	"	66.5	ND	99.1	20-166			
o-Xylene	31.6	1.0	"	32.8	ND	96.3	33-159			
Surrogate: 1,2-Dichloroethane-d4	11.7		"	13.2		88.3	37-154			
Surrogate: Toluene-d8	12.6		"	13.3		94.4	45-149			
Surrogate: 4-Bromofluorobenzene	14.0		"	13.3		105	45-146			

Summit Scientific

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

Project: Ursula 2

Project Number: [none]  
 Project Manager: Brandon Brunns

**Reported:**  
 03/24/15 07:50

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

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

**Batch 1503265 - EPA 5030 Water MS**

<b>Matrix Spike Dup (1503265-MSD1)</b>	<b>Source: 1503186-01</b>			<b>Prepared &amp; Analyzed: 03/23/15</b>						
Benzene	32.2	1.0	ug/l	33.3	ND	96.7	34-141	2.51	32	
Toluene	30.5	1.0	"	33.3	ND	91.4	27-151	3.03	25	
Ethylbenzene	32.5	1.0	"	33.1	ND	98.3	29-160	0.524	50	
m,p-Xylene	66.7	2.0	"	66.5	ND	100	20-166	1.19	36	
o-Xylene	31.7	1.0	"	32.8	ND	96.6	33-159	0.348	26	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>12.4</i>		<i>"</i>	<i>13.2</i>		<i>94.3</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.0</i>		<i>"</i>	<i>13.3</i>		<i>97.7</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>14.0</i>		<i>"</i>	<i>13.3</i>		<i>105</i>	<i>45-146</i>			

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

Project: Ursula 2

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
03/24/15 07:50

### 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

---

Summit Scientific

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# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 09, 2015

Brandon Bruns  
PDC Energy  
1775 Sherman St. STE. 3000  
Denver, CO 80203  
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 04/06/15 16:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'Ben Shrewsbury', with a long, sweeping horizontal line extending to the right.

Ben Shrewsbury For Paul Shrewsbury  
President



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

Project: Ursula 2

Project Number: [none]  
Project Manager: Brandon Brunns

**Reported:**  
04/09/15 14:16

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01@4-5'	1504044-01	Soil	04/06/15 09:20	04/06/15 16:20
BH02@5-6'	1504044-02	Soil	04/06/15 10:10	04/06/15 16:20
BH04@5-6'	1504044-03	Soil	04/06/15 11:40	04/06/15 16:20
BH06@6'	1504044-04	Soil	04/06/15 12:50	04/06/15 16:20
BH07@5-6'	1504044-05	Soil	04/06/15 13:25	04/06/15 16:20
BH08@5-6'	1504044-06	Soil	04/06/15 13:55	04/06/15 16:20
BH09@5-6'	1504044-07	Soil	04/06/15 14:25	04/06/15 16:20
BH10@5-6'	1504044-08	Soil	04/06/15 14:50	04/06/15 16:20
BH01	1504044-09	Water	04/06/15 10:20	04/06/15 16:20
BH02	1504044-10	Water	04/06/15 11:00	04/06/15 16:20
BH03	1504044-11	Water	04/06/15 11:30	04/06/15 16:20
BH04	1504044-12	Water	04/06/15 12:20	04/06/15 16:20
BH05	1504044-13	Water	04/06/15 12:45	04/06/15 16:20
BH06	1504044-14	Water	04/06/15 13:10	04/06/15 16:20
BH07	1504044-15	Water	04/06/15 13:45	04/06/15 16:20
BH08	1504044-16	Water	04/06/15 14:10	04/06/15 16:20
BH09	1504044-17	Water	04/06/15 14:40	04/06/15 16:20
BH10	1504044-18	Water	04/06/15 15:15	04/06/15 16:20

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: Ursula 2

Project Number: [none]  
Project Manager: Brandon Bruns

Reported:  
04/09/15 14:16

# Summit Scientific 1504044.1

S<sub>2</sub>

741 Corporate Circle, Suite J&K ♦ Golden, Colorado 80401  
303-277-9310 ♦ 303-374-5933

Page 1 of 2

Client: PDC/Tasman Project Manager: Brandon Bruns  
Address: \_\_\_\_\_ E-Mail: \_\_\_\_\_  
City/State/Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ Project Name: Ursula #2  
Sampler Name: Eric Sigel Project Number: \_\_\_\_\_

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested						Special Instructions
					HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	8260 GIBSKN	8015 DRO				
1	BH01 e 5-6'	4/6/15	920	1			X			X			X	X				
2	BH02 e 5-6'		1010															
3	BH04 e 5-6'		1140															
4	BH06 e 6'		1250															
5	BH07 e 5-6'		1325															
6	BH08 e 5-6'		1355															
7	BH09 e 5-6'		1425															
8	BH10 e 5-6'		1450															
9																		
10																		

Relinquished by: <u>E. A. Sigel</u> Date/Time: <u>4/6/15</u>	Received by: <u>Andrew Cole</u> Date/Time: <u>4/6/15</u>	Date/Time: <u>1620</u>	Turn Around Time (Check)	Notes:
Relinquished by: _____ Date/Time: _____	Received by: _____ Date/Time: _____		Same Day _____ 72 hours <u>X</u>	<u>none</u>
Relinquished by: _____ Date/Time: _____	Received by: _____ Date/Time: _____		24 hours _____ Standard _____	
Relinquished by: _____ Date/Time: _____	Received by: _____ Date/Time: _____		48 hours _____	
Sample Integrity:			Temperature Upon Receipt: <u>7.6</u>	
			Intact: <u>Yes</u> No	

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

Project: Ursula 2

Project Number: [none]  
Project Manager: Brandon Bruns

Reported:  
04/09/15 14:16

# Summit Scientific

S<sub>2</sub>

1504044.2

741 Corporate Circle, Suite J&K ♦ Golden, Colorado 80401  
303-277-9310 ♦ 303-374-5933

Page 2 of 2

Client: PDC/Tasman Project Manager: Brandon Bruns  
Address: \_\_\_\_\_ E-Mail: \_\_\_\_\_  
City/State/Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ Project Name: Ursula #2  
Sampler Name: Eric Siegel Project Number: \_\_\_\_\_

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested				Special Instructions
					HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)				
1	BH01	4/6/15	1020	3	X				X							
2	BH02		1100		X		X									
3	BH03		1130		X											
4	BH04		1220		X		X									
5	BH05		1245		X											
6	BH06		1310		X											
7	BH07		1345		X		X									
8	BH08		1410		X											
9	BH09		1440		X											
10	BH10		1515		X											

Relinquished by: <u>Eric A. Siegel</u> Date/Time: <u>4/6/15</u>	Received by: <u>Andrew Cole</u> Date/Time: <u>4/6/15</u>	Turn Around Time (Check)	Notes: <u>snice</u>
Relinquished by: _____ Date/Time: _____	Received by: _____ Date/Time: _____	Same Day _____ 72 hours <input checked="" type="checkbox"/>	
Relinquished by: _____ Date/Time: _____	Received by: _____ Date/Time: _____	24 hours _____ Standard _____ 48 hours _____	
Sample Integrity:		Temperature Upon Receipt: <u>7.6</u>	
		Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	

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

Project: Ursula 2  
Project Number: [none]  
Project Manager: Brandon Brunns

**Reported:**  
04/09/15 14:16

**BH01@4-5'**  
**1504044-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/06/15 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504063	04/07/15	04/08/15	8015M	

Date Sampled: **04/06/15 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		110 %	30-150		"	"	"	"	

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

Date Sampled: **04/06/15 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1504062	04/07/15	04/09/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/06/15 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.2 %	21-167		"	"	"	"	

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*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: Ursula 2  
Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
04/09/15 14:16

**BH02@5-6'**  
**1504044-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/06/15 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504063	04/07/15	04/09/15	8015M	

Date Sampled: **04/06/15 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		110 %	30-150		"	"	"	"	

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

Date Sampled: **04/06/15 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1504062	04/07/15	04/09/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/06/15 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.0 %	21-167		"	"	"	"	

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

Project: Ursula 2

Project Number: [none]  
 Project Manager: Brandon Bruns

**Reported:**  
 04/09/15 14:16

**BH04@5-6'**  
**1504044-03 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/06/15 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504063	04/07/15	04/09/15	8015M	

Date Sampled: **04/06/15 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		109 %	30-150		"	"	"	"	

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

Date Sampled: **04/06/15 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1504062	04/07/15	04/09/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/06/15 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

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

Project: Ursula 2

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
04/09/15 14:16

**BH06@6'**  
**1504044-04 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/06/15 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504063	04/07/15	04/09/15	8015M	

Date Sampled: **04/06/15 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		110 %	30-150		"	"	"	"	

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

Date Sampled: **04/06/15 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1504062	04/07/15	04/09/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/06/15 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

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

Project: Ursula 2  
Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
04/09/15 14:16

**BH07@5-6'**  
**1504044-05 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/06/15 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>2400</b>	50	mg/kg	1	1504063	04/07/15	04/09/15	8015M	

Date Sampled: **04/06/15 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		110 %	30-150		"	"	"	"	

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

Date Sampled: **04/06/15 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Naphthalene</b>	<b>0.34</b>	0.010	mg/kg	1	1504062	04/07/15	04/09/15	EPA 8260B	
<b>Benzene</b>	<b>0.014</b>	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>2.3</b>	0.50	"	100	"	"	04/09/15	"	
<b>Xylenes (total)</b>	<b>69</b>	1.0	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>3700</b>	50	"	"	"	"	"	"	

Date Sampled: **04/06/15 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		114 %	23-173		"	"	04/09/15	"	
<i>Surrogate: Toluene-d8</i>		701 %	20-170		"	"	"	"	S-02
<i>Surrogate: 4-Bromofluorobenzene</i>		161 %	21-167		"	"	"	"	S-02

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*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: Ursula 2  
Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
04/09/15 14:16

**BH08@5-6'**  
**1504044-06 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/06/15 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504063	04/07/15	04/09/15	8015M	

Date Sampled: **04/06/15 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		108 %	30-150		"	"	"	"	

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

Date Sampled: **04/06/15 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1504062	04/07/15	04/09/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/06/15 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.5 %	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: Ursula 2  
Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
04/09/15 14:16

**BH09@5-6'**  
**1504044-07 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/06/15 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504063	04/07/15	04/09/15	8015M	

Date Sampled: **04/06/15 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		109 %	30-150		"	"	"	"	

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

Date Sampled: **04/06/15 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1504062	04/07/15	04/09/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/06/15 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

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

Project: Ursula 2  
Project Number: [none]  
Project Manager: Brandon Brunns

**Reported:**  
04/09/15 14:16

**BH10@5-6'**  
**1504044-08 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/06/15 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>240</b>	50	mg/kg	1	1504063	04/07/15	04/09/15	8015M	

Date Sampled: **04/06/15 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		116 %	30-150		"	"	"	"	

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

Date Sampled: **04/06/15 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Naphthalene</b>	<b>0.076</b>	0.010	mg/kg	1	1504062	04/07/15	04/09/15	EPA 8260B	
<b>Benzene</b>	<b>0.0053</b>	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.020</b>	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>440</b>	5.0	"	10	"	"	04/09/15	"	

Date Sampled: **04/06/15 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		105 %	23-173		"	"	04/09/15	"	
<i>Surrogate: Toluene-d8</i>		121 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		167 %	21-167		"	"	"	"	

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

Project: Ursula 2  
 Project Number: [none]  
 Project Manager: Brandon Bruns

**Reported:**  
 04/09/15 14:16

**BH01**  
**1504044-09 (Water)**

**Summit Scientific**

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

Date Sampled: **04/06/15 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1504061	04/08/15	04/08/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **04/06/15 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		97.8 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		96.5 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		111 %	45-146		"	"	"	"	

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

Project: Ursula 2  
 Project Number: [none]  
 Project Manager: Brandon Brunns

**Reported:**  
 04/09/15 14:16

**BH02**  
**1504044-10 (Water)**

**Summit Scientific**

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

Date Sampled: **04/06/15 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>24</b>	1.0	ug/l	1	1504061	04/08/15	04/08/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>1600</b>	100	"	100	"	"	"	"	
<b>Xylenes (total)</b>	<b>13000</b>	100	"	"	"	"	"	"	

Date Sampled: **04/06/15 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		95.2 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98.8 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		111 %	45-146		"	"	"	"	

Summit Scientific

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

Project: Ursula 2  
 Project Number: [none]  
 Project Manager: Brandon Brunns

**Reported:**  
 04/09/15 14:16

**BH03**  
**1504044-11 (Water)**

**Summit Scientific**

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

Date Sampled: **04/06/15 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1504061	04/08/15	04/08/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>5.0</b>	1.0	"	"	"	"	"	"	

Date Sampled: **04/06/15 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		102 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98.3 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		112 %	45-146		"	"	"	"	

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

Project: Ursula 2  
 Project Number: [none]  
 Project Manager: Brandon Bruns

**Reported:**  
 04/09/15 14:16

**BH04**  
**1504044-12 (Water)**

**Summit Scientific**

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

Date Sampled: **04/06/15 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>1100</b>	100	ug/l	100	1504061	04/08/15	04/08/15	EPA 8260B	
<b>Toluene</b>	<b>6.4</b>	1.0	"	1	"	"	"	"	
<b>Ethylbenzene</b>	<b>920</b>	100	"	100	"	"	"	"	
<b>Xylenes (total)</b>	<b>8900</b>	100	"	"	"	"	"	"	

Date Sampled: **04/06/15 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		99.2 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98.6 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		107 %	45-146		"	"	"	"	

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

Project: Ursula 2  
 Project Number: [none]  
 Project Manager: Brandon Bruns

**Reported:**  
 04/09/15 14:16

**BH05**  
**1504044-13 (Water)**

**Summit Scientific**

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

Date Sampled: **04/06/15 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>1100</b>	100	ug/l	100	1504061	04/08/15	04/08/15	EPA 8260B	
<b>Toluene</b>	<b>7.0</b>	1.0	"	1	"	"	"	"	
<b>Ethylbenzene</b>	<b>1200</b>	100	"	100	"	"	"	"	
<b>Xylenes (total)</b>	<b>9400</b>	100	"	"	"	"	"	"	

Date Sampled: **04/06/15 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		94.4 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		97.7 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		111 %	45-146		"	"	"	"	

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

Project: Ursula 2  
 Project Number: [none]  
 Project Manager: Brandon Bruns

**Reported:**  
 04/09/15 14:16

**BH06**  
**1504044-14 (Water)**

**Summit Scientific**

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

Date Sampled: **04/06/15 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1504061	04/08/15	04/08/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **04/06/15 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		99.7 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		96.9 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		110 %	45-146		"	"	"	"	

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

Project: Ursula 2  
 Project Number: [none]  
 Project Manager: Brandon Brunns

**Reported:**  
 04/09/15 14:16

**BH07**  
**1504044-15 (Water)**

**Summit Scientific**

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

Date Sampled: **04/06/15 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>450</b>	10	ug/l	10	1504061	04/08/15	04/08/15	EPA 8260B	
Toluene	ND	1.0	"	1	"	"	"	"	
<b>Ethylbenzene</b>	<b>12</b>	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>540</b>	1.0	"	"	"	"	"	"	

Date Sampled: **04/06/15 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		101 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		110 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		113 %	45-146		"	"	"	"	

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

Project: Ursula 2  
 Project Number: [none]  
 Project Manager: Brandon Bruns

**Reported:**  
 04/09/15 14:16

**BH08**  
**1504044-16 (Water)**

**Summit Scientific**

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

Date Sampled: **04/06/15 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>15</b>	1.0	ug/l	1	1504061	04/08/15	04/08/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>4.0</b>	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>3.5</b>	1.0	"	"	"	"	"	"	

Date Sampled: **04/06/15 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96.1 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98.9 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		107 %	45-146		"	"	"	"	

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

Project: Ursula 2  
 Project Number: [none]  
 Project Manager: Brandon Brunns

**Reported:**  
 04/09/15 14:16

**BH09**  
**1504044-17 (Water)**

**Summit Scientific**

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

Date Sampled: **04/06/15 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>28</b>	1.0	ug/l	1	1504061	04/08/15	04/08/15	EPA 8260B	
<b>Toluene</b>	<b>200</b>	1.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>130</b>	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>2700</b>	10	"	10	"	"	"	"	

Date Sampled: **04/06/15 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		94.8 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		96.3 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		104 %	45-146		"	"	"	"	

Summit Scientific

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

Project: Ursula 2  
 Project Number: [none]  
 Project Manager: Brandon Bruns

**Reported:**  
 04/09/15 14:16

**BH10**  
**1504044-18 (Water)**

**Summit Scientific**

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

Date Sampled: **04/06/15 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>2.5</b>	1.0	ug/l	1	1504061	04/08/15	04/08/15	EPA 8260B	
<b>Toluene</b>	<b>1.6</b>	1.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>2.5</b>	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>5.0</b>	1.0	"	"	"	"	"	"	

Date Sampled: **04/06/15 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		91.7 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98.2 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		110 %	45-146		"	"	"	"	

Summit Scientific

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

Project: Ursula 2

Project Number: [none]  
 Project Manager: Brandon Brunns

**Reported:**  
 04/09/15 14:16

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch 1504063 - EPA 3550A**

<b>Blank (1504063-BLK1)</b>				Prepared & Analyzed: 04/07/15							
C10-C28 (DRO)	ND	50	mg/kg								
Surrogate: <i>o</i> -Terphenyl	13.9		"	12.2		114	30-150				
<b>LCS (1504063-BS1)</b>				Prepared & Analyzed: 04/07/15							
C10-C28 (DRO)	452	50	mg/kg	501		90.2	73-134				
Surrogate: <i>o</i> -Terphenyl	13.2		"	12.2		108	30-150				
<b>Matrix Spike (1504063-MS1)</b>				<b>Source: 1504052-03</b>		Prepared & Analyzed: 04/07/15					
C10-C28 (DRO)	438	50	mg/kg	474	ND	92.3	50-148				
Surrogate: <i>o</i> -Terphenyl	13.1		"	11.6		114	30-150				
<b>Matrix Spike Dup (1504063-MSD1)</b>				<b>Source: 1504052-03</b>		Prepared & Analyzed: 04/07/15					
C10-C28 (DRO)	440	50	mg/kg	475	ND	92.6	50-148	0.501		13	
Surrogate: <i>o</i> -Terphenyl	13.1		"	11.6		113	30-150				

Summit Scientific

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

Project: Ursula 2  
Project Number: [none]  
Project Manager: Brandon Brunns

**Reported:**  
04/09/15 14:16

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

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

**Batch 1504061 - EPA 5030 Water MS**

**Blank (1504061-BLK1)**

Prepared & Analyzed: 04/07/15

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>12.5</i>		<i>"</i>	<i>13.2</i>		<i>95.0</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.0</i>		<i>"</i>	<i>13.3</i>		<i>97.4</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>14.8</i>		<i>"</i>	<i>13.3</i>		<i>111</i>	<i>45-146</i>			

**LCS (1504061-BS1)**

Prepared & Analyzed: 04/07/15

Benzene	30.8	1.0	ug/l	33.3		92.4	51-132			
Toluene	29.3	1.0	"	33.3		87.9	51-138			
Ethylbenzene	31.2	1.0	"	33.1		94.2	58-146			
m,p-Xylene	62.7	2.0	"	66.5		94.3	57-144			
o-Xylene	30.6	1.0	"	32.8		93.4	53-146			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>12.9</i>		<i>"</i>	<i>13.2</i>		<i>97.6</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.3</i>		<i>"</i>	<i>13.3</i>		<i>100</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>14.2</i>		<i>"</i>	<i>13.3</i>		<i>106</i>	<i>45-146</i>			

**Matrix Spike (1504061-MS1)**

Source: 1504048-01

Prepared & Analyzed: 04/07/15

Benzene	30.4	1.0	ug/l	33.3	ND	91.2	34-141			
Toluene	28.9	1.0	"	33.3	ND	86.6	27-151			
Ethylbenzene	31.8	1.0	"	33.1	ND	96.3	29-160			
m,p-Xylene	63.7	2.0	"	66.5	ND	95.8	20-166			
o-Xylene	30.8	1.0	"	32.8	ND	94.0	33-159			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>12.8</i>		<i>"</i>	<i>13.2</i>		<i>97.0</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.0</i>		<i>"</i>	<i>13.3</i>		<i>97.2</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>14.2</i>		<i>"</i>	<i>13.3</i>		<i>107</i>	<i>45-146</i>			

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

Project: Ursula 2  
Project Number: [none]  
Project Manager: Brandon Brunns

**Reported:**  
04/09/15 14:16

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

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

**Batch 1504061 - EPA 5030 Water MS**

Matrix Spike Dup (1504061-MSD1)	Source: 1504048-01			Prepared & Analyzed: 04/07/15						
Benzene	30.9	1.0	ug/l	33.3	ND	92.7	34-141	1.66	32	
Toluene	29.4	1.0	"	33.3	ND	88.4	27-151	2.02	25	
Ethylbenzene	32.2	1.0	"	33.1	ND	97.5	29-160	1.22	50	
m,p-Xylene	64.9	2.0	"	66.5	ND	97.6	20-166	1.83	36	
o-Xylene	31.0	1.0	"	32.8	ND	94.6	33-159	0.582	26	
Surrogate: 1,2-Dichloroethane-d4	13.9		"	13.2		105	37-154			
Surrogate: Toluene-d8	13.1		"	13.3		98.0	45-149			
Surrogate: 4-Bromofluorobenzene	14.5		"	13.3		109	45-146			

**Batch 1504062 - EPA 5030 Soil MS**

Blank (1504062-BLK1)	Prepared & Analyzed: 04/07/15									
Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0340		"	0.0396		85.8	23-173			
Surrogate: Toluene-d8	0.0387		"	0.0400		96.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0437		"	0.0400		109	21-167			

LCS (1504062-BS1)	Prepared & Analyzed: 04/07/15									
Naphthalene	ND	0.010	mg/kg							
Benzene	0.0907	0.0020	"	0.100		90.7	58-130			
Toluene	0.0882	0.0050	"	0.100		88.2	61-134			
Ethylbenzene	0.0961	0.0050	"	0.0992		96.9	74-139			
m,p-Xylene	0.194	0.010	"	0.200		97.1	73-137			
o-Xylene	0.0923	0.0050	"	0.0984		93.8	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0364		"	0.0396		92.0	23-173			
Surrogate: Toluene-d8	0.0385		"	0.0400		96.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0424		"	0.0400		106	21-167			

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

Project: Ursula 2

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
04/09/15 14:16

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

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

**Batch 1504062 - EPA 5030 Soil MS**

**Matrix Spike (1504062-MS1)**

**Source: 1504052-03**

Prepared & Analyzed: 04/07/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0904	0.0020	"	0.0982	ND	92.1	30-131			
Toluene	0.0877	0.0050	"	0.0982	ND	89.3	30-134			
Ethylbenzene	0.0938	0.0050	"	0.0974	ND	96.3	22-153			
m,p-Xylene	0.190	0.010	"	0.196	ND	97.0	10-159			
o-Xylene	0.0913	0.0050	"	0.0967	ND	94.5	31-151			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0354</i>		<i>"</i>	<i>0.0389</i>		<i>91.1</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0391</i>		<i>"</i>	<i>0.0393</i>		<i>99.4</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0400</i>		<i>"</i>	<i>0.0393</i>		<i>102</i>	<i>21-167</i>			

**Matrix Spike Dup (1504062-MSD1)**

**Source: 1504052-03**

Prepared & Analyzed: 04/07/15

Naphthalene	ND	0.010	mg/kg		ND		10-158		42
Benzene	0.0873	0.0020	"	0.0952	ND	91.7	30-131	3.52	34
Toluene	0.0864	0.0050	"	0.0952	ND	90.7	30-134	1.46	30
Ethylbenzene	0.0919	0.0050	"	0.0945	ND	97.3	22-153	2.03	24
m,p-Xylene	0.184	0.010	"	0.190	ND	96.8	10-159	3.27	68
o-Xylene	0.0869	0.0050	"	0.0937	ND	92.7	31-151	4.98	38
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0358</i>		<i>"</i>	<i>0.0377</i>		<i>95.0</i>	<i>23-173</i>		
<i>Surrogate: Toluene-d8</i>	<i>0.0381</i>		<i>"</i>	<i>0.0381</i>		<i>100</i>	<i>20-170</i>		
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0400</i>		<i>"</i>	<i>0.0381</i>		<i>105</i>	<i>21-167</i>		

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

Project: Ursula 2

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
04/09/15 14:16

### Notes and Definitions

S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

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

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Summit Scientific

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# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 12, 2015

Brandon Bruns  
PDC Energy  
1775 Sherman St. STE. 3000  
Denver, CO 80203  
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 04/10/15 17:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury  
President



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

Project: Ursula 2

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
04/12/15 19:55

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH11@3-4'	1504106-01	Soil	04/10/15 09:45	04/10/15 17:30
BH12@6-7'	1504106-02	Soil	04/10/15 10:30	04/10/15 17:30
SB01@2'	1504106-03	Soil	04/10/15 11:10	04/10/15 17:30
SB01@5'	1504106-04	Soil	04/10/15 11:15	04/10/15 17:30
BH11	1504106-05	Water	04/10/15 10:22	04/10/15 17:30
BH12	1504106-06	Water	04/10/15 11:40	04/10/15 17:30
BH13	1504106-07	Water	04/10/15 11:30	04/10/15 17:30
BH14	1504106-08	Water	04/10/15 12:15	04/10/15 17:30

Summit Scientific

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

Project: Ursula 2

Project Number: [none]  
Project Manager: Brandon Bruns

Reported:  
04/12/15 19:55

# Summit Scientific *15041660*

S<sub>2</sub>

741 Corporate Circle, Suite J&K ♦ Golden, Colorado 80401  
303-277-9310 ♦ 303-374-5933

Page 1 of 1

Client: PDC/Tasman Project Manager: Brandon Bruns  
Address: \_\_\_\_\_ E-Mail: \_\_\_\_\_  
City/State/Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ Project Name: Ursula #2  
Sampler Name: Eric Sigel Project Number: \_\_\_\_\_

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested			Special Instructions
					HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	8015 DRO	8060 GIBBERN	
1	BH11 e3-4'	4/10/15	945	1			X			X			X	X	
2	BH12 e6-7'		1030	1			X			X			X	X	
3	SB01 e2'		1110	1			X			X			X	X	
4	SB01 e5'		1115	1			X			X			X	X	
5	BH11		1022	3	X				X					X	
6	BH12		1140	2			X		X					X	
7	BH13		1130	3	X				X					X	
8	BH14	↓	1215	3	X				X					X	
9															
10															

Relinquished by: <u>Eric A. Sigel</u>	Date/Time: <u>4/10/15</u>	Received by: <u>[Signature]</u>	Date/Time: <u>4/10/15 1655</u>	Turn Around Time (Check)	Notes:
				Same Day <input type="checkbox"/>	Standard <input type="checkbox"/>  Sample Integrity: Temperature Upon Receipt: <u>3.6°C</u> Intact: <input checked="" type="radio"/> Yes No
				24 hours <input checked="" type="checkbox"/>	
				48 hours <input type="checkbox"/>	
Relinquished by: <u>[Signature]</u>	Date/Time: <u>4/10/15 1730</u>	Received by: <u>[Signature]</u>	Date/Time: <u>4-10 1730</u>		<u>on ice</u>

www.s2scientific.com



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

Project: Ursula 2

Project Number: [none]  
Project Manager: Brandon Brunns

**Reported:**  
04/12/15 19:55

**BH11@3-4'**  
**1504106-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/10/15 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504109	04/10/15	04/10/15	8015M	

Date Sampled: **04/10/15 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		114 %	70-130		"	"	"	"	

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

Date Sampled: **04/10/15 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1504110	04/10/15	04/10/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>0.55</b>	0.50	"	"	"	"	"	"	

Date Sampled: **04/10/15 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.8 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Ursula 2

Project Number: [none]  
Project Manager: Brandon Brunns

Reported:  
04/12/15 19:55

**BH12@6-7'**  
**1504106-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/10/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504109	04/10/15	04/10/15	8015M	

Date Sampled: **04/10/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		112 %	70-130		"	"	"	"	

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

Date Sampled: **04/10/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1504110	04/10/15	04/10/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/10/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.8 %	21-167		"	"	"	"	

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

Project: Ursula 2  
Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
04/12/15 19:55

**SB01@2'**  
**1504106-03 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/10/15 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>610</b>	50	mg/kg	1	1504109	04/10/15	04/10/15	8015M	

Date Sampled: **04/10/15 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		123 %	70-130		"	"	"	"	

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

Date Sampled: **04/10/15 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Naphthalene</b>	<b>0.39</b>	0.010	mg/kg	1	1504110	04/10/15	04/10/15	EPA 8260B	
<b>Benzene</b>	<b>0.027</b>	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.38</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.056</b>	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>56</b>	0.50	"	"	"	"	"	"	

Date Sampled: **04/10/15 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96.8 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		45.6 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		260 %	21-167		"	"	"	"	S-02

Summit Scientific

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

Project: Ursula 2  
Project Number: [none]  
Project Manager: Brandon Brunns

**Reported:**  
04/12/15 19:55

**SB01@5'**  
**1504106-04 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/10/15 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>730</b>	50	mg/kg	1	1504109	04/10/15	04/10/15	8015M	

Date Sampled: **04/10/15 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		114 %	70-130		"	"	"	"	

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

Date Sampled: **04/10/15 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Naphthalene</b>	<b>4.8</b>	1.0	mg/kg	100	1504110	04/10/15	04/10/15	EPA 8260B	
<b>Benzene</b>	<b>0.15</b>	0.0020	"	1	"	"	04/11/15	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>7.2</b>	0.50	"	100	"	"	04/10/15	"	
<b>Xylenes (total)</b>	<b>15</b>	1.0	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>2300</b>	50	"	"	"	"	"	"	

Date Sampled: **04/10/15 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		91.6 %	23-173		"	"	04/11/15	"	
<i>Surrogate: Toluene-d8</i>		1780 %	20-170		"	"	"	"	S-02
<i>Surrogate: 4-Bromofluorobenzene</i>		1580 %	21-167		"	"	"	"	S-02

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

Project: Ursula 2  
 Project Number: [none]  
 Project Manager: Brandon Brunns

**Reported:**  
 04/12/15 19:55

**BH11**  
**1504106-05 (Water)**

**Summit Scientific**

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

Date Sampled: **04/10/15 10:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1504123	04/11/15	04/11/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **04/10/15 10:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		<i>106 %</i>	<i>37-154</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	
<i>Surrogate: Toluene-d8</i>		<i>95.6 %</i>	<i>45-149</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>102 %</i>	<i>45-146</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	

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

Project: Ursula 2  
 Project Number: [none]  
 Project Manager: Brandon Brunns

**Reported:**  
 04/12/15 19:55

**BH12**  
**1504106-06 (Water)**

**Summit Scientific**

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

Date Sampled: **04/10/15 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1504123	04/11/15	04/11/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **04/10/15 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		98.7 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		97.0 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		103 %	45-146		"	"	"	"	

Summit Scientific

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

Project: Ursula 2

Project Number: [none]  
 Project Manager: Brandon Brunns

**Reported:**  
 04/12/15 19:55

**BH13**  
**1504106-07 (Water)**

**Summit Scientific**

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

Date Sampled: **04/10/15 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1504123	04/11/15	04/11/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **04/10/15 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		98.1 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		97.1 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		100 %	45-146		"	"	"	"	

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

Project: Ursula 2

Project Number: [none]  
 Project Manager: Brandon Brunns

**Reported:**  
 04/12/15 19:55

**BH14**  
**1504106-08 (Water)**

**Summit Scientific**

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

Date Sampled: **04/10/15 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1504123	04/11/15	04/11/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **04/10/15 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		<i>103 %</i>	<i>37-154</i>		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		<i>94.4 %</i>	<i>45-149</i>		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>101 %</i>	<i>45-146</i>		"	"	"	"	

Summit Scientific

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

Project: Ursula 2  
 Project Number: [none]  
 Project Manager: Brandon Brunns

**Reported:**  
 04/12/15 19:55

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch 1504109 - EPA 3550A**

<b>Blank (1504109-BLK1)</b>				Prepared & Analyzed: 04/10/15						
C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
<i>Surrogate: o-Terphenyl</i>	<i>15.0</i>		<i>"</i>	<i>12.2</i>		<i>123</i>	<i>70-130</i>			
<b>LCS (1504109-BS1)</b>				Prepared & Analyzed: 04/10/15						
C10-C28 (DRO)	493	50	mg/kg	501	11.5	98.3	50-150			
<i>Surrogate: o-Terphenyl</i>	<i>13.9</i>		<i>"</i>	<i>12.2</i>		<i>114</i>	<i>70-130</i>			
<b>Matrix Spike (1504109-MS1)</b>				<b>Source: 1504081-01</b>		Prepared & Analyzed: 04/10/15				
C10-C28 (DRO)	519	50	mg/kg	495	11.5	102	50-150			
<i>Surrogate: o-Terphenyl</i>	<i>14.0</i>		<i>"</i>	<i>12.1</i>		<i>116</i>	<i>70-130</i>			
<b>Matrix Spike Dup (1504109-MSD1)</b>				<b>Source: 1504081-01</b>		Prepared & Analyzed: 04/10/15				
C10-C28 (DRO)	486	50	mg/kg	490	11.5	96.8	50-150	6.45	20	
<i>Surrogate: o-Terphenyl</i>	<i>13.3</i>		<i>"</i>	<i>11.9</i>		<i>111</i>	<i>70-130</i>			

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

Project: Ursula 2  
Project Number: [none]  
Project Manager: Brandon Bruns

Reported:  
04/12/15 19:55

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

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

**Batch 1504110 - EPA 5030 Soil MS**

**Blank (1504110-BLK1)**

Prepared & Analyzed: 04/10/15

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0372</i>		<i>"</i>	<i>0.0396</i>		<i>93.9</i>		<i>23-173</i>		
<i>Surrogate: Toluene-d8</i>	<i>0.0382</i>		<i>"</i>	<i>0.0400</i>		<i>95.6</i>		<i>20-170</i>		
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0368</i>		<i>"</i>	<i>0.0400</i>		<i>92.0</i>		<i>21-167</i>		

**LCS (1504110-BS1)**

Prepared & Analyzed: 04/10/15

Naphthalene	ND	0.010	mg/kg					66-138		
Benzene	0.0935	0.0020	"	0.100		93.5		58-130		
Toluene	0.103	0.0050	"	0.100		103		61-134		
Ethylbenzene	0.107	0.0050	"	0.0992		108		74-139		
m,p-Xylene	0.223	0.010	"	0.200		112		73-137		
o-Xylene	0.115	0.0050	"	0.0984		117		73-141		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0382</i>		<i>"</i>	<i>0.0396</i>		<i>96.6</i>		<i>23-173</i>		
<i>Surrogate: Toluene-d8</i>	<i>0.0388</i>		<i>"</i>	<i>0.0400</i>		<i>96.9</i>		<i>20-170</i>		
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0367</i>		<i>"</i>	<i>0.0400</i>		<i>91.6</i>		<i>21-167</i>		

**Matrix Spike (1504110-MS1)**

Source: 1504057-01

Prepared & Analyzed: 04/10/15

Naphthalene	ND	0.010	mg/kg		ND			10-158		
Benzene	0.0951	0.0020	"	0.0977	ND	97.4		30-131		
Toluene	0.102	0.0050	"	0.0977	ND	104		30-134		
Ethylbenzene	0.0970	0.0050	"	0.0969	ND	100		22-153		
m,p-Xylene	0.204	0.010	"	0.195	0.00776	101		10-159		
o-Xylene	0.105	0.0050	"	0.0961	ND	109		31-151		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0397</i>		<i>"</i>	<i>0.0387</i>		<i>103</i>		<i>23-173</i>		
<i>Surrogate: Toluene-d8</i>	<i>0.0383</i>		<i>"</i>	<i>0.0391</i>		<i>98.2</i>		<i>20-170</i>		
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0356</i>		<i>"</i>	<i>0.0391</i>		<i>91.0</i>		<i>21-167</i>		

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

Project: Ursula 2  
Project Number: [none]  
Project Manager: Brandon Brunns

Reported:  
04/12/15 19:55

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

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

**Batch 1504110 - EPA 5030 Soil MS**

**Matrix Spike Dup (1504110-MSD1)**

Source: 1504057-01

Prepared & Analyzed: 04/10/15

Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0896	0.0020	"	0.0952	ND	94.1	30-131	5.95	34	
Toluene	0.0933	0.0050	"	0.0952	ND	97.9	30-134	8.79	30	
Ethylbenzene	0.0870	0.0050	"	0.0945	ND	92.1	22-153	10.8	24	
m,p-Xylene	0.185	0.010	"	0.190	0.00776	93.2	10-159	9.84	68	
o-Xylene	0.0936	0.0050	"	0.0937	ND	99.9	31-151	11.6	38	
Surrogate: 1,2-Dichloroethane-d4	0.0381		"	0.0377		101	23-173			
Surrogate: Toluene-d8	0.0371		"	0.0381		97.3	20-170			
Surrogate: 4-Bromofluorobenzene	0.0355		"	0.0381		93.1	21-167			

**Batch 1504123 - EPA 5030 Water MS**

**Blank (1504123-BLK1)**

Prepared & Analyzed: 04/11/15

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	12.9		"	13.2		97.4	37-154			
Surrogate: Toluene-d8	13.0		"	13.3		97.7	45-149			
Surrogate: 4-Bromofluorobenzene	12.6		"	13.3		94.3	45-146			

**LCS (1504123-BS1)**

Prepared & Analyzed: 04/11/15

Benzene	46.1	1.0	ug/l	50.0		92.2	51-132			
Toluene	47.2	1.0	"	50.0		94.5	51-138			
Ethylbenzene	47.4	1.0	"	50.0		94.9	58-146			
m,p-Xylene	96.8	2.0	"	100		96.8	57-144			
o-Xylene	48.6	1.0	"	50.0		97.1	53-146			
Surrogate: 1,2-Dichloroethane-d4	11.8		"	13.2		89.8	37-154			
Surrogate: Toluene-d8	13.2		"	13.3		98.7	45-149			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.6	45-146			

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

Project: Ursula 2  
Project Number: [none]  
Project Manager: Brandon Brunns

Reported:  
04/12/15 19:55

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

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

**Batch 1504123 - EPA 5030 Water MS**

<b>Matrix Spike (1504123-MS1)</b>	<b>Source: 1504047-01</b>			<b>Prepared &amp; Analyzed: 04/11/15</b>						
Benzene	47.2	1.0	ug/l	50.0	ND	94.3	34-141			
Toluene	48.0	1.0	"	50.0	ND	95.9	27-151			
Ethylbenzene	48.7	1.0	"	50.0	ND	97.4	29-160			
m,p-Xylene	99.3	2.0	"	100	ND	99.3	20-166			
o-Xylene	50.1	1.0	"	50.0	ND	100	33-159			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>11.7</i>		<i>"</i>	<i>13.2</i>		<i>88.9</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.2</i>		<i>"</i>	<i>13.3</i>		<i>99.2</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.1</i>		<i>"</i>	<i>13.3</i>		<i>98.1</i>	<i>45-146</i>			
<b>Matrix Spike Dup (1504123-MSD1)</b>	<b>Source: 1504047-01</b>			<b>Prepared &amp; Analyzed: 04/11/15</b>						
Benzene	48.3	1.0	ug/l	50.0	ND	96.7	34-141	2.47	32	
Toluene	49.6	1.0	"	50.0	ND	99.3	27-151	3.46	25	
Ethylbenzene	49.8	1.0	"	50.0	ND	99.7	29-160	2.29	50	
m,p-Xylene	101	2.0	"	100	ND	101	20-166	1.96	36	
o-Xylene	51.5	1.0	"	50.0	ND	103	33-159	2.72	26	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>11.9</i>		<i>"</i>	<i>13.2</i>		<i>90.5</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.2</i>		<i>"</i>	<i>13.3</i>		<i>99.0</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.1</i>		<i>"</i>	<i>13.3</i>		<i>98.3</i>	<i>45-146</i>			

Summit Scientific

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

Project: Ursula 2

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
04/12/15 19:55

### Notes and Definitions

- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- 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**

Boring/Well ID #: <b>BH01</b>	SITE NAME: <b>Ursula #2</b>	CLIENT NAME: <b>PDC</b>
Date Started: <b>4/6/15</b>	Location: <b>Weld Co</b>	
Date Completed: <b>4/6/15</b>	TOC Elevation:	DTW:
Type of Drill: <b>DPT</b>	Geologist: <b>EB</b>	
Bit Size: <b>2"</b>	Project Manager: <b>CW</b>	

 Drilling Company: **Tasman**

Depth (feet)	Well Completion	Sample Type	Blows (per 6 in.)	PID (ppm)	Laboratory Sample	USCS	Description
1	sand		Recovery %	NR			Gravelly sand, road base
2		Micro Core	75%	0.0		SP	Lt brown fine sand. mod dense, dry. little clay, few oxidation streaks
3				0.0			
4				0.0			
5				0.0	BH01e45' 9:20		Sand, as above
6		Micro Core	100%	0.0		SP	As above, wet
7				0.0			
8							
9		NS		0%	NR		
10							
11							TD=10'
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

Boring/Well ID #: <b>BHOZ</b>	SITE NAME: <b>Ursula #2</b>	CLIENT NAME: <b>PDC</b>
Date Started: <b>4/6/15</b>	Location: <b>weld Co</b>	
Date Completed: <b>4/6/15</b>	TOC Elevation:	DTW:
Type of Drill: <b>DPT</b>	Geologist: <b>ES</b>	
Bit Size: <b>2"</b>	Project Manager: <b>Ch</b>	

 Drilling Company: **Tasman**

Depth (feet)	Well Completion	Sample Type	Blows (per 6 in.)	PID (ppm)	Laboratory Sample	USCS	Description
1			Recovery	NR			NR
2		Macro Core	75%	0.0		ML	Brown, Sandy (fine) silt. loose, dry
3				0.0		SP	lt brown, fine sand w/ little clay. dry. med. density
4				0.0			
5				NR			NR
6	sand	MC	75%	3.3	BHOZE5-6" 10.10	SP	lt brown, f-in sand, as above
7				1641			As above, moist, gray stain MC odor
8				1540			Wet at 7'
9				1427			As above, heavy black stain
10		MC	100%	1160		SP	
11				4.9			As above, lt brown, no stain
12							TD=11'
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

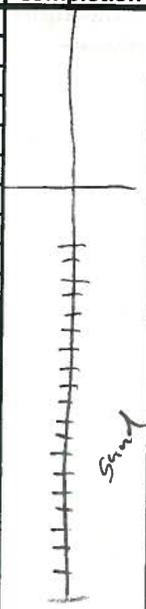
Boring/Well ID #: <b>BH03</b>	SITE NAME: <b>Ursula #2</b>	CLIENT NAME: <b>PDC</b>
Date Started: <b>4/6/15</b>	Location: <b>Weld Co.</b>	
Date Completed: <b>4/6/15</b>	TOC Elevation:	DTW:
Type of Drill: <b>DPT</b>	Geologist: <b>ES</b>	
Bit Size: <b>2"</b>	Project Manager: <b>CW</b>	

 Drilling Company: **Tasman**

Depth (feet)	Well Completion	Sample Type	Blows (per 6 in.)	PID (ppm)	Laboratory Sample	USCS	Description
1		Macro Core	<i>Retain</i>	NR			
2			100%	2.0		SP SM	Lt brown, silty fine sand, dry, loose
3			3.6				
4							
5	sand	MC	75%	NR			
6				3.4		SP SM	As above, med density
7				2.6		SP	Lt brown, fine sand w/ little clay, dry, med density
8				2.3			As above, wet
9				0.3			SP
10			100%	0.0			
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

Boring/Well ID #: <b>B404</b>	SITE NAME: <b>Ursula #2</b>	CLIENT NAME: <b>PDC</b>
Date Started: <b>4/6/15</b>	Location: <b>Weld Co</b>	
Date Completed: <b>4/6/15</b>	TOC Elevation:	DTW:
Type of Drill: <b>DPT</b>	Geologist: <b>ES</b>	
Bit Size: <b>2"</b>	Project Manager: <b>CW</b>	

 Drilling Company: **TASMAN**

Depth (feet)	Well Completion	Sample Type	Blows (per 6 in.)	PID (ppm)	Laboratory Sample	USCS	Description		
1		Mud Core	Recovery	NR					
2			75%	0.0		SM	Brown silty fine sand, dry, loose		
3				0.0					
4				0.0		SP	lt brown, fine sand, med density		
5		ML	75%		NR				
6				0.3	B404 @ 5-6' 11:40	SP	As above		
7				964		SP	Fine sand, wet, oxidation streaks and gray stain, HC odor		
8				1570					
9					335				As above, black stain ↓
10					15.4				No stain, slight odor
11					3.5				
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									



# Borehole Logging Form

Boring/Well ID #: <b>BH05</b>	SITE NAME: <b>Ursula #2</b>	CLIENT NAME: <b>PDC</b>
Date Started: <b>4/6/15</b>	Location: <b>Weld Co</b>	
Date Completed: <b>4/6/15</b>	TOC Elevation:	DTW:
Type of Drill: <b>DPT</b>	Geologist: <b>ES</b>	
Bit Size: <b>2"</b>	Project Manager: <b>CW</b>	

Drilling Company: **Tasman**

Depth (feet)	Well Completion	Sample Type	Blows (per 6 in.)	PID (ppm)	Laboratory Sample	USCS	Description	
1							No samples	
2								
3								
4								
5								Gray silt, HC odor in saturated soil
6								
7								
8								
9								
10								
11							TD = 10'	
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								

Boring/Well ID #: <b>BH06</b>	SITE NAME: <b>Ursula #2</b>	CLIENT NAME: <b>PDC</b>
Date Started: <b>4/6/15</b>	Location: <b>Weld Co</b>	
Date Completed: <b>4/6/15</b>	TOC Elevation:	DTW:
Type of Drill: <b>DPT</b>	Geologist: <b>ES</b>	
Bit Size: <b>2"</b>	Project Manager: <b>CW</b>	

 Drilling Company: **Tasman**

Depth (feet)	Well Completion	Sample Type	Blows (per 6 in.)	PID (ppm)	Laboratory Sample	USCS	Description	
1		Macro Core	Recovery					
2			60%	0.5		SM	Brown, fine sand, silty, loose	
3								
4								
5	Fractured	MC		NR			No recovery	
6			75%	0.0	BH06 6' 12:50	SP	lt brown, f-in sand, dry, med density, no stain/odor	
7				0.0				
8				0.1				As above, wet
9				0.0				
10			100%	0.0			SP	wet sand, as above
11				0.0				
12							TD=11'	
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								

Boring/Well ID #: <b>BH07</b>	SITE NAME: <b>Ursula #2</b>	CLIENT NAME: <b>PDC</b>
Date Started: <b>4/6/15</b>	Location: <b>Weld Co.</b>	
Date Completed: <b>4/6/15</b>	TOC Elevation:	DTW:
Type of Drill: <b>DPT</b>	Geologist: <b>EB</b>	
Bit Size: <b>2"</b>	Project Manager: <b>CW</b>	

 Drilling Company: **Tasman**

Depth (feet)	Well Completion	Sample Type	Blows (per 6 in.)	PID (ppm)	Laboratory Sample	USCS	Description	
1			Recovery	NR				
2		Mud Core	60%	50.8		SP	Brown, fine sand w/ clay, dry, low plast. med density	
3						SP	As above, gray stain + HC odor	
4				990		SP		
5				NR				
6	Sand	MC	75%	1442	BH0705-6' 13:25	SP	As above, strong HC odor	
7				1085				
8					1174		SP	wet, dk gray/black stain, odor
9		MC	0%					No recovery, wet sand
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								

Boring/Well ID #: <b>BH08</b>	SITE NAME: <b>Ursula #2</b>	CLIENT NAME: <b>PDC</b>
Date Started: <b>4/6/15</b>	Location: <b>Weld Co</b>	
Date Completed: <b>4/6/15</b>	TOC Elevation:	DTW:
Type of Drill: <b>DPT</b>	Geologist: <b>ES</b>	
Bit Size: <b>2"</b>	Project Manager: <b>CHR</b>	

 Drilling Company: **Tasman**

Depth (feet)	Well Completion	Sample Type	Blows (per 6 in.)	PID (ppm)	Laboratory Sample	USCS	Description
1			Recovery	NR			
2		Macro Core	75%	4.9		SC	Brown, clayey fine sand, dry, med density, low plasticity
3				5.7			
4				8.4		SP	lt brown, fine sand w/ little clay, dry, med density, non plastic
5				NR			
6		MC	70%	6.1	BH08e5-6 13:55	AS	above
7				0.3		AS	above, wet
8				1.0			Little grey stain
9							
10		MC	0%	NR			NO Recovery, wet sand
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

Boring/Well ID #: <b>BH09</b>	SITE NAME: <b>Ursula #2</b>	CLIENT NAME: <b>PDC</b>
Date Started: <b>4/6/15</b>	Location: <b>Weld Co.</b>	
Date Completed: <b>4/6/15</b>	TOC Elevation:	DTW: <b>6'</b>
Type of Drill: <b>DPT</b>	Geologist: <b>ES</b>	
Bit Size: <b>2"</b>	Project Manager: <b>CW</b>	

 Drilling Company: **Tasman**

Depth (feet)	Well Completion	Sample Type	Blows (per 6 in.)	PID (ppm)	Laboratory Sample	USCS	Description
1		Macro Cae	Recovery	NR			
2			25%	1.7		SL	Brown clayey f-m sand, dry, med density, low plast., roots
3				1.9			
4				0.9		SP	lt brown, f-m sand w/ little clay, dry, med density
5	sand	MC	25%	NR			
6				2.5	BH09e5-6' 14:25	SP	lt brown, f-m sand as above
7				13.8		SP	f-m sand, wet, slight gray stain
8				49.1			As above, black stain, MC odor
9							
10		0%	NR			wet sand	
11							
12							TD = 11'
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

Boring/Well ID #: <b>BH10</b>	SITE NAME: <b>Ursula #2</b>	CLIENT NAME: <b>PDC</b>
Date Started: <b>4/6/15</b>	Location: <b>Weld Co</b>	
Date Completed: <b>4/6/15</b>	TOC Elevation:	DTW:
Type of Drill: <b>DPT</b>	Geologist: <b>ES</b>	
Bit Size: <b>2"</b>	Project Manager: <b>CW</b>	

 Drilling Company: **Tasman**

Depth (feet)	Well Completion	Sample Type	Blows (per 6 in.)	PID (ppm)	Laboratory Sample	USCS	Description	
1	[Well Completion Diagram]	Macro Core	Recovery	NR				
2			75%	0.7		SC	Brown, clayey fine sand, dense med density, oxidation, low fest.	
3				0.1				
4				0.0		SP	lt brown, fine sand, dry med density	
5	[Well Completion Diagram]	MC	100%	1.9			As above, brown	
6				209	BH10e5-6' 14:50	SP	As above, gray + black stain, HC odor	
7				146.4				Wet, gray stain, HC odor
8	[Well Completion Diagram]	MC	0%	104.8		SP		
9								Wet sand, HC stain/odor
10				NR		SP		
11								
12							TD = 11'	
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								



# Borehole Logging Form

Boring/Well ID #: <b>BH11</b>	SITE NAME: <b>Ursula #2</b>	CLIENT NAME: <b>PDC</b>
Date Started: <b>4/10/15</b>	Location: <b>Weld Co.</b>	
Date Completed: <b>4/10/15</b>	TOC Elevation:	DTW:
Type of Drill: <b>DPT</b>	Geologist: <b>ES</b>	
Bit Size: <b>2"</b>	Project Manager: <b>CW</b>	

Drilling Company: **Tasman**

Depth (feet)	Well Completion	Sample Type	Blows (per 6 in)	PID (ppm)	Laboratory Sample	USCS	Description
1		Macro Core	Recovery	NR			
2			75%	0.1		SP	lt brn. fine sand, dry, med density
3				0.2			
4				0.3	BH11 23.4' 9:45		
5	sand	MC	75%	NR			
6				0.1		SP	lt brn. fine sand, wet, med density
7				0.4			
8		0.5					
9		MC	100%	0.5		SP	As above
10				0.6			
11			0.5				
12							TD = 11'
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

Boring/Well ID #: <b>BH12</b>	SITE NAME: <b>Uruda #2</b>	CLIENT NAME: <b>PDC</b>
Date Started: <b>4/10/15</b>	Location: <b>Uruda Co.</b>	
Date Completed: <b>4/10/15</b>	TOC Elevation:	DTW:
Type of Drill: <b>DPT</b>	Geologist: <b>EB</b>	
Bit Size: <b>2"</b>	Project Manager: <b>CW</b>	

 Drilling Company: **Tasman**

Depth (feet)	Well Completion	Sample Type	Blows (per 6 in.)	PID (ppm)	Laboratory Sample	USCS	Description	
1			<i>Recovery</i>	<i>NR</i>				
2		<i>Macro core</i>	<i>60%</i>	<i>0.4</i>		<i>SP</i>	<i>Dk brown, fine sand w/ clay dry, med density</i>	
3								
4				<i>0.5</i>			<i>As above, brown</i>	
5					<i>NR</i>			
6		<i>MC</i>	<i>50%</i>		<i>0.6</i>	<i>BH1206-7 10:30</i>	<i>SP</i>	<i>lt brown, fine sand, dry, med density</i>
7					<i>0.7</i>			<i>Wet at 7'</i>
8					<i>0.7</i>			
9			<i>100%</i>		<i>0.7</i>			<i>wet sand, as above</i>
10					<i>0.8</i>			
11							<i>TD = 10'</i>	
12								
13								
14								
15								
16								
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18								
19								
20								
21								
22								
23								
24								
25								



# Borehole Logging Form

Boring/Well ID #: <b>BH13</b>	SITE NAME: <b>Ursula #2</b>	CLIENT NAME: <b>PDC</b>
Date Started: <b>4/10/15</b>	Location: <b>Weld Co</b>	
Date Completed: <b>4/10/15</b>	TOC Elevation:	DTW:
Type of Drill: <b>DPT</b>	Geologist: <b>EB</b>	
Bit Size: <b>2"</b>	Project Manager: <b>OW</b>	

Drilling Company: **Tasman**

Depth (feet)	Well Completion	Sample Type	Blows (per 6 in.)	PID (ppm)	Laboratory Sample	USCS	Description
1							<p>No Samples</p>
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							TD = 10
12							
13							
14							
15							
16							
17							
18							
19							
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21							
22							
23							
24							
25							



# Borehole Logging Form

Boring/Well ID #: <b>BH14</b>	SITE NAME: <b>Ursula #2</b>	CLIENT NAME: <b>PDC</b>
Date Started: <b>4/10/15</b>	Location: <b>weld Co.</b>	
Date Completed: <b>4/10/15</b>	TOC Elevation:	DTW:
Type of Drill: <b>DPT</b>	Geologist: <b>ES</b>	
Bit Size: <b>2"</b>	Project Manager: <b>CLW</b>	

Drilling Company: **Tasman**

Depth (feet)	Well Completion	Sample Type	Blows (per 6 in.)	PID (ppm)	Laboratory Sample	USCS	Description
1							No Samples
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							TD = 10'
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

Boring/Well ID #: <b>S801</b>		SITE NAME: <b>Ursula #2</b>			CLIENT NAME: <b>PDC</b>		
Date Started: <b>4/10/15</b>				Location: <b>Weld Co.</b>			
Date Completed: <b>4/10/15</b>				TOC Elevation:		DTW:	
Type of Drill: <b>Hand Auger</b>				Geologist: <b>ES</b>			
Bit Size: <b>2"</b>				Project Manager: <b>CW</b>			
Drilling Company: <b>Tasman</b>							
Depth (feet)	Well Completion	Sample Type	Blows (per 6 in.)	PID (ppm)	Laboratory Sample	USCS	Description
1				945			Brown, gravelly road base.
2				1550	S801e 2' 11:10		Gray stained, fine sand, dry, med density, HC odor ↓ TD = 5'
3				1318			
4				1225			
5				1295	S801e 5' 11:15		
6							
7							
8							
9							
10							
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25							