

TABLE 1
DEWALT 1-12
SOIL ANALYTICAL RESULTS SUMMARY TABLE

Sample ID	Date Sampled	Depth (bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	TPH ⁽²⁾ (mg/kg)	Naphthalene (mg/kg)
COGCC standards for soil (mg/kg) ⁽¹⁾			0.17	85	100	175	500	23
SS-1	12/11/2014	4.5'	<0.0020	<0.0050	<0.0050	<.0010	560.51	<0.010
SS-2	12/11/2014	4.5'	<0.0020	<0.0050	<0.0050	<.0010	<50	<0.010
SS-3	12/11/2014	4.5'	<0.0020	<0.0050	<0.0050	<.0010	<50	<0.010
SS-4	12/11/2014	4.5'	<0.0020	<0.0050	<0.0050	<.0010	<50	<0.010
SS-5	12/11/2014	4.5'	<0.00020	<0.0050	<0.0050	<.0010	<50	<0.010

Notes:

1. Standards for soil are taken from 2 CCR 404-1, Table 910-1, effective February 1, 2014.

2. 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
DEWALT 1-12
GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE

Sample ID	Date Sampled	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)
COGCC Table 910-1 Groundwater Standard (ug/L) ⁽¹⁾		5	560	700	1,400
GW01	12/15/2014	860	180	40	260

Notes:

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





COGCC = Colorado Oil and Gas Conservation Commission

ug/L = Micrograms per liter

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

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



DRAWN BY: PD	Facility Diagram PDC Energy, Inc. – DJ Basin Dewalt 1-12 SWNE S12 T6N R65W Weld County, CO	 TASMAN GEOSCIENCES 6899 Pecos Street, Unit C Denver, CO 80221	LEGEND  Approximate Area of Excavation X Soil Sample Location  Groundwater Sample Location  Horizontal Remediation Pipe	FIGURE 2 EXCAVATION SITE MAP
DATE: 12/16/2014				

ATTACHMENT A

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

December 12, 2014

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Dewalt 1-12

Enclosed are the results of analyses for samples received by Summit Scientific on 12/11/14 15:03. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President



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

Project: Dewalt 1-12
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/12/14 07:07

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-1@4.5'	1412106-01	Soil	12/11/14 00:00	12/11/14 15:03
SS-2@4.5'	1412106-02	Soil	12/11/14 00:00	12/11/14 15:03
SS-3@4.5'	1412106-03	Soil	12/11/14 00:00	12/11/14 15:03
SS-4@4.5'	1412106-04	Soil	12/11/14 00:00	12/11/14 15:03

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: Dewalt 1-12
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
12/12/14 07:07

SS-1@4.5'
1412106-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/11/14 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	560	50	mg/kg	1	1412134	12/11/14	12/11/14	8015M	

Date Sampled: 12/11/14 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		111 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/11/14 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1412133	12/11/14	12/12/14	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	0.51	0.50	"	"	"	"	"	"	

Date Sampled: 12/11/14 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.8 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Dewalt 1-12
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/12/14 07:07

SS-2@4.5'
1412106-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/11/14 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1412134	12/11/14	12/11/14	8015M	

Date Sampled: 12/11/14 00:00

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

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/11/14 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1412133	12/11/14	12/12/14	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: 12/11/14 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		111 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.4 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Dewalt 1-12
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/12/14 07:07

SS-3@4.5'
1412106-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/11/14 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1412134	12/11/14	12/11/14	8015M	

Date Sampled: 12/11/14 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		104 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/11/14 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1412133	12/11/14	12/12/14	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: 12/11/14 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.4 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Dewalt 1-12
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
12/12/14 07:07

SS-4@4.5'
1412106-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/11/14 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1412134	12/11/14	12/11/14	8015M	

Date Sampled: 12/11/14 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		114 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/11/14 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1412133	12/11/14	12/12/14	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: 12/11/14 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.0 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Dewalt 1-12
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
12/12/14 07:07

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1412134 - EPA 3550A

Blank (1412134-BLK1)

Prepared: 12/11/14 Analyzed: 12/12/14

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 12.3 " 12.2 101 30-150

LCS (1412134-BS1)

Prepared: 12/11/14 Analyzed: 12/12/14

C10-C28 (DRO) 518 50 mg/kg 501 103 73-134

Surrogate: o-Terphenyl 12.6 " 12.2 104 30-150

Matrix Spike (1412134-MS1)

Source: 1412106-01

Prepared: 12/11/14 Analyzed: 12/12/14

C10-C28 (DRO) 493 50 mg/kg 491 564 NR 50-148

Surrogate: o-Terphenyl 11.8 " 12.0 98.5 30-150

Matrix Spike Dup (1412134-MSD1)

Source: 1412106-01

Prepared: 12/11/14 Analyzed: 12/12/14

C10-C28 (DRO) 515 50 mg/kg 491 564 NR 50-148 4.53 13

Surrogate: o-Terphenyl 12.3 " 12.0 103 30-150

Summit Scientific

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

Project: Dewalt 1-12
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/12/14 07:07

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

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

Batch 1412133 - EPA 5030 Soil MS

Blank (1412133-BLK1)

Prepared: 12/11/14 Analyzed: 12/12/14

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	0.0423		"	0.0396	107	23-173				
Surrogate: Toluene-d8	0.0400		"	0.0400	100	20-170				
Surrogate: 4-Bromofluorobenzene	0.0388		"	0.0400	96.9	21-167				

LCS (1412133-BS1)

Prepared: 12/11/14 Analyzed: 12/12/14

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0906	0.0020	"	0.100	90.6	58-130				
Toluene	0.0919	0.0050	"	0.100	91.9	61-134				
Ethylbenzene	0.100	0.0050	"	0.0992	101	74-139				
m,p-Xylene	0.197	0.010	"	0.200	98.9	73-137				
o-Xylene	0.102	0.0050	"	0.0984	103	73-141				
Surrogate: 1,2-Dichloroethane-d4	0.0408		"	0.0396	103	23-173				
Surrogate: Toluene-d8	0.0387		"	0.0400	96.8	20-170				
Surrogate: 4-Bromofluorobenzene	0.0370		"	0.0400	92.5	21-167				

Matrix Spike (1412133-MS1)

Source: 1412106-01

Prepared: 12/11/14 Analyzed: 12/12/14

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0885	0.0020	"	0.0971	ND	91.2	30-131			
Toluene	0.0881	0.0050	"	0.0971	ND	90.7	30-134			
Ethylbenzene	0.0961	0.0050	"	0.0963	ND	99.8	22-153			
m,p-Xylene	0.187	0.010	"	0.194	ND	96.3	10-159			
o-Xylene	0.0965	0.0050	"	0.0955	ND	101	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0413		"	0.0384	107	23-173				
Surrogate: Toluene-d8	0.0378		"	0.0388	97.4	20-170				
Surrogate: 4-Bromofluorobenzene	0.0366		"	0.0388	94.4	21-167				

Summit Scientific

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

Project: Dewalt 1-12
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/12/14 07:07

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

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

Batch 1412133 - EPA 5030 Soil MS

Matrix Spike Dup (1412133-MSD1)		Source: 1412106-01			Prepared: 12/11/14		Analyzed: 12/12/14			
Naphthalene	ND	0.010	mg/kg		ND		10-158			42
Benzene	0.0879	0.0020	"	0.0980	ND	89.7	30-131	0.683		34
Toluene	0.0893	0.0050	"	0.0980	ND	91.1	30-134	1.34		30
Ethylbenzene	0.0978	0.0050	"	0.0973	ND	101	22-153	1.76		24
m,p-Xylene	0.193	0.010	"	0.196	ND	98.5	10-159	3.24		68
o-Xylene	0.0990	0.0050	"	0.0965	ND	103	31-151	2.53		38
Surrogate: 1,2-Dichloroethane-d4		0.0416	"	0.0388		107	23-173			
Surrogate: Toluene-d8		0.0384	"	0.0392		98.0	20-170			
Surrogate: 4-Bromofluorobenzene		0.0369	"	0.0392		94.0	21-167			

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

Project: Dewalt 1-12

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/12/14 07:07

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

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.

A handwritten signature in black ink, appearing to be 'MSM'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

December 14, 2014

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Dewalt 1-12

Enclosed are the results of analyses for samples received by Summit Scientific on 12/12/14 15:02. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President



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

Project: Dewalt 1-12
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/14/14 13:30

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-5@4.5'	1412114-01	Soil	12/12/14 12:00	12/12/14 15:02

Summit Scientific 1412114
S₂

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

Page 1 of 1

Client: PDC Energy Project Manager: Brandon Bruns
Address: E-Mail: bbruns@pdc.com / bbruce@pdc.com
City/State/Zip: pdowny@tasman-geo.com
Phone: Fax: Project Name: Dewalt 1-12
Sampler Name: Paul Downey Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions
					HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	BTEX/PAH/NAP	DRO			
1	SS-5 @ 4.5'	12/12/14	12:00	1			X			X			X	X			
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Relinquished by: <i>Paul Downey</i>	Date/Time: 12/12/14 15:02	Received by: <i>Paul Downey</i>	Date/Time: 12/12/14 15:02	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours — 24 hours — Standard — 48 hours —	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity: Temperature Upon Receipt: 14	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Intact: Yes No	

www.s2scientific.com

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: Dewalt 1-12
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
12/14/14 13:30

SS-5@4.5'
1412114-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/12/14 12:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1412152	12/12/14	12/13/14	8015M	

Date Sampled: 12/12/14 12:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		113 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/12/14 12:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1412151	12/12/14	12/12/14	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: 12/12/14 12:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		120 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.1 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Dewalt 1-12
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
12/14/14 13:30

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1412152 - EPA 3550A

Blank (1412152-BLK1)

Prepared & Analyzed: 12/12/14

C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	13.0		"	12.2		106	30-150			

LCS (1412152-BS1)

Prepared & Analyzed: 12/12/14

C10-C28 (DRO)	575	50	mg/kg	501		115	73-134			
Surrogate: o-Terphenyl	14.0		"	12.2		115	30-150			

Matrix Spike (1412152-MS1)

Source: 1412112-01

Prepared & Analyzed: 12/12/14

C10-C28 (DRO)	542	50	mg/kg	501	ND	108	50-148			
Surrogate: o-Terphenyl	13.5		"	12.2		111	30-150			

Matrix Spike Dup (1412152-MSD1)

Source: 1412112-01

Prepared & Analyzed: 12/12/14

C10-C28 (DRO)	576	50	mg/kg	501	ND	115	50-148	6.20	13	
Surrogate: o-Terphenyl	13.3		"	12.2		109	30-150			

Summit Scientific

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



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

Project: Dewalt 1-12
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
12/14/14 13:30

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

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

Batch 1412151 - EPA 5030 Soil MS

Blank (1412151-BLK1)

Prepared & Analyzed: 12/12/14

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	0.0391		"	0.0396		98.6	23-173			
Surrogate: Toluene-d8	0.0382		"	0.0400		95.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0386		"	0.0400		96.4	21-167			

LCS (1412151-BS1)

Prepared & Analyzed: 12/12/14

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0916	0.0020	"	0.100		91.6	58-130			
Toluene	0.0916	0.0050	"	0.100		91.6	61-134			
Ethylbenzene	0.0996	0.0050	"	0.0992		100	74-139			
m,p-Xylene	0.196	0.010	"	0.200		98.0	73-137			
o-Xylene	0.0997	0.0050	"	0.0984		101	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0394		"	0.0396		99.4	23-173			
Surrogate: Toluene-d8	0.0386		"	0.0400		96.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0369		"	0.0400		92.2	21-167			

Matrix Spike (1412151-MS1)

Source: 1412112-01

Prepared & Analyzed: 12/12/14

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0910	0.0020	"	0.100	ND	91.0	30-131			
Toluene	0.0934	0.0050	"	0.100	0.00402	89.3	30-134			
Ethylbenzene	0.102	0.0050	"	0.0992	ND	103	22-153			
m,p-Xylene	0.205	0.010	"	0.200	0.00339	101	10-159			
o-Xylene	0.105	0.0050	"	0.0984	ND	106	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0408		"	0.0396		103	23-173			
Surrogate: Toluene-d8	0.0391		"	0.0400		97.7	20-170			
Surrogate: 4-Bromofluorobenzene	0.0375		"	0.0400		93.8	21-167			

Summit Scientific

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Denver CO, 80203

Project: Dewalt 1-12
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/14/14 13:30

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

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

Batch 1412151 - EPA 5030 Soil MS

Matrix Spike Dup (1412151-MSD1)		Source: 1412112-01			Prepared & Analyzed: 12/12/14					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0916	0.0020	"	0.100	ND	91.6	30-131	0.592	34	
Toluene	0.0936	0.0050	"	0.100	0.00402	89.6	30-134	0.257	30	
Ethylbenzene	0.102	0.0050	"	0.0992	ND	103	22-153	0.00	24	
m,p-Xylene	0.203	0.010	"	0.200	0.00339	100	10-159	0.941	68	
o-Xylene	0.104	0.0050	"	0.0984	ND	105	31-151	0.979	38	
Surrogate: 1,2-Dichloroethane-d4	0.0403		"	0.0396		102	23-173			
Surrogate: Toluene-d8	0.0383		"	0.0400		95.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0362		"	0.0400		90.5	21-167			

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

Project: Dewalt 1-12
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/14/14 13:30

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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A handwritten signature in black ink, appearing to be 'MSM'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

December 16, 2014

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Dewalt 1-12

Enclosed are the results of analyses for samples received by Summit Scientific on 12/15/14 15:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President



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

Project: Dewalt 1-12
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/16/14 07:23

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GW01	1412124-01	Water	12/15/14 00:00	12/15/14 15:00

Summit Scientific 1412124
S₂

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

Page of

Client: PDC Energy Project Manager: Brandon Bruns
Address: E-Mail: bbruns@petd.com
City/State/Zip:
Phone: Fax: Project Name: Dewalt 1-12
Sampler Name: Paul Dorney Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions
					HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	BTEX								
1	GW01	12/15/14		3	X				X				X								
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by: <i>Paul Dorney</i>	Date/Time: 12/15/14 15:00	Received by: <i>Brandon Bruns</i>	Date/Time: 12/15/14 1500	Turn Around Time (Check)	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day <input checked="" type="checkbox"/> 72 hours	
				24 hours	
				48 hours	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:	
				Temperature Upon Receipt: 67	
				Intact: Yes No	

www.s2scientific.com

Summit Scientific

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

Project: Dewalt 1-12
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
12/16/14 07:23

GW01
1412124-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/15/14 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	860	100	ug/l	100	1412166	12/15/14	12/15/14	EPA 8260B	
Toluene	180	1.0	"	1	"	"	12/15/14	"	
Ethylbenzene	40	1.0	"	"	"	"	"	"	
Xylenes (total)	260	1.0	"	"	"	"	"	"	

Date Sampled: 12/15/14 00:00

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>		96.5 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		92.6 %	45-146		"	"	"	"	

Summit Scientific

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PDC Energy
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Denver CO, 80203

Project: Dewalt 1-12
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
12/16/14 07:23

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 1412166 - EPA 5030 Water MS

Blank (1412166-BLK1)

Prepared: 12/15/14 Analyzed: 12/16/14

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	12.7		"	13.2		96.4	37-154			
Surrogate: Toluene-d8	12.5		"	13.3		94.0	45-149			
Surrogate: 4-Bromofluorobenzene	12.7		"	13.3		95.5	45-146			

LCS (1412166-BS1)

Prepared: 12/15/14 Analyzed: 12/16/14

Benzene	30.2	1.0	ug/l	33.3		90.7	51-132			
Toluene	30.1	1.0	"	33.3		90.3	51-138			
Ethylbenzene	32.7	1.0	"	33.1		98.9	58-146			
m,p-Xylene	63.9	2.0	"	66.5		96.1	57-144			
o-Xylene	33.1	1.0	"	32.8		101	53-146			
Surrogate: 1,2-Dichloroethane-d4	13.1		"	13.2		98.9	37-154			
Surrogate: Toluene-d8	12.8		"	13.3		95.9	45-149			
Surrogate: 4-Bromofluorobenzene	12.4		"	13.3		92.9	45-146			

Matrix Spike (1412166-MS1)

Source: 1412082-01

Prepared: 12/15/14 Analyzed: 12/16/14

Benzene	31.6	1.0	ug/l	33.3	1.23	91.1	34-141			
Toluene	28.8	1.0	"	33.3	ND	86.3	27-151			
Ethylbenzene	59.4	1.0	"	33.1	26.3	100	29-160			
m,p-Xylene	64.4	2.0	"	66.5	ND	96.8	20-166			
o-Xylene	33.8	1.0	"	32.8	ND	103	33-159			
Surrogate: 1,2-Dichloroethane-d4	13.9		"	13.2		106	37-154			
Surrogate: Toluene-d8	12.5		"	13.3		93.8	45-149			
Surrogate: 4-Bromofluorobenzene	12.3		"	13.3		92.1	45-146			

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Project: Dewalt 1-12
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Project Manager: Brandon Brunns

Reported:
12/16/14 07:23

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

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

Batch 1412166 - EPA 5030 Water MS

Matrix Spike Dup (1412166-MSD1)	Source: 1412082-01			Prepared: 12/15/14		Analyzed: 12/16/14				
Benzene	31.0	1.0	ug/l	33.3	1.23	89.5	34-141	1.72	32	
Toluene	28.8	1.0	"	33.3	ND	86.3	27-151	0.0348	25	
Ethylbenzene	55.7	1.0	"	33.1	26.3	89.0	29-160	6.51	50	
m,p-Xylene	62.8	2.0	"	66.5	ND	94.4	20-166	2.58	36	
o-Xylene	33.3	1.0	"	32.8	ND	101	33-159	1.52	26	
Surrogate: 1,2-Dichloroethane-d4	13.9		"	13.2		105	37-154			
Surrogate: Toluene-d8	12.5		"	13.3		93.8	45-149			
Surrogate: 4-Bromofluorobenzene	12.5		"	13.3		93.8	45-146			

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

Project: Dewalt 1-12

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/16/14 07:23

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

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