

TABLE 1
RUPERT 1, 2, 32-9
SOIL ANALYTICAL RESULTS SUMMARY TABLE

Sample ID	Date Sampled	Depth (Feet bgs)	PID Readings (ppm)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	TPH ⁽²⁾ (mg/kg)
SS01	2/13/2014	15	620	<0.002	<0.005	0.032	0.58	0.017	15
SS02	2/14/2014	9	1	<0.002	<0.005	<0.005	<0.010	<0.010	<50
SS03	2/19/2014	9	720	<0.002	<0.005	1.8	27	0.29	4,400
SS04	2/19/2014	9	0	<0.002	<0.005	<0.005	<0.010	<0.010	<50
TP01	2/19/2014	2	1173	0.31	<0.005	0.064	28	0.23	1,180
TP01	2/19/2014	8	2350	0.19	<0.005	3.2	50	0.38	2,040
SS05	2/21/2014	9	0.3	<0.002	<0.005	<0.005	<0.010	<0.010	<50
SS06	2/21/2014	9	1.6	<0.002	<0.005	<0.005	<0.010	<0.010	<50
SS07	2/25/2014	9	66.8	<0.002	<0.005	<0.005	<0.010	<0.010	<50
SS08	2/25/2014	9	3801	0.12	0.095	4.6	82	1.1	2,140
SS09	2/26/2014	9	4200	0.5	<0.005	13	230	2.2	5,200
SS10	2/27/2014	9	0.5	<0.002	<0.005	<0.005	<0.010	<0.010	<50
SS11	2/28/2014	9	586	<0.002	<0.005	<0.005	<0.010	<0.010	0.81
SS12	3/3/2014	9	685	0.0093	<0.005	<0.005	<0.010	<0.010	<50
SS13	2/28/2014	9	213	<0.002	<0.005	<0.005	<0.010	<0.010	<50
SS14	2/28/2014	9	2.9	<0.002	<0.005	<0.005	<0.010	<0.010	<50
SS15	3/3/2014	9	2	<0.002	<0.005	<0.005	<0.010	<0.010	<50
SS16	3/4/2014	9	1350	<0.002	0.017	0.027	0.61	0.015	7.2
SS17	3/4/2014	9	1135	0.0044	<0.005	<0.005	0.046	<0.010	4.6
SS18	3/4/2014	9	164	0.003	<0.005	<0.005	0.011	<0.010	<50
SS19	3/5/2014	9	187.9	0.039	<0.005	0.0068	0.079	<0.010	0.58
SS20	3/5/2014	13	24.1	<0.002	<0.005	<0.005	<0.010	<0.010	<50
SS21	3/5/2014	9	821.5	<0.002	<0.005	<0.005	0.034	<0.010	1.8
SS22	3/5/2014	9	815.8	<0.002	<0.005	0.0051	0.032	<0.010	2.9
SS23	3/5/2014	9	44.6	<0.002	<0.005	<0.005	<0.010	<0.010	<50
SS24	3/5/2014	13	4.1	<0.002	<0.005	<0.005	<0.010	<0.010	<50
COGCC standards for soil (mg/kg) ⁽¹⁾				0.17	85	100	175	23	500

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.

GRO - Gasoline range organics.

DRO - Diesel range organics.

mg/kg - Milligrams per kilogram.

bgs - Below ground surface.

ppm - Parts per million

Bold red values indicate an exceedance of the COGCC soil standards for the Site.

TABLE 2
RUPERT 1, 2, 32-9
GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE

Sample ID	Date Sampled	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)
GW01	3/5/2014	7.4	4.7	<1.0	240
GW02	3/5/2014	16	48.0	11	310
COGCC standards for groundwater (ug/L) ⁽¹⁾		5	560	700	1,400

Notes:

1). The environmental cleanup standards for groundwater that are applicable to this site are the Colorado Oil and Gas Conservation Commission (COGCC) standards for contaminants in groundwater according to Table 910-1 of the COGCC 900 Series Rule for E&P Waste Management.

Bold red values indicate an exceedance of the COGCC groundwater standards for the Site.

ug/L= Micrograms per liter.

ATTACHMENT A

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

February 13, 2014

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Rupert 1,2,32-9

Enclosed are the results of analyses for samples received by Summit Scientific on 02/13/14 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Ben Shrewsbury
President / Laboratory Manager

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

Project: Rupert 1,2,32-9

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/13/14 20:36

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@15'	1402057-01	Soil	02/13/14 14:00	02/13/14 17:00

[illegible]



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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
02/13/14 20:36

SS01@15'
1402057-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/13/14 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1402093	02/13/14	02/13/14	8015M	

Date Sampled: **02/13/14 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		119 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/13/14 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.017	0.010	mg/kg	1	1402094	02/13/14	02/13/14	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.032	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.58	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	15	0.50	"	"	"	"	"	"	

Date Sampled: **02/13/14 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.8 %	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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
02/13/14 20:36

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 1402093 - EPA 3550A

Blank (1402093-BLK1)

Prepared & Analyzed: 02/13/14

C10-C28 (DRO) ND 50 mg/kg

LCS (1402093-BS1)

Prepared & Analyzed: 02/13/14

C10-C28 (DRO) 513 50 mg/kg 501 102 73-134

Matrix Spike (1402093-MS1)

Source: 1402057-01

Prepared & Analyzed: 02/13/14

C10-C28 (DRO) 482 50 mg/kg 474 ND 102 50-148

Summit Scientific

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/13/14 20:36

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

Batch 1402094 - EPA 5030 Soil MS

Blank (1402094-BLK1)

Prepared & Analyzed: 02/13/14

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	0.0439		"	0.0395	111	23-173				
Surrogate: Toluene-d8	0.0402		"	0.0398	101	20-170				
Surrogate: 4-Bromofluorobenzene	0.0414		"	0.0398	104	21-167				

LCS (1402094-BS1)

Prepared & Analyzed: 02/13/14

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0919	0.0020	"	0.0966	95.2	58-130				
Toluene	0.0971	0.0050	"	0.0969	100	61-134				
Ethylbenzene	0.0976	0.0050	"	0.0961	101	74-139				
m,p-Xylene	0.191	0.010	"	0.194	98.3	73-137				
o-Xylene	0.0934	0.0050	"	0.0957	97.6	73-141				
Surrogate: 1,2-Dichloroethane-d4	0.0412		"	0.0385	107	23-173				
Surrogate: Toluene-d8	0.0394		"	0.0388	102	20-170				
Surrogate: 4-Bromofluorobenzene	0.0397		"	0.0388	102	21-167				

Matrix Spike (1402094-MS1)

Source: 1402057-01

Prepared & Analyzed: 02/13/14

Naphthalene	0.0186	0.010	mg/kg		0.0173		10-158			
Benzene	0.102	0.0020	"	0.0964	ND	106	30-131			
Toluene	0.0986	0.0050	"	0.0967	ND	102	30-134			
Ethylbenzene	0.152	0.0050	"	0.0959	0.0315	126	22-153			
m,p-Xylene	0.762	0.010	"	0.193	0.573	97.9	10-159			
o-Xylene	0.128	0.0050	"	0.0956	0.00487	129	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0402		"	0.0384		105	23-173			
Surrogate: Toluene-d8	0.0371		"	0.0387		95.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0427		"	0.0387		110	21-167			

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
02/13/14 20:36

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 1402094 - EPA 5030 Soil MS

Matrix Spike Dup (1402094-MSD1)	Source: 1402057-01			Prepared & Analyzed: 02/13/14							
Naphthalene	0.0255	0.010	mg/kg		0.0173		10-158	31.3	42		
Benzene	0.105	0.0020	"	0.0953	ND	110	30-131	2.97	34		
Toluene	0.100	0.0050	"	0.0956	ND	105	30-134	1.92	30		
Ethylbenzene	0.222	0.0050	"	0.0948	0.0315	201	22-153	37.2	24		QM-07
m,p-Xylene	1.83	0.010	"	0.191	0.573	660	10-159	82.6	68		QM-07
o-Xylene	0.142	0.0050	"	0.0945	0.00487	146	31-151	10.5	38		
Surrogate: 1,2-Dichloroethane-d4	0.0409		"	0.0380		108	23-173				
Surrogate: Toluene-d8	0.0401		"	0.0382		105	20-170				
Surrogate: 4-Bromofluorobenzene	0.0464		"	0.0382		121	21-167				

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/13/14 20:36

Notes and Definitions

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.

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

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

February 16, 2014

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Rupert 1,2,32-9

Enclosed are the results of analyses for samples received by Summit Scientific on 02/14/14 16:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Ben Shrewsbury
President / Laboratory Manager



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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/16/14 20:27

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS02@9'	1402070-01	Soil	02/14/14 10:30	02/14/14 16:45

Summit Scientific
741 Corporate Circle Suite 1 • Golden, Colorado 80401
303-277-9310 • 303-374-5933 Fax

Client: PDC Energy
Address: _____
City/State/Zip: _____
Phone: _____
Sample Name: C. W. 1402070

Project Manager: Brandon Bruns
E-Mail: _____
Project Name: Rupert 1, 2-4
Project Number: 1402070

Page 1 of 1

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative	Matrix	Analyze For:	Special Instructions
SS02@9'	2/14/14	1030	1	HCl HNO ₃ None Other (Specify) _____ Groundwater Soil	Air - Canister Serial # _____ Other (Specify) _____ 8260 BTEX NAR 6P0 8265 DEO		

Requisitioned by:	Date/Time:	Received by:	Date/Time:	Requisitioned by:	Date/Time:	Received by:	Date/Time:
[Signature]	2/14/14 12:45	[Signature]	2/14/14 16:45				

Turn Around Time (Check):
Same Day ☒ 72 Hours ☐
24 Hours ☐ 48 Hours ☐ Standard ☐ 7601

Sample Integrity:
Temperature Log: Receipt ☒ 2°C
Intact: Yes ☒ No ☐

Notes:

www.s2scientific.com

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
02/16/14 20:27

SS02@9'
1402070-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 02/14/14 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1402106	02/14/14	02/14/14	8015M	

Date Sampled: 02/14/14 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		119 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 02/14/14 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1402105	02/14/14	02/14/14	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: 02/14/14 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		118 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	21-167		"	"	"	"	

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/16/14 20:27

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 1402106 - EPA 3550A

Blank (1402106-BLK1)

Prepared & Analyzed: 02/14/14

C10-C28 (DRO) ND 50 mg/kg

LCS (1402106-BS1)

Prepared & Analyzed: 02/14/14

C10-C28 (DRO) 435 50 mg/kg 488 89.0 73-134

Matrix Spike (1402106-MS1)

Source: 1402070-01

Prepared & Analyzed: 02/14/14

C10-C28 (DRO) 431 50 mg/kg 471 ND 91.5 50-148

Matrix Spike Dup (1402106-MSD1)

Source: 1402070-01

Prepared & Analyzed: 02/14/14

C10-C28 (DRO) 434 50 mg/kg 467 ND 92.8 50-148 0.732 13

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/16/14 20:27

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 1402105 - EPA 5030 Soil MS

Blank (1402105-BLK1)

Prepared & Analyzed: 02/14/14

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	0.0422		"	0.0381	111	23-173				
Surrogate: Toluene-d8	0.0378		"	0.0384	98.5	20-170				
Surrogate: 4-Bromofluorobenzene	0.0414		"	0.0384	108	21-167				

LCS (1402105-BS1)

Prepared & Analyzed: 02/14/14

Naphthalene	ND	0.010	mg/kg			66-138				
Benzene	0.112	0.0020	"	0.0983	114	58-130				
Toluene	0.115	0.0050	"	0.0986	117	61-134				
Ethylbenzene	0.121	0.0050	"	0.0978	124	74-139				
m,p-Xylene	0.236	0.010	"	0.197	120	73-137				
o-Xylene	0.124	0.0050	"	0.0974	127	73-141				
Surrogate: 1,2-Dichloroethane-d4	0.0434		"	0.0392	111	23-173				
Surrogate: Toluene-d8	0.0394		"	0.0394	99.8	20-170				
Surrogate: 4-Bromofluorobenzene	0.0415		"	0.0394	105	21-167				

Matrix Spike (1402105-MS1)

Source: 1402070-01

Prepared & Analyzed: 02/14/14

Naphthalene	ND	0.010	mg/kg		ND	10-158				
Benzene	0.103	0.0020	"	0.0942	ND	30-131				
Toluene	0.106	0.0050	"	0.0945	ND	30-134				
Ethylbenzene	0.114	0.0050	"	0.0938	ND	22-153				
m,p-Xylene	0.227	0.010	"	0.189	ND	10-159				
o-Xylene	0.119	0.0050	"	0.0934	ND	31-151				
Surrogate: 1,2-Dichloroethane-d4	0.0444		"	0.0375	118	23-173				
Surrogate: Toluene-d8	0.0375		"	0.0378	99.1	20-170				
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0378	105	21-167				

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/16/14 20:27

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 1402105 - EPA 5030 Soil MS

Matrix Spike Dup (1402105-MSD1)		Source: 1402070-01			Prepared & Analyzed: 02/14/14					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.106	0.0020	"	0.0948	ND	112	30-131	2.88	34	
Toluene	0.110	0.0050	"	0.0951	ND	116	30-134	3.61	30	
Ethylbenzene	0.118	0.0050	"	0.0943	ND	126	22-153	3.77	24	
m,p-Xylene	0.232	0.010	"	0.190	ND	122	10-159	2.01	68	
o-Xylene	0.120	0.0050	"	0.0939	ND	128	31-151	1.52	38	
Surrogate: 1,2-Dichloroethane-d4	0.0425		"	0.0377		113	23-173			
Surrogate: Toluene-d8	0.0374		"	0.0380		98.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0390		"	0.0380		103	21-167			

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/16/14 20:27

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

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

February 20, 2014

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Rupert 1,2,32-9

Enclosed are the results of analyses for samples received by Summit Scientific on 02/19/14 15:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Ben Shrewsbury
President / Laboratory Manager



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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/20/14 01:40

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS03@9'	1402087-01	Soil	02/19/14 08:00	02/19/14 15:30
SS04@9'	1402087-02	Soil	02/19/14 08:05	02/19/14 15:30
TP01@2'	1402087-03	Soil	02/19/14 09:00	02/19/14 15:30
TP01@8'	1402087-04	Soil	02/19/14 09:05	02/19/14 15:30

Summit Scientific

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
02/20/14 01:40

SS03@9'
1402087-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 02/19/14 08:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	2000	50	mg/kg	1	1402134	02/19/14	02/19/14	8015M	

Date Sampled: 02/19/14 08:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		142 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 02/19/14 08:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.29	0.010	mg/kg	1	1402133	02/19/14	02/19/14	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	1.8	0.050	"	10	"	"	"	"	
Xylenes (total)	27	0.10	"	"	"	"	"	"	E
Gasoline Range Hydrocarbons	2400	5.0	"	"	"	"	"	"	E

Date Sampled: 02/19/14 08:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
02/20/14 01:40

SS04@9'
1402087-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/19/14 08:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1402134	02/19/14	02/19/14	8015M	

Date Sampled: **02/19/14 08:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		134 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/19/14 08:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1402133	02/19/14	02/19/14	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: **02/19/14 08:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.7 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
02/20/14 01:40

TP01 @ 2'
1402087-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/19/14 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	580	50	mg/kg	1	1402134	02/19/14	02/19/14	8015M	

Date Sampled: **02/19/14 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		87.8 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/19/14 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.23	0.010	mg/kg	1	1402133	02/19/14	02/19/14	EPA 8260B	
Benzene	0.31	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.064	0.0050	"	"	"	"	"	"	
Xylenes (total)	28	0.10	"	10	"	"	"	"	E
Gasoline Range Hydrocarbons	600	5.0	"	"	"	"	02/19/14	"	

Date Sampled: **02/19/14 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	02/19/14	"	
Surrogate: Toluene-d8		97.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
02/20/14 01:40

TP01@8'
1402087-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 02/19/14 09:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	940	50	mg/kg	1	1402134	02/19/14	02/19/14	8015M	

Date Sampled: 02/19/14 09:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		112 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 02/19/14 09:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.38	0.010	mg/kg	1	1402133	02/19/14	02/19/14	EPA 8260B	
Benzene	0.19	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	3.2	0.050	"	10	"	"	02/19/14	"	
Xylenes (total)	50	0.10	"	"	"	"	"	"	E
Gasoline Range Hydrocarbons	1100	5.0	"	"	"	"	02/19/14	"	E

Date Sampled: 02/19/14 09:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.5 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
02/20/14 01:40

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 1402134 - EPA 3550A

Blank (1402134-BLK1)

Prepared & Analyzed: 02/19/14

C10-C28 (DRO) ND 50 mg/kg

LCS (1402134-BS1)

Prepared: 02/19/14 Analyzed: 02/20/14

C10-C28 (DRO) 455 50 mg/kg 479 94.9 73-134

Matrix Spike (1402134-MS1)

Source: 1402087-02

Prepared: 02/19/14 Analyzed: 02/20/14

C10-C28 (DRO) 577 50 mg/kg 492 ND 117 50-148

Matrix Spike Dup (1402134-MSD1)

Source: 1402087-02

Prepared: 02/19/14 Analyzed: 02/20/14

C10-C28 (DRO) 608 50 mg/kg 488 ND 124 50-148 5.24 13

Summit Scientific

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/20/14 01:40

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 1402133 - EPA 5030 Soil MS

Blank (1402133-BLK1)

Prepared & Analyzed: 02/19/14

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	0.0397		"	0.0385	103	23-173				
Surrogate: Toluene-d8	0.0376		"	0.0388	96.9	20-170				
Surrogate: 4-Bromofluorobenzene	0.0386		"	0.0388	99.3	21-167				

LCS (1402133-BS1)

Prepared & Analyzed: 02/19/14

Naphthalene	ND	0.010	mg/kg			66-138				
Benzene	0.0849	0.0020	"	0.0993	85.5	58-130				
Toluene	0.0942	0.0050	"	0.0996	94.6	61-134				
Ethylbenzene	0.105	0.0050	"	0.0988	107	74-139				
m,p-Xylene	0.212	0.010	"	0.199	106	73-137				
o-Xylene	0.105	0.0050	"	0.0984	107	73-141				
Surrogate: 1,2-Dichloroethane-d4	0.0413		"	0.0395	104	23-173				
Surrogate: Toluene-d8	0.0383		"	0.0398	96.1	20-170				
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0398	100	21-167				

Matrix Spike (1402133-MS1)

Source: 1402087-02

Prepared & Analyzed: 02/19/14

Naphthalene	ND	0.010	mg/kg		ND	10-158				
Benzene	0.0816	0.0020	"	0.0964	ND	84.6	30-131			
Toluene	0.0898	0.0050	"	0.0967	ND	92.9	30-134			
Ethylbenzene	0.102	0.0050	"	0.0959	ND	106	22-153			
m,p-Xylene	0.208	0.010	"	0.193	ND	107	10-159			
o-Xylene	0.101	0.0050	"	0.0956	ND	106	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0402		"	0.0384	105	23-173				
Surrogate: Toluene-d8	0.0374		"	0.0387	96.6	20-170				
Surrogate: 4-Bromofluorobenzene	0.0384		"	0.0387	99.3	21-167				

Summit Scientific

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/20/14 01:40

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 1402133 - EPA 5030 Soil MS

Matrix Spike Dup (1402133-MSD1)		Source: 1402087-02			Prepared & Analyzed: 02/19/14					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0801	0.0020	"	0.0957	ND	83.7	30-131	1.84	34	
Toluene	0.0875	0.0050	"	0.0960	ND	91.2	30-134	2.63	30	
Ethylbenzene	0.102	0.0050	"	0.0952	ND	107	22-153	0.288	24	
m,p-Xylene	0.208	0.010	"	0.192	ND	108	10-159	0.0606	68	
o-Xylene	0.102	0.0050	"	0.0948	ND	108	31-151	1.10	38	
Surrogate: 1,2-Dichloroethane-d4		0.0407	"	0.0381		107	23-173			
Surrogate: Toluene-d8		0.0362	"	0.0384		94.3	20-170			
Surrogate: 4-Bromofluorobenzene		0.0388	"	0.0384		101	21-167			

Summit Scientific

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/20/14 01:40

Notes and Definitions

E The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.

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

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

February 23, 2014

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Rupert 1,2,32-9

Enclosed are the results of analyses for samples received by Summit Scientific on 02/21/14 16:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Ben Shrewsbury
President / Laboratory Manager



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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/23/14 20:23

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS05@9	1402113-01	Soil	02/21/14 10:30	02/21/14 16:55
SS06@9	1402113-02	Soil	02/21/14 10:40	02/21/14 16:55

Summit Scientific

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



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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
02/23/14 20:23

SS05@9
1402113-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 02/21/14 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1402156	02/21/14	02/22/14	8015M	

Date Sampled: 02/21/14 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		98.7 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 02/21/14 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1402155	02/21/14	02/21/14	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: 02/21/14 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		108 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.2 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
02/23/14 20:23

SS06@9
1402113-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 02/21/14 10:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1402156	02/21/14	02/22/14	8015M	

Date Sampled: 02/21/14 10:40

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

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 02/21/14 10:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1402155	02/21/14	02/22/14	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: 02/21/14 10:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.7 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
02/23/14 20:23

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 1402156 - EPA 3550A

Blank (1402156-BLK1)

Prepared & Analyzed: 02/21/14

C10-C28 (DRO) ND 50 mg/kg

LCS (1402156-BS1)

Prepared & Analyzed: 02/21/14

C10-C28 (DRO) 410 50 mg/kg 501 81.8 73-134

Matrix Spike (1402156-MS1)

Source: 1402111-01

Prepared & Analyzed: 02/21/14

C10-C28 (DRO) 428 50 mg/kg 501 ND 85.4 50-148

Matrix Spike Dup (1402156-MSD1)

Source: 1402111-01

Prepared & Analyzed: 02/21/14

C10-C28 (DRO) 448 50 mg/kg 501 ND 89.5 50-148 4.65 13

Summit Scientific

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/23/14 20:23

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 1402155 - EPA 5030 Soil MS

Blank (1402155-BLK1)

Prepared: 02/21/14 Analyzed: 02/22/14

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	0.0413		"	0.0397	104	23-173				
Surrogate: Toluene-d8	0.0381		"	0.0400	95.2	20-170				
Surrogate: 4-Bromofluorobenzene	0.0427		"	0.0400	107	21-167				

LCS (1402155-BS1)

Prepared: 02/21/14 Analyzed: 02/22/14

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.102	0.0020	"	0.0997	102	58-130				
Toluene	0.103	0.0050	"	0.100	103	61-134				
Ethylbenzene	0.125	0.0050	"	0.0992	126	74-139				
m,p-Xylene	0.249	0.010	"	0.200	125	73-137				
o-Xylene	0.128	0.0050	"	0.0988	130	73-141				
Surrogate: 1,2-Dichloroethane-d4	0.0447		"	0.0397	113	23-173				
Surrogate: Toluene-d8	0.0375		"	0.0400	93.8	20-170				
Surrogate: 4-Bromofluorobenzene	0.0436		"	0.0400	109	21-167				

Matrix Spike (1402155-MS1)

Source: 1402111-01

Prepared: 02/21/14 Analyzed: 02/22/14

Naphthalene	ND	0.010	mg/kg		0.0194		10-158			
Benzene	0.110	0.0020	"	0.0997	ND	110	30-131			
Toluene	0.107	0.0050	"	0.100	ND	107	30-134			
Ethylbenzene	0.123	0.0050	"	0.0992	0.00405	120	22-153			
m,p-Xylene	0.245	0.010	"	0.200	0.0219	111	10-159			
o-Xylene	0.126	0.0050	"	0.0988	0.00975	118	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0448		"	0.0397		113	23-173			
Surrogate: Toluene-d8	0.0376		"	0.0400		94.0	20-170			
Surrogate: 4-Bromofluorobenzene	0.0414		"	0.0400		104	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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/23/14 20:23

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 1402155 - EPA 5030 Soil MS

Matrix Spike Dup (1402155-MSD1)		Source: 1402111-01			Prepared: 02/21/14		Analyzed: 02/22/14			
Naphthalene	ND	0.010	mg/kg		0.0194		10-158		42	
Benzene	0.106	0.0020	"	0.0997	ND	106	30-131	3.86	34	
Toluene	0.113	0.0050	"	0.100	ND	113	30-134	6.00	30	
Ethylbenzene	0.121	0.0050	"	0.0992	0.00405	118	22-153	1.18	24	
m,p-Xylene	0.241	0.010	"	0.200	0.0219	109	10-159	1.61	68	
o-Xylene	0.126	0.0050	"	0.0988	0.00975	118	31-151	0.0475	38	
Surrogate: 1,2-Dichloroethane-d4	0.0440		"	0.0397		111	23-173			
Surrogate: Toluene-d8	0.0413		"	0.0400		103	20-170			
Surrogate: 4-Bromofluorobenzene	0.0407		"	0.0400		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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/23/14 20:23

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

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

February 26, 2014

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Rupert 1,2,32-9

Enclosed are the results of analyses for samples received by Summit Scientific on 02/25/14 16:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Ben Shrewsbury
President / Laboratory Manager



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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/26/14 16:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS07@9'	1402142-01	Soil	02/25/14 09:30	02/25/14 16:55
SS08@9'	1402142-02	Soil	02/25/14 09:45	02/25/14 16:55

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: Rupert 1,2,32-9

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/26/14 16:59

Summit Scientific

741 Corporate Circle Suite I ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-277-9531 Fax

Client: Tsaran Geosciences / PDC
 Address: 6899 Peoria Street
 City/State/Zip: Denver, CO 80221
 Phone: (720) 988-2024 Fax: _____
 Sampler Name: Box 1 Mag 1041
 Project Manager: Brandon Davis
 E-Mail: _____
 Project Name: Report 1232-9
 Project Number: _____

Page 1 of 1

[illegible]

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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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
02/26/14 16:59

SS07@9'
1402142-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 02/25/14 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1402170	02/25/14	02/25/14	8015M	

Date Sampled: 02/25/14 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		97.9 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 02/25/14 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1402169	02/25/14	02/25/14	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: 02/25/14 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.5 %	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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
02/26/14 16:59

SS08@9'
1402142-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 02/25/14 09:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	740	50	mg/kg	1	1402170	02/25/14	02/25/14	8015M	

Date Sampled: 02/25/14 09:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		91.2 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 02/25/14 09:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	1.1	0.10	mg/kg	10	1402169	02/25/14	02/25/14	EPA 8260B	
Benzene	0.12	0.020	"	"	"	"	"	"	
Toluene	0.095	0.050	"	"	"	"	"	"	
Ethylbenzene	4.6	0.50	"	100	"	"	"	"	
Xylenes (total)	82	1.0	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	1400	50	"	"	"	"	"	"	

Date Sampled: 02/25/14 09:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		98.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		110 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		119 %	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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
02/26/14 16:59

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 1402170 - EPA 3550A

Blank (1402170-BLK1)

Prepared & Analyzed: 02/25/14

C10-C28 (DRO) ND 50 mg/kg

LCS (1402170-BS1)

Prepared & Analyzed: 02/25/14

C10-C28 (DRO) 533 50 mg/kg 488 109 73-134

Matrix Spike (1402170-MS1)

Source: 1402132-01

Prepared & Analyzed: 02/25/14

C10-C28 (DRO) 548 50 mg/kg 490 ND 112 50-148

Matrix Spike Dup (1402170-MSD1)

Source: 1402132-01

Prepared & Analyzed: 02/25/14

C10-C28 (DRO) 554 50 mg/kg 487 ND 114 50-148 1.12 13

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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
02/26/14 16:59

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 1402169 - EPA 5030 Soil MS

Blank (1402169-BLK1)

Prepared & Analyzed: 02/25/14

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	0.0379		"	0.0395	96.0	23-173				
Surrogate: Toluene-d8	0.0379		"	0.0398	95.2	20-170				
Surrogate: 4-Bromofluorobenzene	0.0383		"	0.0398	96.1	21-167				

LCS (1402169-BS1)

Prepared & Analyzed: 02/25/14

Naphthalene	ND	0.010	mg/kg			66-138				
Benzene	0.00758	0.0020	"	0.00890	85.1	58-130				
Toluene	0.00821	0.0050	"	0.00893	92.0	61-134				
Ethylbenzene	0.00915	0.0050	"	0.00886	103	74-139				
m,p-Xylene	0.0184	0.010	"	0.0179	103	73-137				
o-Xylene	0.00909	0.0050	"	0.00882	103	73-141				
Surrogate: 1,2-Dichloroethane-d4	0.00352		"	0.00354	99.3	23-173				
Surrogate: Toluene-d8	0.00345		"	0.00357	96.7	20-170				
Surrogate: 4-Bromofluorobenzene	0.00351		"	0.00357	98.2	21-167				

LCS (1402169-BS2)

Prepared & Analyzed: 02/25/14

Naphthalene	ND	0.010	mg/kg			66-138				
Benzene	0.0808	0.0020	"	0.0966	83.6	58-130				
Toluene	0.0874	0.0050	"	0.0969	90.2	61-134				
Ethylbenzene	0.0997	0.0050	"	0.0961	104	74-139				
m,p-Xylene	0.200	0.010	"	0.194	103	73-137				
o-Xylene	0.0976	0.0050	"	0.0957	102	73-141				
Surrogate: 1,2-Dichloroethane-d4	0.0365		"	0.0385	95.0	23-173				
Surrogate: Toluene-d8	0.0369		"	0.0388	95.1	20-170				
Surrogate: 4-Bromofluorobenzene	0.0376		"	0.0388	97.0	21-167				

Summit Scientific

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



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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/26/14 16:59

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 1402169 - EPA 5030 Soil MS

Matrix Spike (1402169-MS1)

Source: 1402132-01

Prepared & Analyzed: 02/25/14

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0829	0.0020	"	0.0974	ND	85.2	30-131			
Toluene	0.0896	0.0050	"	0.0977	ND	91.7	30-134			
Ethylbenzene	0.101	0.0050	"	0.0969	ND	104	22-153			
m,p-Xylene	0.204	0.010	"	0.195	ND	105	10-159			
o-Xylene	0.102	0.0050	"	0.0965	ND	105	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0398		"	0.0388		103	23-173			
Surrogate: Toluene-d8	0.0377		"	0.0391		96.5	20-170			
Surrogate: 4-Bromofluorobenzene	0.0383		"	0.0391		98.2	21-167			

Matrix Spike (1402169-MS2)

Source: 1402145-01

Prepared & Analyzed: 02/25/14

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0766	0.0020	"	0.0920	ND	83.3	30-131			
Toluene	0.0845	0.0050	"	0.0923	ND	91.6	30-134			
Ethylbenzene	0.0939	0.0050	"	0.0915	ND	103	22-153			
m,p-Xylene	0.192	0.010	"	0.185	ND	104	10-159			
o-Xylene	0.0943	0.0050	"	0.0911	ND	103	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0378		"	0.0366		103	23-173			
Surrogate: Toluene-d8	0.0356		"	0.0369		96.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0356		"	0.0369		96.5	21-167			

Matrix Spike Dup (1402169-MSD1)

Source: 1402132-01

Prepared & Analyzed: 02/25/14

Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0802	0.0020	"	0.0961	ND	83.5	30-131	3.36	34	
Toluene	0.0877	0.0050	"	0.0963	ND	91.0	30-134	2.08	30	
Ethylbenzene	0.0964	0.0050	"	0.0956	ND	101	22-153	4.52	24	
m,p-Xylene	0.198	0.010	"	0.193	ND	103	10-159	3.44	68	
o-Xylene	0.0979	0.0050	"	0.0952	ND	103	31-151	3.69	38	
Surrogate: 1,2-Dichloroethane-d4	0.0407		"	0.0382		106	23-173			
Surrogate: Toluene-d8	0.0374		"	0.0385		97.0	20-170			
Surrogate: 4-Bromofluorobenzene	0.0378		"	0.0385		98.0	21-167			

Summit Scientific

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



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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/26/14 16:59

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 1402169 - EPA 5030 Soil MS

Matrix Spike Dup (1402169-MSD2)		Source: 1402145-01			Prepared & Analyzed: 02/25/14					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0803	0.0020	"	0.0939	ND	85.5	30-131	4.65	34	
Toluene	0.0875	0.0050	"	0.0942	ND	93.0	30-134	3.48	30	
Ethylbenzene	0.0977	0.0050	"	0.0934	ND	105	22-153	4.01	24	
m,p-Xylene	0.198	0.010	"	0.188	ND	105	10-159	3.34	68	
o-Xylene	0.0991	0.0050	"	0.0930	ND	106	31-151	4.94	38	
Surrogate: 1,2-Dichloroethane-d4	0.0388		"	0.0374		104	23-173			
Surrogate: Toluene-d8	0.0367		"	0.0377		97.5	20-170			
Surrogate: 4-Bromofluorobenzene	0.0364		"	0.0377		96.7	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: Rupert 1,2,32-9

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/26/14 16:59

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

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

February 26, 2014

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Rupert 1,2,32-9

Enclosed are the results of analyses for samples received by Summit Scientific on 02/26/14 16:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'BS' or 'Shrewsbury', written in a cursive style.

Ben Shrewsbury
President / Laboratory Manager



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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
02/26/14 21:37

SS09@9'
1402153-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/26/14 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	1500	50	mg/kg	1	1402175	02/26/14	02/26/14	8015M	

Date Sampled: **02/26/14 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		107 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/26/14 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	2.2	0.10	mg/kg	10	1402176	02/26/14	02/26/14	EPA 8260B	
Benzene	0.50	0.020	"	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	"	R-01
Ethylbenzene	13	0.50	"	100	"	"	02/26/14	"	
Xylenes (total)	230	1.0	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	3700	50	"	"	"	"	"	"	

Date Sampled: **02/26/14 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		103 %	23-173		"	"	02/26/14	"	
<i>Surrogate: Toluene-d8</i>		88.0 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		83.7 %	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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
02/26/14 21:37

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 1402175 - EPA 3550A

LCS (1402175-BS1)

Prepared & Analyzed: 02/26/14

C10-C28 (DRO)	404	50	mg/kg	481	84.0	73-134		
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LCS Dup (1402175-BSD1)

Prepared & Analyzed: 02/26/14

C10-C28 (DRO)	415	50	mg/kg	477	87.0	73-134	2.68	11
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Matrix Spike (1402175-MS1)

Source: 1402152-01

Prepared & Analyzed: 02/26/14

C10-C28 (DRO)	480	50	mg/kg	499	ND	96.1	50-148	
---------------	-----	----	-------	-----	----	------	--------	--

Matrix Spike Dup (1402175-MSD1)

Source: 1402152-01

Prepared & Analyzed: 02/26/14

C10-C28 (DRO)	415	50	mg/kg	479	ND	86.6	50-148	14.5	13
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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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/26/14 21:37

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 1402176 - EPA 5030 Soil MS

Blank (1402176-BLK1)

Prepared & Analyzed: 02/26/14

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	0.0352		"	0.0360		97.9	23-173			
Surrogate: Toluene-d8	0.0343		"	0.0362		94.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0355		"	0.0362		98.0	21-167			

LCS (1402176-BS1)

Prepared & Analyzed: 02/26/14

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0810	0.0020	"	0.0968		83.7	58-130			
Toluene	0.0879	0.0050	"	0.0971		90.5	61-134			
Ethylbenzene	0.0975	0.0050	"	0.0963		101	74-139			
m,p-Xylene	0.195	0.010	"	0.194		100	73-137			
o-Xylene	0.0961	0.0050	"	0.0959		100	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0381		"	0.0385		98.8	23-173			
Surrogate: Toluene-d8	0.0372		"	0.0388		95.7	20-170			
Surrogate: 4-Bromofluorobenzene	0.0371		"	0.0388		95.6	21-167			

LCS Dup (1402176-BSD1)

Prepared & Analyzed: 02/26/14

Naphthalene	ND	0.010	mg/kg				66-138		12	
Benzene	0.0788	0.0020	"	0.0937		84.1	58-130	2.75	13	
Toluene	0.0858	0.0050	"	0.0940		91.3	61-134	2.39	16	
Ethylbenzene	0.0967	0.0050	"	0.0932		104	74-139	0.798	12	
m,p-Xylene	0.194	0.010	"	0.188		103	73-137	0.376	14	
o-Xylene	0.0950	0.0050	"	0.0929		102	73-141	1.18	12	
Surrogate: 1,2-Dichloroethane-d4	0.0369		"	0.0373		99.0	23-173			
Surrogate: Toluene-d8	0.0363		"	0.0376		96.5	20-170			
Surrogate: 4-Bromofluorobenzene	0.0357		"	0.0376		95.0	21-167			

Summit Scientific

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



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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
02/26/14 21:37

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 1402176 - EPA 5030 Soil MS

Matrix Spike (1402176-MS1)		Source: 1402152-01			Prepared & Analyzed: 02/26/14					
Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0885	0.0020	"	0.101	ND	87.7	30-131			
Toluene	0.0949	0.0050	"	0.101	ND	93.8	30-134			
Ethylbenzene	0.104	0.0050	"	0.100	ND	104	22-153			
m,p-Xylene	0.211	0.010	"	0.202	ND	104	10-159			
o-Xylene	0.105	0.0050	"	0.100	ND	105	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0427		"	0.0402		106	23-173			
Surrogate: Toluene-d8	0.0395		"	0.0405		97.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0394		"	0.0405		97.3	21-167			

Summit Scientific

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



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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/26/14 21:37

Notes and Definitions

R-01 The Reporting Limit for this analyte has been raised to account for matrix interference.

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

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

February 27, 2014

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Rupert 1,2,32-9

Enclosed are the results of analyses for samples received by Summit Scientific on 02/27/14 16:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'BS' or 'Shrewsbury', written in a cursive style.

Ben Shrewsbury
President / Laboratory Manager

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

Project: Rupert 1,2,32-9

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/27/14 21:33

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS10@9'	1402170-01	Soil	02/27/14 11:30	02/27/14 16:45

[illegible]



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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
02/27/14 21:33

SS10@9'
1402170-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 02/27/14 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1402183	02/27/14	02/27/14	8015M	

Date Sampled: 02/27/14 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		107 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 02/27/14 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1402182	02/27/14	02/27/14	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: 02/27/14 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.3 %	21-167		"	"	"	"	

Summit Scientific

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



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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
02/27/14 21:33

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 1402183 - EPA 3550A

Blank (1402183-BLK1)

Prepared & Analyzed: 02/27/14

C10-C28 (DRO) ND 50 mg/kg

LCS (1402183-BS1)

Prepared & Analyzed: 02/27/14

C10-C28 (DRO) 437 50 mg/kg 501 87.3 73-134

Matrix Spike (1402183-MS1)

Source: 1402169-03

Prepared & Analyzed: 02/27/14

C10-C28 (DRO) 410 50 mg/kg 447 ND 91.9 50-148

Matrix Spike Dup (1402183-MSD1)

Source: 1402169-03

Prepared & Analyzed: 02/27/14

C10-C28 (DRO) 449 50 mg/kg 485 ND 92.7 50-148 9.00 13

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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/27/14 21:33

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 1402182 - EPA 5030 Soil MS

Blank (1402182-BLK1)

Prepared & Analyzed: 02/27/14

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		"	0.0386	101	23-173				
Surrogate: Toluene-d8	0.0373		"	0.0389	95.8	20-170				
Surrogate: 4-Bromofluorobenzene	0.0383		"	0.0389	98.5	21-167				

LCS (1402182-BS1)

Prepared & Analyzed: 02/27/14

Naphthalene	ND	0.010	mg/kg			66-138				
Benzene	0.0786	0.0020	"	0.0944	83.3	58-130				
Toluene	0.0868	0.0050	"	0.0947	91.6	61-134				
Ethylbenzene	0.0945	0.0050	"	0.0939	101	74-139				
m,p-Xylene	0.190	0.010	"	0.189	100	73-137				
o-Xylene	0.0943	0.0050	"	0.0936	101	73-141				
Surrogate: 1,2-Dichloroethane-d4	0.0372		"	0.0376	99.0	23-173				
Surrogate: Toluene-d8	0.0374		"	0.0379	98.8	20-170				
Surrogate: 4-Bromofluorobenzene	0.0366		"	0.0379	96.5	21-167				

LCS Dup (1402182-BSD1)

Prepared & Analyzed: 02/27/14

Naphthalene	ND	0.010	mg/kg			66-138			12	
Benzene	0.0842	0.0020	"	0.0997	84.4	58-130	6.77		13	
Toluene	0.0934	0.0050	"	0.100	93.4	61-134	7.29		16	
Ethylbenzene	0.104	0.0050	"	0.0992	105	74-139	9.36		12	
m,p-Xylene	0.209	0.010	"	0.200	105	73-137	9.65		14	
o-Xylene	0.103	0.0050	"	0.0988	104	73-141	8.94		12	
Surrogate: 1,2-Dichloroethane-d4	0.0396		"	0.0397	99.7	23-173				
Surrogate: Toluene-d8	0.0388		"	0.0400	97.1	20-170				
Surrogate: 4-Bromofluorobenzene	0.0388		"	0.0400	97.1	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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/27/14 21:33

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 1402182 - EPA 5030 Soil MS

Matrix Spike (1402182-MS1)

Source: 1402169-03

Prepared & Analyzed: 02/27/14

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0760	0.0020	"	0.0900	ND	84.5	30-131			
Toluene	0.0850	0.0050	"	0.0903	ND	94.2	30-134			
Ethylbenzene	0.0928	0.0050	"	0.0895	ND	104	22-153			
m,p-Xylene	0.186	0.010	"	0.181	ND	103	10-159			
o-Xylene	0.0920	0.0050	"	0.0892	ND	103	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0367		"	0.0358		102	23-173			
Surrogate: Toluene-d8	0.0349		"	0.0361		96.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0354		"	0.0361		98.1	21-167			

Matrix Spike Dup (1402182-MSD1)

Source: 1402169-03

Prepared & Analyzed: 02/27/14

Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0805	0.0020	"	0.0916	ND	87.9	30-131	5.77	34	
Toluene	0.0854	0.0050	"	0.0919	ND	92.9	30-134	0.475	30	
Ethylbenzene	0.0933	0.0050	"	0.0912	ND	102	22-153	0.441	24	
m,p-Xylene	0.192	0.010	"	0.184	ND	104	10-159	2.85	68	
o-Xylene	0.0941	0.0050	"	0.0908	ND	104	31-151	2.20	38	
Surrogate: 1,2-Dichloroethane-d4	0.0365		"	0.0365		99.9	23-173			
Surrogate: Toluene-d8	0.0353		"	0.0368		95.9	20-170			
Surrogate: 4-Bromofluorobenzene	0.0355		"	0.0368		96.6	21-167			

Summit Scientific

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



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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
02/27/14 21:33

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

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

March 02, 2014

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Rupert 1,2,32-9

Enclosed are the results of analyses for samples received by Summit Scientific on 02/28/14 17:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Ben Shrewsbury
President / Laboratory Manager



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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/02/14 15:36

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS11@9'	1402186-01	Soil	02/28/14 10:30	02/28/14 17:15
SS13@9'	1402186-03	Soil	02/28/14 11:30	02/28/14 17:15
SS14@9'	1402186-04	Soil	02/28/14 14:00	02/28/14 17:15

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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/02/14 15:36

SS11@9'
1402186-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 02/28/14 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1402187	02/28/14	03/01/14	8015M	

Date Sampled: 02/28/14 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		106 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 02/28/14 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1402191	02/28/14	03/01/14	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	0.81	0.50	"	"	"	"	"	"	

Date Sampled: 02/28/14 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

Summit Scientific

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



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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/02/14 15:36

SS13@9'
1402186-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/28/14 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1402187	02/28/14	03/01/14	8015M	

Date Sampled: **02/28/14 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		85.0 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/28/14 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1402191	02/28/14	03/01/14	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: **02/28/14 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		116 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		89.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		109 %	21-167		"	"	"	"	

Summit Scientific

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



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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/02/14 15:36

SS14@9'
1402186-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/28/14 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1402187	02/28/14	03/01/14	8015M	

Date Sampled: **02/28/14 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		100 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/28/14 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1402191	02/28/14	02/28/14	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: **02/28/14 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.6 %	21-167		"	"	"	"	

Summit Scientific

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



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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/02/14 15:36

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 1402187 - EPA 3550A

Blank (1402187-BLK1)

Prepared & Analyzed: 02/28/14

C10-C28 (DRO) ND 50 mg/kg

LCS (1402187-BS1)

Prepared: 02/28/14 Analyzed: 03/01/14

C10-C28 (DRO) 396 50 mg/kg 480 82.5 73-134

Matrix Spike (1402187-MS1)

Source: 1402156-01

Prepared: 02/28/14 Analyzed: 03/01/14

C10-C28 (DRO) 705 50 mg/kg 470 221 103 50-148

Matrix Spike Dup (1402187-MSD1)

Source: 1402156-01

Prepared: 02/28/14 Analyzed: 03/01/14

C10-C28 (DRO) 739 50 mg/kg 447 221 116 50-148 4.68 13

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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/02/14 15:36

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 1402191 - EPA 5030 Soil MS

Blank (1402191-BLK1)

Prepared & Analyzed: 02/28/14

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	0.0366		"	0.0384	95.3	23-173				
Surrogate: Toluene-d8	0.0366		"	0.0387	94.6	20-170				
Surrogate: 4-Bromofluorobenzene	0.0366		"	0.0387	94.5	21-167				

LCS (1402191-BS1)

Prepared & Analyzed: 02/28/14

Naphthalene	ND	0.010	mg/kg			66-138				
Benzene	0.0794	0.0020	"	0.0932	85.2	58-130				
Toluene	0.0862	0.0050	"	0.0935	92.2	61-134				
Ethylbenzene	0.0928	0.0050	"	0.0927	100	74-139				
m,p-Xylene	0.186	0.010	"	0.187	99.5	73-137				
o-Xylene	0.0916	0.0050	"	0.0923	99.2	73-141				
Surrogate: 1,2-Dichloroethane-d4	0.0363		"	0.0371	97.7	23-173				
Surrogate: Toluene-d8	0.0364		"	0.0374	97.3	20-170				
Surrogate: 4-Bromofluorobenzene	0.0350		"	0.0374	93.6	21-167				

Matrix Spike (1402191-MS1)

Source: 1402175-01

Prepared & Analyzed: 02/28/14

Naphthalene	ND	0.010	mg/kg		ND	10-158				
Benzene	0.0850	0.0020	"	0.0997	ND	85.3	30-131			
Toluene	0.0919	0.0050	"	0.100	ND	91.9	30-134			
Ethylbenzene	0.104	0.0050	"	0.0992	ND	105	22-153			
m,p-Xylene	0.207	0.010	"	0.200	ND	103	10-159			
o-Xylene	0.104	0.0050	"	0.0988	ND	105	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0384		"	0.0397	96.7	23-173				
Surrogate: Toluene-d8	0.0384		"	0.0400	96.0	20-170				
Surrogate: 4-Bromofluorobenzene	0.0385		"	0.0400	96.2	21-167				

Summit Scientific

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



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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/02/14 15:36

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 1402191 - EPA 5030 Soil MS

Matrix Spike Dup (1402191-MSD1)		Source: 1402175-01			Prepared & Analyzed: 02/28/14					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0826	0.0020	"	0.0962	ND	85.8	30-131	2.90	34	
Toluene	0.0914	0.0050	"	0.0965	ND	94.7	30-134	0.514	30	
Ethylbenzene	0.100	0.0050	"	0.0958	ND	105	22-153	3.62	24	
m,p-Xylene	0.204	0.010	"	0.193	ND	106	10-159	1.57	68	
o-Xylene	0.0987	0.0050	"	0.0954	ND	104	31-151	5.28	38	
Surrogate: 1,2-Dichloroethane-d4		0.0374	"	0.0383		97.7	23-173			
Surrogate: Toluene-d8		0.0378	"	0.0386		97.8	20-170			
Surrogate: 4-Bromofluorobenzene		0.0386	"	0.0386		99.9	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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/02/14 15:36

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

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

March 03, 2014

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Rupert 1,2,32-9

Enclosed are the results of analyses for samples received by Summit Scientific on 03/03/14 16:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Ben Shrewsbury
President / Laboratory Manager



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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/03/14 23:34

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS12@9'	1403005-01	Soil	03/03/14 10:45	03/03/14 16:55
SS15@9'	1403005-02	Soil	03/03/14 14:00	03/03/14 16:55

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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/03/14 23:34

SS12@9'
1403005-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/03/14 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1403018	03/03/14	03/03/14	8015M	

Date Sampled: **03/03/14 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		97.5 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/03/14 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1403017	03/03/14	03/03/14	EPA 8260B	
Benzene	0.0093	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/03/14 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		100 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.4 %	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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/03/14 23:34

SS15@9'
1403005-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/03/14 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1403018	03/03/14	03/03/14	8015M	

Date Sampled: **03/03/14 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		86.7 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/03/14 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1403017	03/03/14	03/03/14	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: **03/03/14 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.1 %	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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/03/14 23:34

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 1403018 - EPA 3550A

Blank (1403018-BLK1)

Prepared & Analyzed: 03/03/14

C10-C28 (DRO) ND 50 mg/kg

LCS (1403018-BS1)

Prepared & Analyzed: 03/03/14

C10-C28 (DRO) 551 50 mg/kg 473 117 73-134

Matrix Spike (1403018-MS1)

Source: 1402174-01

Prepared & Analyzed: 03/03/14

C10-C28 (DRO) 589 50 mg/kg 491 62.2 107 50-148

Matrix Spike Dup (1403018-MSD1)

Source: 1402174-01

Prepared & Analyzed: 03/03/14

C10-C28 (DRO) 578 50 mg/kg 491 62.2 105 50-148 1.91 13

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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/03/14 23:34

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 1403017 - EPA 5030 Soil MS

Blank (1403017-BLK1)

Prepared & Analyzed: 03/03/14

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	0.0383		"	0.0388	98.7	23-173				
Surrogate: Toluene-d8	0.0366		"	0.0391	93.7	20-170				
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0391	103	21-167				

LCS (1403017-BS1)

Prepared & Analyzed: 03/03/14

Naphthalene	ND	0.010	mg/kg			66-138				
Benzene	0.116	0.0020	"	0.0939	124	58-130				
Toluene	0.113	0.0050	"	0.0942	120	61-134				
Ethylbenzene	0.119	0.0050	"	0.0934	127	74-139				
m,p-Xylene	0.233	0.010	"	0.188	124	73-137				
o-Xylene	0.123	0.0050	"	0.0930	132	73-141				
Surrogate: 1,2-Dichloroethane-d4	0.0463		"	0.0374	124	23-173				
Surrogate: Toluene-d8	0.0408		"	0.0377	108	20-170				
Surrogate: 4-Bromofluorobenzene	0.0383		"	0.0377	102	21-167				

Matrix Spike (1403017-MS1)

Source: 1402174-01

Prepared & Analyzed: 03/03/14

Naphthalene	0.0160	0.010	mg/kg		0.0208	10-158				
Benzene	0.0860	0.0020	"	0.0959	ND	89.7	30-131			
Toluene	0.0975	0.0050	"	0.0962	ND	101	30-134			
Ethylbenzene	0.121	0.0050	"	0.0954	0.00338	124	22-153			
m,p-Xylene	0.280	0.010	"	0.192	0.0496	120	10-159			
o-Xylene	0.136	0.0050	"	0.0950	0.0120	130	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0387		"	0.0382		101	23-173			
Surrogate: Toluene-d8	0.0363		"	0.0385		94.5	20-170			
Surrogate: 4-Bromofluorobenzene	0.0393		"	0.0385		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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/03/14 23:34

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 1403017 - EPA 5030 Soil MS

Matrix Spike Dup (1403017-MSD1)	Source: 1402174-01			Prepared & Analyzed: 03/03/14						
Naphthalene	0.0215	0.010	mg/kg		0.0208		10-158	29.5	42	
Benzene	0.0996	0.0020	"	0.0977	ND	102	30-131	14.7	34	
Toluene	0.127	0.0050	"	0.0980	ND	130	30-134	26.6	30	
Ethylbenzene	0.129	0.0050	"	0.0973	0.00338	129	22-153	5.90	24	
m,p-Xylene	0.292	0.010	"	0.196	0.0496	124	10-159	3.98	68	
o-Xylene	0.142	0.0050	"	0.0969	0.0120	134	31-151	4.23	38	
Surrogate: 1,2-Dichloroethane-d4	0.0449		"	0.0389		115	23-173			
Surrogate: Toluene-d8	0.0437		"	0.0392		112	20-170			
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0392		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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/03/14 23:34

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

A handwritten signature in black ink, appearing to be 'JMM' followed by a long, sweeping horizontal stroke.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

March 04, 2014

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Rupert 1,2,32-9

Enclosed are the results of analyses for samples received by Summit Scientific on 03/04/14 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Ben Shrewsbury
President / Laboratory Manager



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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/04/14 22:32

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS16@9'	1403019-01	Soil	03/04/14 10:30	03/04/14 17:00
SS17@9'	1403019-02	Soil	03/04/14 10:35	03/04/14 17:00
SS18@9'	1403019-03	Soil	03/04/14 12:35	03/04/14 17:00

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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/04/14 22:32

SS16@9'
1403019-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/04/14 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1403029	03/04/14	03/04/14	8015M	

Date Sampled: **03/04/14 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		106 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/04/14 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.015	0.010	mg/kg	1	1403026	03/04/14	03/04/14	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	0.017	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.027	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.61	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	7.2	0.50	"	"	"	"	"	"	

Date Sampled: **03/04/14 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		98.6 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		118 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	21-167		"	"	"	"	

Summit Scientific

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



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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/04/14 22:32

SS17@9'
1403019-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 03/04/14 10:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1403029	03/04/14	03/04/14	8015M	

Date Sampled: 03/04/14 10:35

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: 03/04/14 10:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1403026	03/04/14	03/04/14	EPA 8260B	
Benzene	0.0044	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.046	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	4.6	0.50	"	"	"	"	"	"	

Date Sampled: 03/04/14 10:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		97.9 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.1 %	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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/04/14 22:32

SS18@9'
1403019-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/04/14 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1403029	03/04/14	03/04/14	8015M	

Date Sampled: **03/04/14 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		101 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/04/14 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1403026	03/04/14	03/04/14	EPA 8260B	
Benzene	0.0030	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.011	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/04/14 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		99.6 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.0 %	21-167		"	"	"	"	

Summit Scientific

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



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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/04/14 22:32

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 1403029 - EPA 3550A

Blank (1403029-BLK1)

Prepared & Analyzed: 03/04/14

C10-C28 (DRO) ND 50 mg/kg

LCS (1403029-BS1)

Prepared & Analyzed: 03/04/14

C10-C28 (DRO) 535 50 mg/kg 499 107 73-134

Matrix Spike (1403029-MS1)

Source: 1403018-01

Prepared & Analyzed: 03/04/14

C10-C28 (DRO) 491 50 mg/kg 491 ND 100 50-148

Matrix Spike Dup (1403029-MSD1)

Source: 1403018-01

Prepared & Analyzed: 03/04/14

C10-C28 (DRO) 500 50 mg/kg 489 ND 102 50-148 1.65 13

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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/04/14 22:32

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 1403026 - EPA 5030 Soil MS

Blank (1403026-BLK1)

Prepared & Analyzed: 03/04/14

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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0390</i>		<i>"</i>	<i>0.0395</i>		<i>98.6</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0319</i>		<i>"</i>	<i>0.0398</i>		<i>80.1</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0415</i>		<i>"</i>	<i>0.0398</i>		<i>104</i>	<i>21-167</i>			

LCS (1403026-BS1)

Prepared & Analyzed: 03/04/14

Naphthalene	0.129	0.010	mg/kg	0.148		87.3	66-138			
Benzene	0.148	0.0020	"	0.148		99.8	58-130			
Toluene	0.130	0.0050	"	0.148		87.9	61-134			
Ethylbenzene	0.169	0.0050	"	0.148		114	74-139			
m,p-Xylene	0.335	0.010	"	0.296		113	73-137			
o-Xylene	0.199	0.0050	"	0.148		135	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0349</i>		<i>"</i>	<i>0.0392</i>		<i>89.2</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0350</i>		<i>"</i>	<i>0.0394</i>		<i>88.7</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0514</i>		<i>"</i>	<i>0.0394</i>		<i>130</i>	<i>21-167</i>			

Matrix Spike (1403026-MS1)

Source: 1403016-05

Prepared & Analyzed: 03/04/14

Naphthalene	0.172	0.010	mg/kg	0.145	ND	119	10-158			
Benzene	0.112	0.0020	"	0.145	ND	77.7	30-131			
Toluene	0.0927	0.0050	"	0.145	ND	64.1	30-134			
Ethylbenzene	0.135	0.0050	"	0.145	ND	93.2	22-153			
m,p-Xylene	0.268	0.010	"	0.289	ND	92.8	10-159			
o-Xylene	0.134	0.0050	"	0.145	ND	92.6	31-151			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0370</i>		<i>"</i>	<i>0.0382</i>		<i>96.6</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0281</i>		<i>"</i>	<i>0.0385</i>		<i>73.0</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0398</i>		<i>"</i>	<i>0.0385</i>		<i>103</i>	<i>21-167</i>			

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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/04/14 22:32

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 1403026 - EPA 5030 Soil MS

Matrix Spike Dup (1403026-MSD1)	Source: 1403016-05			Prepared & Analyzed: 03/04/14						
Naphthalene	0.134	0.010	mg/kg	0.147	ND	91.5	10-158	24.8	42	
Benzene	0.146	0.0020	"	0.147	ND	99.2	30-131	25.9	34	
Toluene	0.110	0.0050	"	0.147	ND	74.9	30-134	17.1	30	
Ethylbenzene	0.165	0.0050	"	0.147	ND	112	22-153	20.0	24	
m,p-Xylene	0.323	0.010	"	0.294	ND	110	10-159	18.5	68	
o-Xylene	0.161	0.0050	"	0.147	ND	109	31-151	18.2	38	
Surrogate: 1,2-Dichloroethane-d4	0.0353		"	0.0388		90.9	23-173			
Surrogate: Toluene-d8	0.0290		"	0.0391		74.1	20-170			
Surrogate: 4-Bromofluorobenzene	0.0407		"	0.0391		104	21-167			

Summit Scientific

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/04/14 22:32

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

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

March 07, 2014

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Rupert 1,2,32-9

Enclosed are the results of analyses for samples received by Summit Scientific on 03/05/14 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Ben Shrewsbury
President / Laboratory Manager



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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/07/14 18:06

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GW01	1403027-01	Water	03/05/14 10:35	03/05/14 17:00
GW02	1403027-02	Water	03/05/14 10:40	03/05/14 17:00
SS19@9'	1403027-03	Soil	03/05/14 09:30	03/05/14 17:00
SS20@13'	1403027-04	Soil	03/05/14 09:40	03/05/14 17:00
SS21@9'	1403027-05	Soil	03/05/14 09:45	03/05/14 17:00
SS22@9'	1403027-06	Soil	03/05/14 09:50	03/05/14 17:00
SS23@9'	1403027-07	Soil	03/05/14 09:55	03/05/14 17:00
SS24@13'	1403027-08	Soil	03/05/14 10:00	03/05/14 17:00

Summit Scientific

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

Project: Rupert 1,2,32-9

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/07/14 18:06

1403027

Summit Scientific

741 Corporate Circle Suite 1 • Golden, Colorado 80401
303-277-9310 • 303-277-9331 Fax

Client: Tasman Geosciences
Address: 6859 Pecon Street
City/State/Zip: Denver, CO 80221
Phone: (720) 988-2024
Sample Name: Brands Mountain
Project Manager: Brandon Bruns
E-Mail:
Project Name: Rupert 1,2,32-9
Project Number:

Page 1 of 1

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix		Analyze For:				Special Instructions
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	8260 GNBTEX	8015 DRO	
G-12.01	3/5/14	1035	3		X									Send day for
G-12.02	3/5/14	1040	3		X									Send day for
5519 @ 9'	3/5/14	0930	1		X									Send day for
5520 @ 13'	3/5/14	0940	1		X									48h for
5521 @ 9'	3/5/14	0945	1		X									
5522 @ 9'	3/5/14	0950	1		X									
5523 @ 9'	3/5/14	0955	1		X									
5524 @ 13'	3/5/14	1000	1		X									48h for
Relinquished by: <u>MB</u> Date/Time: <u>3/5/14</u> 1700														
Relinquished by: <u>MB</u> Date/Time: <u>3/5/14</u> 1700														
Relinquished by: <u>MB</u> Date/Time: <u>3/5/14</u> 1700														

Turn Around Time (Check)	Notes
Same Day <input checked="" type="checkbox"/>	72 Hours <input type="checkbox"/>
24 Hours <input type="checkbox"/>	Standard <input checked="" type="checkbox"/>
48 Hours <input type="checkbox"/>	Brands 3/5/14

Sample Integrity:
Temperature Upon Receipt: <u>9°C</u>
Intact: <input checked="" type="checkbox"/> No <input type="checkbox"/>

www.s2scientific.com

Summit Scientific

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/07/14 18:06

GW01
1403027-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/05/14 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	7.4	1.0	ug/l	1	1403042	03/05/14	03/05/14	EPA 8260B	
Toluene	4.7	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	240	1.0	"	"	"	"	"	"	

Date Sampled: **03/05/14 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		88.3 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98.0 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		101 %	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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/07/14 18:06

GW02
1403027-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/05/14 10:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	16	1.0		ug/l	1	1403042	03/05/14	03/05/14	EPA 8260B	
Toluene	48	1.0		"	"	"	"	"	"	
Ethylbenzene	11	1.0		"	"	"	"	"	"	
Xylenes (total)	310	1.0		"	"	"	"	"	"	

Date Sampled: **03/05/14 10:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: 1,2-Dichloroethane-d4</i>		92.9 %		37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		97.5 %		45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		117 %		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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/07/14 18:06

SS19@9'
1403027-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 03/05/14 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1403051	03/06/14	03/06/14	8015M	

Date Sampled: 03/05/14 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		98.8 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 03/05/14 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1403050	03/06/14	03/06/14	EPA 8260B	
Benzene	0.039	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.0068	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.079	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	0.58	0.50	"	"	"	"	"	"	

Date Sampled: 03/05/14 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		99.7 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/07/14 18:06

SS20@13'
1403027-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/05/14 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1403051	03/06/14	03/06/14	8015M	

Date Sampled: **03/05/14 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		102 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/05/14 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1403050	03/06/14	03/06/14	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: **03/05/14 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		100 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/07/14 18:06

SS21@9'
1403027-05 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/05/14 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1403051	03/06/14	03/06/14	8015M	

Date Sampled: **03/05/14 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		105 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/05/14 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1403050	03/06/14	03/06/14	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.034	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	1.8	0.50	"	"	"	"	"	"	

Date Sampled: **03/05/14 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/07/14 18:06

SS22@9'
1403027-06 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/05/14 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1403051	03/06/14	03/06/14	8015M	

Date Sampled: **03/05/14 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		87.7 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/05/14 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1403050	03/06/14	03/06/14	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.0051	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.032	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	2.9	0.50	"	"	"	"	"	"	

Date Sampled: **03/05/14 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/07/14 18:06

SS23@9'
1403027-07 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/05/14 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1403051	03/06/14	03/06/14	8015M	

Date Sampled: **03/05/14 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		99.3 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/05/14 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1403050	03/06/14	03/06/14	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: **03/05/14 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.6 %	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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/07/14 18:06

SS24@13'
1403027-08 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/05/14 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1403051	03/06/14	03/06/14	8015M	

Date Sampled: **03/05/14 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		99.9 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/05/14 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1403050	03/06/14	03/06/14	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: **03/05/14 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.9 %	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: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/07/14 18:06

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 1403051 - EPA 3550A

Blank (1403051-BLK1)

Prepared & Analyzed: 03/06/14

C10-C28 (DRO) ND 50 mg/kg

LCS (1403051-BS1)

Prepared & Analyzed: 03/06/14

C10-C28 (DRO) 516 50 mg/kg 501 103 73-134

Matrix Spike (1403051-MS1)

Source: 1403027-03

Prepared & Analyzed: 03/06/14

C10-C28 (DRO) 493 50 mg/kg 481 26.2 97.1 50-148

Matrix Spike Dup (1403051-MSD1)

Source: 1403027-03

Prepared & Analyzed: 03/06/14

C10-C28 (DRO) 492 50 mg/kg 484 26.2 96.4 50-148 0.142 13

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/07/14 18:06

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 1403042 - EPA 5030 Water MS

Blank (1403042-BLK1)

Prepared & Analyzed: 03/05/14

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	14.1		"	13.2		106	37-154			
Surrogate: Toluene-d8	13.0		"	13.3		97.8	45-149			
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		96.0	45-146			

LCS (1403042-BS1)

Prepared & Analyzed: 03/05/14

Benzene	38.3	1.0	ug/l	33.2		115	51-132			
Toluene	35.2	1.0	"	33.3		106	51-138			
Ethylbenzene	37.7	1.0	"	33.1		114	58-146			
m,p-Xylene	74.6	2.0	"	66.7		112	57-144			
o-Xylene	36.9	1.0	"	32.9		112	53-146			
Surrogate: 1,2-Dichloroethane-d4	14.5		"	13.2		110	37-154			
Surrogate: Toluene-d8	13.1		"	13.3		98.0	45-149			
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		95.6	45-146			

Matrix Spike (1403042-MS1)

Source: 1403027-01

Prepared & Analyzed: 03/05/14

Benzene	37.8	1.0	ug/l	33.2	7.39	91.6	34-141			
Toluene	34.5	1.0	"	33.3	4.74	89.3	27-151			
Ethylbenzene	34.4	1.0	"	33.1	ND	104	29-160			
m,p-Xylene	265	2.0	"	66.7	226	58.1	20-166			
o-Xylene	48.4	1.0	"	32.9	16.1	98.0	33-159			
Surrogate: 1,2-Dichloroethane-d4	12.6		"	13.2		94.8	37-154			
Surrogate: Toluene-d8	13.1		"	13.3		98.0	45-149			
Surrogate: 4-Bromofluorobenzene	14.5		"	13.3		109	45-146			

Summit Scientific

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/07/14 18:06

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 1403042 - EPA 5030 Water MS

Matrix Spike Dup (1403042-MSD1)			Source: 1403027-01		Prepared & Analyzed: 03/05/14					
Benzene	46.5	1.0	ug/l	33.2	7.39	118	34-141	20.6	32	
Toluene	40.9	1.0	"	33.3	4.74	109	27-151	17.0	25	
Ethylbenzene	40.5	1.0	"	33.1	ND	123	29-160	16.3	50	
m,p-Xylene	272	2.0	"	66.7	226	68.7	20-166	2.63	36	
o-Xylene	55.3	1.0	"	32.9	16.1	119	33-159	13.4	26	
Surrogate: 1,2-Dichloroethane-d4	12.6		"	13.2		94.9	37-154			
Surrogate: Toluene-d8	12.9		"	13.3		96.9	45-149			
Surrogate: 4-Bromofluorobenzene	14.0		"	13.3		105	45-146			

Batch 1403050 - EPA 5030 Soil MS

Blank (1403050-BLK1)			Prepared & Analyzed: 03/06/14							
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	0.0341		"	0.0385		88.7	23-173			
Surrogate: Toluene-d8	0.0371		"	0.0388		95.7	20-170			
Surrogate: 4-Bromofluorobenzene	0.0370		"	0.0388		95.5	21-167			

LCS (1403050-BS1)			Prepared & Analyzed: 03/06/14							
Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0862	0.0020	"	0.0974		88.5	58-130			
Toluene	0.0931	0.0050	"	0.0977		95.3	61-134			
Ethylbenzene	0.0964	0.0050	"	0.0969		99.5	74-139			
m,p-Xylene	0.196	0.010	"	0.195		100	73-137			
o-Xylene	0.0976	0.0050	"	0.0965		101	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0363		"	0.0388		93.6	23-173			
Surrogate: Toluene-d8	0.0375		"	0.0391		96.1	20-170			
Surrogate: 4-Bromofluorobenzene	0.0376		"	0.0391		96.3	21-167			

Summit Scientific

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/07/14 18:06

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 1403050 - EPA 5030 Soil MS

Matrix Spike (1403050-MS1)				Source: 1403027-04		Prepared & Analyzed: 03/06/14				
Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0852	0.0020	"	0.0961	ND	88.7	30-131			
Toluene	0.0921	0.0050	"	0.0963	ND	95.6	30-134			
Ethylbenzene	0.0970	0.0050	"	0.0956	ND	101	22-153			
m,p-Xylene	0.198	0.010	"	0.193	ND	103	10-159			
o-Xylene	0.0958	0.0050	"	0.0952	ND	101	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0345		"	0.0382		90.2	23-173			
Surrogate: Toluene-d8	0.0369		"	0.0385		95.7	20-170			
Surrogate: 4-Bromofluorobenzene	0.0362		"	0.0385		94.0	21-167			

Matrix Spike Dup (1403050-MSD1)				Source: 1403027-04		Prepared & Analyzed: 03/06/14				
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0845	0.0020	"	0.0974	ND	86.8	30-131	0.906	34	
Toluene	0.0920	0.0050	"	0.0977	ND	94.2	30-134	0.0960	30	
Ethylbenzene	0.0962	0.0050	"	0.0969	ND	99.3	22-153	0.841	24	
m,p-Xylene	0.198	0.010	"	0.195	ND	101	10-159	0.172	68	
o-Xylene	0.0970	0.0050	"	0.0965	ND	101	31-151	1.33	38	
Surrogate: 1,2-Dichloroethane-d4	0.0367		"	0.0388		94.8	23-173			
Surrogate: Toluene-d8	0.0371		"	0.0391		94.9	20-170			
Surrogate: 4-Bromofluorobenzene	0.0371		"	0.0391		95.0	21-167			

Summit Scientific

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/07/14 18:06

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

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

March 12, 2014

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Rupert 1,2,32-9

Enclosed are the results of analyses for samples received by Summit Scientific on 03/07/14 16:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'BS' or 'Shrewsbury', written in a cursive style.

Ben Shrewsbury
President / Laboratory Manager



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

Project: Rupert 1,2,32-9

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/12/14 18:24

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GW03	1403047-01	Water	03/07/14 09:00	03/07/14 16:45

Summit Scientific
S₂
741 Corporate Circle, Suite J&K • Golden, Colorado 80401
303-277-9310 • 303-374-5933

Client: PDC/Tasman
Address: _____
City/State/Zip: _____
Phone: _____
Project Manager: Brandon Bruns
E-Mail: _____
Page 1 of 1

Project Name: Rupert 1,2,32-9
Project Number: _____

ID	Sample Description	Date Sampled	Time Sampled	Preservative				Matrix			Analysis Requested	Special Instructions
				# of containers	HCl	HNO ₃	None	Other (Specify)	Groundwater	Air-Canister #		
1	GW03	3/7/14	0900	3	X				X			
2												
3												
4												
5												
6												
7												
8												
9												
10												

Relinquished by: <i>Eric Siegel</i>	Date/Time: 3/7/14	Received by: <i>MC</i>	Date/Time: 3/7/14	Turn Around Time (Check): Same Day <input type="checkbox"/> 72 hours <input checked="" type="checkbox"/> 24 hours <input type="checkbox"/> Standard <input type="checkbox"/>	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity: Temperature Upon Receipt: 6°C Intact: <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:		

www.s2scientific.com

Summit Scientific

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/12/14 18:24

GW03
1403047-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/07/14 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	32	1.0	ug/l	1	1403067	03/10/14	03/11/14	EPA 8260B	
Toluene	36	1.0	"	"	"	"	"	"	
Ethylbenzene	27	1.0	"	"	"	"	"	"	
Xylenes (total)	750	1.0	"	"	"	"	"	"	

Date Sampled: **03/07/14 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		89.8 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		103 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		99.8 %	45-146		"	"	"	"	

Summit Scientific

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/12/14 18:24

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 1403067 - EPA 5030 Water MS

Blank (1403067-BLK1)

Prepared & Analyzed: 03/12/14

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	12.1		"	13.2		91.4	37-154			
Surrogate: Toluene-d8	12.9		"	13.3		97.0	45-149			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.4	45-146			

LCS (1403067-BS1)

Prepared & Analyzed: 03/12/14

Benzene	29.9	1.0	ug/l	33.2		89.8	51-132			
Toluene	31.7	1.0	"	33.3		95.2	51-138			
Ethylbenzene	33.1	1.0	"	33.1		100	58-146			
m,p-Xylene	66.3	2.0	"	66.7		99.5	57-144			
o-Xylene	32.5	1.0	"	32.9		98.7	53-146			
Surrogate: 1,2-Dichloroethane-d4	11.5		"	13.2		86.8	37-154			
Surrogate: Toluene-d8	12.8		"	13.3		95.7	45-149			
Surrogate: 4-Bromofluorobenzene	12.4		"	13.3		93.3	45-146			

Matrix Spike (1403067-MS1)

Source: 1403043-02

Prepared & Analyzed: 03/12/14

Benzene	29.3	1.0	ug/l	33.2	ND	88.3	34-141			
Toluene	31.7	1.0	"	33.3	ND	95.2	27-151			
Ethylbenzene	33.9	1.0	"	33.1	ND	103	29-160			
m,p-Xylene	68.1	2.0	"	66.7	ND	102	20-166			
o-Xylene	33.9	1.0	"	32.9	ND	103	33-159			
Surrogate: 1,2-Dichloroethane-d4	11.0		"	13.2		83.2	37-154			
Surrogate: Toluene-d8	13.0		"	13.3		97.2	45-149			
Surrogate: 4-Bromofluorobenzene	12.6		"	13.3		94.6	45-146			

Summit Scientific

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

Project: Rupert 1,2,32-9
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/12/14 18:24

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 1403067 - EPA 5030 Water MS

Matrix Spike Dup (1403067-MSD1)	Source: 1403043-02			Prepared & Analyzed: 03/12/14						
Benzene	29.3	1.0	ug/l	33.2	ND	88.2	34-141	0.0341	32	
Toluene	31.5	1.0	"	33.3	ND	94.4	27-151	0.791	25	
Ethylbenzene	33.6	1.0	"	33.1	ND	102	29-160	0.977	50	
m,p-Xylene	67.9	2.0	"	66.7	ND	102	20-166	0.265	36	
o-Xylene	33.1	1.0	"	32.9	ND	101	33-159	2.48	26	
Surrogate: 1,2-Dichloroethane-d4	11.0		"	13.2		83.3	37-154			
Surrogate: Toluene-d8	13.0		"	13.3		97.2	45-149			
Surrogate: 4-Bromofluorobenzene	12.4		"	13.3		93.3	45-146			

Summit Scientific

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