

TABLE 1
DANIELSON 15G-HZ
SOIL ANALYTICAL RESULTS SUMMARY TABLE

Sample ID	Date Sampled	Depth (bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	TPH ⁽²⁾ (mg/kg)	Naphthalene (mg/kg)
COGCC standards for soil (mg/kg) ⁽¹⁾			0.17	85	100	175	500	23
SS01 @ 3"	3/5/2015	3"	<0.0020	<0.0050	<0.0050	<0.010	<50	<0.010
SS02 @ 3"	3/5/2015	3"	<0.0020	<0.0050	<0.0050	<0.010	<50	<0.010
SS03 @ 3"	3/5/2015	3"	<0.0020	<0.0050	<0.0050	<0.010	<50	<0.010

Notes:

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

2. TPH - Total volatile and extractable petroleum hydrocarbons. Value calculated by adding GRO and DRO concentrations.

COGCC = Colorado Oil and Gas Conservation Commission

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

GRO = Total volatile petroleum hydrocarbons - gasoline range organics

DRO = Total extractable petroleum hydrocarbons - diesel range organics

mg/kg = Milligrams per kilogram

bgs = Below ground surface

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

ATTACHMENT A

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

March 06, 2015

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Danielson 15G-HZ

Enclosed are the results of analyses for samples received by Summit Scientific on 03/05/15 18:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Paul Shrewsbury
President



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

Project: Danielson 15G-HZ
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/06/15 06:34

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@3"	1503035-01	Soil	03/05/15 12:15	03/05/15 18:10
SS02@3"	1503035-02	Soil	03/05/15 12:20	03/05/15 18:10
SS03@3"	1503035-03	Soil	03/05/15 12:25	03/05/15 18:10

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

Project: Danielson 15G-HZ

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/06/15 06:34

Summit Scientific _{S₂} 1503035

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

Page 1 of 1

Client: PDC Energy Project Manager: Brandon Bruns
Address: _____ E-Mail: brandon.bruns@pdc.com
City/State/Zip: _____
Phone: 970 420 6839 Fax: _____ Project Name: Danielson 15G-HZ
Sampler Name: Paul Downey Project Number: _____

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions
					HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	BTEX	TPH	DRO/GAO	NAP	
1	SS01 @ 3"	3/5/15	12:15	1			X			X				X	X	X	
2	SS02 @ 3"		12:20	1			X			X				X	X	X	
3	SS03 @ 3"		12:25	1			X			X				X	X	X	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Relinquished by: <u>[Signature]</u>	Date/Time: <u>3/5/15 15:55</u>	Received by: <u>[Signature]</u>	Date/Time: <u>03/05/15 15:54pm</u>	Turn Around Time (Check)	Notes:
				Same Day <u>X</u> 72 hours <u>—</u>	
				24 hours <u>—</u> Standard <u>—</u>	
				48 hours <u>—</u>	
Relinquished by: <u>Wendy Bendine A. Bays</u>	Date/Time: <u>03/05/15 6:10pm</u>	Received by: <u>[Signature]</u>	Date/Time: <u>3-5-15 6:10pm</u>	Sample Integrity:	
				Temperature Upon Receipt: <u>9.0</u>	
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____	Intact: <u>Yes</u> No	

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

Project: Danielson 15G-HZ
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/06/15 06:34

SS01@3"
1503035-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 03/05/15 12:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1503065	03/05/15	03/05/15	8015M	

Date Sampled: 03/05/15 12:15

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: 03/05/15 12:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1503066	03/05/15	03/05/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 03/05/15 12:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

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

Project: Danielson 15G-HZ
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/06/15 06:34

SS02@3"
1503035-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/05/15 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1503065	03/05/15	03/05/15	8015M	

Date Sampled: **03/05/15 12:20**

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: **03/05/15 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1503066	03/05/15	03/05/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/05/15 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

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

Project: Danielson 15G-HZ
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/06/15 06:34

SS03@3"
1503035-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/05/15 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1503065	03/05/15	03/05/15	8015M	

Date Sampled: **03/05/15 12:25**

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: **03/05/15 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1503066	03/05/15	03/05/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/05/15 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

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

Project: Danielson 15G-HZ
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/06/15 06:34

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 1503065 - EPA 3550A

Blank (1503065-BLK1)

Prepared: 03/05/15 Analyzed: 03/06/15

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 12.0 " 12.2 98.0 30-150

LCS (1503065-BS1)

Prepared: 03/05/15 Analyzed: 03/06/15

C10-C28 (DRO) 443 50 mg/kg 501 88.5 73-134

Surrogate: o-Terphenyl 12.2 " 12.2 100 30-150

Matrix Spike (1503065-MS1)

Source: 1503033-01

Prepared: 03/05/15 Analyzed: 03/06/15

C10-C28 (DRO) 424 50 mg/kg 485 35.8 80.1 50-148

Surrogate: o-Terphenyl 11.7 " 11.8 99.0 30-150

Matrix Spike Dup (1503065-MSD1)

Source: 1503033-01

Prepared: 03/05/15 Analyzed: 03/06/15

C10-C28 (DRO) 475 50 mg/kg 495 35.8 88.7 50-148 11.3 13

Surrogate: o-Terphenyl 12.8 " 12.1 106 30-150

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PDC Energy
1775 Sherman St. STE. 3000
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Project: Danielson 15G-HZ
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/06/15 06:34

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 1503066 - EPA 5030 Soil MS

Blank (1503066-BLK1)

Prepared & Analyzed: 03/05/15

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0450		"	0.0396	114	23-173				
Surrogate: Toluene-d8	0.0409		"	0.0400	102	20-170				
Surrogate: 4-Bromofluorobenzene	0.0419		"	0.0400	105	21-167				

LCS (1503066-BS1)

Prepared & Analyzed: 03/05/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0757	0.0020	"	0.100	75.7	58-130				
Toluene	0.0876	0.0050	"	0.100	87.6	61-134				
Ethylbenzene	0.102	0.0050	"	0.0992	103	74-139				
m,p-Xylene	0.204	0.010	"	0.200	102	73-137				
o-Xylene	0.105	0.0050	"	0.0984	107	73-141				
Surrogate: 1,2-Dichloroethane-d4	0.0446		"	0.0396	112	23-173				
Surrogate: Toluene-d8	0.0413		"	0.0400	103	20-170				
Surrogate: 4-Bromofluorobenzene	0.0419		"	0.0400	105	21-167				

Matrix Spike (1503066-MS1)

Source: 1503033-01

Prepared & Analyzed: 03/05/15

Naphthalene	ND	0.010	mg/kg		ND	10-158				
Benzene	0.0727	0.0020	"	0.0990	ND	73.4	30-131			
Toluene	0.0847	0.0050	"	0.0990	ND	85.6	30-134			
Ethylbenzene	0.101	0.0050	"	0.0982	ND	103	22-153			
m,p-Xylene	0.200	0.010	"	0.198	ND	101	10-159			
o-Xylene	0.104	0.0050	"	0.0974	ND	107	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0435		"	0.0392	111	23-173				
Surrogate: Toluene-d8	0.0394		"	0.0396	99.5	20-170				
Surrogate: 4-Bromofluorobenzene	0.0406		"	0.0396	102	21-167				

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

Project: Danielson 15G-HZ
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/06/15 06:34

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 1503066 - EPA 5030 Soil MS

Matrix Spike Dup (1503066-MSD1)		Source: 1503033-01			Prepared: 03/05/15		Analyzed: 03/06/15			
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0695	0.0020	"	0.0945	ND	73.5	30-131	4.52	34	
Toluene	0.0804	0.0050	"	0.0945	ND	85.0	30-134	5.27	30	
Ethylbenzene	0.0952	0.0050	"	0.0938	ND	101	22-153	5.68	24	
m,p-Xylene	0.190	0.010	"	0.189	ND	101	10-159	5.10	68	
o-Xylene	0.0986	0.0050	"	0.0930	ND	106	31-151	5.27	38	
Surrogate: 1,2-Dichloroethane-d4	0.0434		"	0.0374		116	23-173			
Surrogate: Toluene-d8	0.0383		"	0.0378		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0387		"	0.0378		102	21-167			

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Denver CO, 80203

Project: Danielson 15G-HZ
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/06/15 06:34

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

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