

**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,



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 1503035

S₂

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

Page 1 of 1

Client: PDC Energy Project Manager: Brandon Bruns
Address: _____ E-Mail: brandon.brunsb@pdc.com
City/State/Zip: _____
Phone: 970 420 6829 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	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	BTEX	TPH	DRO/GAD	
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) Same Day <input checked="" type="checkbox"/> 72 hours ___ 24 hours ___ Standard ___ 48 hours ___ Sample Integrity: Temperature Upon Receipt: <u>9.0</u> Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	Notes:
Relinquished by: <u>[Signature]</u> Date/Time: <u>03/05/15 6:10pm</u>	Received by: <u>[Signature]</u> Date/Time: <u>3-5-15 6:10pm</u>		
Relinquished by: _____ Date/Time: _____	Received by: _____ Date/Time: _____		

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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

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: <i>o</i> -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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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

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: <i>o</i> -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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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: <i>o</i> -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	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch 1503065 - EPA 3550A

Blank (1503065-BLK1)

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

C10-C28 (DRO)	ND	50	mg/kg								
<i>Surrogate: o-Terphenyl</i>	<i>12.0</i>		"	<i>12.2</i>		<i>98.0</i>	<i>30-150</i>				

LCS (1503065-BS1)

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

C10-C28 (DRO)	443	50	mg/kg	501		88.5	73-134				
<i>Surrogate: o-Terphenyl</i>	<i>12.2</i>		"	<i>12.2</i>		<i>100</i>	<i>30-150</i>				

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				
<i>Surrogate: o-Terphenyl</i>	<i>11.7</i>		"	<i>11.8</i>		<i>99.0</i>	<i>30-150</i>				

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		
<i>Surrogate: o-Terphenyl</i>	<i>12.8</i>		"	<i>12.1</i>		<i>106</i>	<i>30-150</i>				

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Project: Danielson 15G-HZ

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/06/15 06:34

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

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

Batch 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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0450</i>		<i>"</i>	<i>0.0396</i>		<i>114</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0409</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0419</i>		<i>"</i>	<i>0.0400</i>		<i>105</i>	<i>21-167</i>			

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			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0446</i>		<i>"</i>	<i>0.0396</i>		<i>112</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0413</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0419</i>		<i>"</i>	<i>0.0400</i>		<i>105</i>	<i>21-167</i>			

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			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0435</i>		<i>"</i>	<i>0.0392</i>		<i>111</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0394</i>		<i>"</i>	<i>0.0396</i>		<i>99.5</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0406</i>		<i>"</i>	<i>0.0396</i>		<i>102</i>	<i>21-167</i>			

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PDC Energy
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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	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

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
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0434</i>		<i>"</i>	<i>0.0374</i>		<i>116</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0383</i>		<i>"</i>	<i>0.0378</i>		<i>101</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0387</i>		<i>"</i>	<i>0.0378</i>		<i>102</i>	<i>21-167</i>			

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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

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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