



4640 Pecos Street | Unit C | Denver, Colorado 80211  
303.433.1322 Phone 303.265.9645 Fax

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December 04, 2009

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Petroleum Development Corporation  
3801 Carson Ave.  
Evans COLOI 80534

Hubbs  
Project Number: 41-33  
Project: Sughroue

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Attached are the analytical results for Sughroue received by Origins Laboratory, Inc. 12/3/2009 3:43:00PM. Please let us know if you have any questions, or if we can help with anything at all.

The analytical results in the following report were analyzed under the guidelines of EPA Methods specified in SW-846. The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. This laboratory report is intended solely for the above addressee and it is only to be used and or reproduced in its entirety.

DRAFT REPORT  
DATA SUBJECT TO CHANGE

4640 Pecos Street | Unit C  
Denver, Colorado 80211  
303.433.1322 | Laboratory  
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Petroleum Development Corporation  
3801 Carson Ave.  
Evans COLO 80534

Hubbs  
Project Number: 41-33  
Project: Sughroue

#### CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Sampled	Date Received
DRAFT: N01 @ 4'	X912013-01	Soil	12/3/2009 1:45:00PM	12/03/2009 15:43
DRAFT: E01 @	X912013-02	Soil	12/3/2009 1:30:00PM	12/03/2009 15:43
DRAFT: S01 @	X912013-03	Soil	12/3/2009 1:35:00PM	12/03/2009 15:43
DRAFT: W01 @	X912013-04	Soil	12/3/2009 1:40:00PM	12/03/2009 15:43
DRAFT: Bttm 01 @ 6'	X912013-05	Soil	12/3/2009 1:50:00PM	12/03/2009 15:43

DRAFT REPORT

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Petroleum Development Corporation  
3801 Carson Ave.  
Evans CO 80534

Hubbs  
Project Number: 41-33  
Project: Sughrue

**ORIGINS** LABORATORY, INC.  
www.originslaboratory.com  
page 1 of 1  
X912013

Client: Petroleum Development Corp  
Address: 3801 Carson Ave  
Telephone Number: 970-534-1221  
Email Address: trapeer@petel.com  
trapeer@petel.com  
trapeer@petel.com

Project Manager: Hubbs  
Project Name: Sughrue  
Project Number: 41-33  
Samples Collected By: Casper

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions		
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa Canister #			Other	
N01 @ 4'	12-3-06	1:45p	1						X				1	
E04 @		1:30p	1										2	
S01 @		1:35p	1										3	
W01 @		1:40p	1										4	
Btme 1 @ 6'		1:50p	1										5	
													6	
													7	
													8	
													9	
													10	
Relinquished By: <u>[Signature]</u>	Date: <u>12-3-09</u>	Time: <u>3:43p</u>	Received By: <u>[Signature]</u>	Date: <u>12-3-09</u>	Time: <u>1543</u>	Turnaround Time: <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard								
Relinquished By: <u>[Signature]</u>	Date: <u>12-3-09</u>	Time: <u>3:43p</u>	Received By: <u>[Signature]</u>	Date: <u>12-3-09</u>	Time: <u>1543</u>									

4640 North Pecos Street | Unit C | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

DRAFT REPORT

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Petroleum Development Corporation  
3801 Carson Ave.  
Evans COLO 80534

Hubbs  
Project Number: 41-33  
Project: Sughrue

**DRAFT: N01 @ 4'**  
**X912013-01 (Soil)**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

**Origins Laboratory, Inc.**

**BTEX by EPA 8260B**

Benzene	ND	0.0100	mg/kg	2.5	9L03001	12/03/2009	12/04/2009
Toluene	ND	0.0100	"	"	"	"	"
Ethylbenzene	ND	0.0100	"	"	"	"	"
o-Xylene	ND	0.0100	"	"	"	"	"
m,p-Xylene	ND	0.0200	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	96.7 %	77.6-134			"	"	"
Surrogate: Toluene-d8	105 %	81.4-121			"	"	"
Surrogate: 4-Bromofluorobenzene	96.5 %	74.7-123			"	"	"

**GRO/DRO by EPA 8015M**

Gasoline (C6-C10)	ND	50.0	mg/kg	1	9L03003	12/03/2009	12/03/2009
Diesel (C10-C28)	ND	50.0	"	"	"	"	"

Surrogate: o-Terphenyl	121 %	65-140			"	"	"
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DRAFT REPORT

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Petroleum Development Corporation

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Evans COLO 80534

Hubbs

Project Number: 41-33

Project: Sughrue

**DRAFT: E01 @  
X912013-02 (Soil)**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

**Origins Laboratory, Inc.**

**BTEX by EPA 8260B**

Benzene	ND	0.0100	mg/kg	2.5	9L03001	12/03/2009	12/04/2009
Toluene	ND	0.0100	"	"	"	"	"
Ethylbenzene	ND	0.0100	"	"	"	"	"
o-Xylene	ND	0.0100	"	"	"	"	"
m,p-Xylene	ND	0.0200	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	96.0 %	77.6-134			"	"	"
Surrogate: Toluene-d8	104 %	81.4-121			"	"	"
Surrogate: 4-Bromofluorobenzene	96.6 %	74.7-123			"	"	"

**GRO/DRO by EPA 8015M**

Gasoline (C6-C10)	ND	50.0	mg/kg	1	9L03003	12/03/2009	12/03/2009
Diesel (C10-C28)	ND	50.0	"	"	"	"	"

Surrogate: o-Terphenyl	122 %	65-140			"	"	"
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Project Number: 41-33

Project: Sughrue

**DRAFT: S01 @**  
**X912013-03 (Soil)**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

**Origins Laboratory, Inc.**

**BTEX by EPA 8260B**

Benzene	ND	0.0100	mg/kg	2.5	9L03001	12/03/2009	12/04/2009
Toluene	ND	0.0100	"	"	"	"	"
Ethylbenzene	ND	0.0100	"	"	"	"	"
o-Xylene	ND	0.0100	"	"	"	"	"
m,p-Xylene	ND	0.0200	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	96.8 %	77.6-134			"	"	"
Surrogate: Toluene-d8	104 %	81.4-121			"	"	"
Surrogate: 4-Bromofluorobenzene	96.4 %	74.7-123			"	"	"

**GRO/DRO by EPA 8015M**

Gasoline (C6-C10)	ND	50.0	mg/kg	1	9L03003	12/03/2009	12/03/2009
Diesel (C10-C28)	ND	50.0	"	"	"	"	"

Surrogate: o-Terphenyl	121 %	65-140			"	"	"
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Project Number: 41-33

Project: Sughrue

**DRAFT: W01 @  
X912013-04 (Soil)**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

**Origins Laboratory, Inc.**

**BTEX by EPA 8260B**

Benzene	ND	0.0100	mg/kg	2.5	9L03001	12/03/2009	12/04/2009
Toluene	ND	0.0100	"	"	"	"	"
Ethylbenzene	ND	0.0100	"	"	"	"	"
o-Xylene	ND	0.0100	"	"	"	"	"
m,p-Xylene	ND	0.0200	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	96.2 %	77.6-134			"	"	"
Surrogate: Toluene-d8	104 %	81.4-121			"	"	"
Surrogate: 4-Bromofluorobenzene	96.0 %	74.7-123			"	"	"

**GRO/DRO by EPA 8015M**

Gasoline (C6-C10)	ND	50.0	mg/kg	1	9L03003	12/03/2009	12/03/2009
Diesel (C10-C28)	ND	50.0	"	"	"	"	"

Surrogate: o-Terphenyl	126 %	65-140			"	"	"
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Hubbs

Project Number: 41-33

Project: Sughrue

DRAFT: Bttm 01 @ 6'

X912013-05 (Soil)

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

Origins Laboratory, Inc.

#### BTEX by EPA 8260B

Benzene	ND	0.0100	mg/kg	2.5	9L03001	12/03/2009	12/04/2009
Toluene	ND	0.0100	"	"	"	"	"
Ethylbenzene	ND	0.0100	"	"	"	"	"
o-Xylene	ND	0.0100	"	"	"	"	"
m,p-Xylene	ND	0.0200	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	96.3 %	77.6-134			"	"	"
Surrogate: Toluene-d8	105 %	81.4-121			"	"	"
Surrogate: 4-Bromofluorobenzene	96.8 %	74.7-123			"	"	"

#### GRO/DRO by EPA 8015M

Gasoline (C6-C10)	ND	50.0	mg/kg	1	9L03003	12/03/2009	12/03/2009
Diesel (C10-C28)	ND	50.0	"	"	"	"	"

Surrogate: o-Terphenyl	123 %	65-140			"	"	"
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Project Number: 41-33

Project: Sughrue

**DRAFT: Extractable Petroleum Hydrocarbons by 8015M – Quality Control**

**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9L03003 – Default Prep GC-Semi</b>										
<b>Blank (9L03003-BLK1)</b>					Prepared: 12/03/2009 Analyzed: 12/03/2009					
Gasoline (C6-C10)	ND	50.0	mg/kg							
Diesel (C10-C28)	ND	50.0	"							
Surrogate: o-Terphenyl	59.8		g	50.0		120	65-140			
<b>LCS (9L03003-BS1)</b>					Prepared: 12/03/2009 Analyzed: 12/03/2009					
Gasoline (C6-C10)	ND	50.0	mg/kg				65-140			
Diesel (C10-C28)	558	50.0	"	500		112	60-140			
Surrogate: o-Terphenyl	60.3		g	50.0		121	65-140			
<b>LCS Dup (9L03003-BSD1)</b>					Prepared: 12/03/2009 Analyzed: 12/03/2009					
Gasoline (C6-C10)	ND	50.0	mg/kg				65-140		25	
Diesel (C10-C28)	559	50.0	"	500		112	60-140	0.0827	25	
Surrogate: o-Terphenyl	60.2		g	50.0		120	65-140			

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Project Number: 41-33

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### Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

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## Items for Project Manager Review

LabNumber	Analysis	Anayte	Exception
			This is a modified report
			VERSION 5.85:2894
			(Soil)
			Special Units Used
9L03003-BS1	BTEX by EPA 8260B		
		Gasoline (C6-C10)	No spike level
9L03003-BSD1	GRO/DRO by EPA 8015M		
		Gasoline (C6-C10)	No spike level
			GRO/DRO by EPA 8015M

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