

09/20/2010

Noble Energy Inc.

Todd Cullum

804 Grand Avenue

Platteville

CO

80651

Project Name- Lilli Unit Battery C-9

Project Number- [none]

Attached are your analytical results for Lilli Unit Battery C-9 received by Origins Laboratory, Inc. September 14, 2010 10:30 am. This project is associated with Origins project number X009076-01 .

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.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all,

Origins Laboratory, Inc.

303.433.1322

o-squad@oelabinc.com



Noble Energy Inc.
804 Grand Avenue
Platteville CO 80651

Todd Cullum
Project Number: [none]
Project: Lilli Unit Battery C-9

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Sampled	Date Received
SS-C-EP	X009076-01	Soil	9/10/2010 3:15:00PM	09/14/2010 10:30
SS-SP-C	X009076-02	Soil	9/13/2010 1:00:00PM	09/14/2010 10:30

Origins Laboratory, Inc.



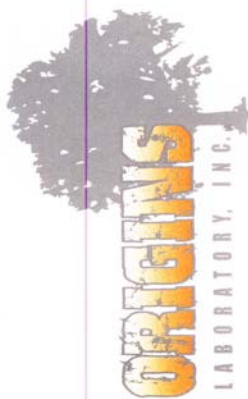
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Noelle E Doyle,

Noble Energy Inc.
804 Grand Avenue
Platteville CO 80651

Todd Cullum
Project Number: [none]
Project: Lilli Unit Battery C-9

1009076
page 1 of 1



originslaboratory.com

Project Manager: Todd Cullum
Project Name: Lilli Unit C-9
Project Number:
Samples Collected by: Todd Cullum

Client: Noble Energy Inc.
Address: 804 Grand Ave
Platteville CO 80651
Telephone Number: 970-785-5000
E-Mail Address: tcullum@nobleenergyinc.com

Sample ID - Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix		Analysis				Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air - Summa Canister #	Other	BTEX	TPH	
55-C-EP	9-10-10	3:15 PM	2						X				X	1
55-SP-C	9-13-10	1:00 PM	2						X				X	2
														3
														4
														5
														6
														7
														8
														9
														10

Relinquished by:	Date	Time	Received by:	Date	Time	Temperature Upon Receipt:
Todd Cullum	9-14-10	10:30 AM	Doyle	9/14/10	1030	
Relinquished by:	Date	Time	Received by:	Date	Time	Turn Around Time:
						Same Day 24-hr 48-hr 72-hr
						Standard

4640 North Pecos Street | Unit C | Denver, Colorado 80211 | Laboratory - 303.433.1322 | Fax - 303.265.9645

Origins Laboratory, Inc.

Noelle E Doyle

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Noble Energy Inc.
804 Grand Avenue
Platteville CO 80651

Todd Cullum
Project Number: [none]
Project: Lilli Unit Battery C-9

SS-C-EP

9/10/2010 3:15:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X009076-01 (Soil)

BTEX by EPA 8260B

Benzene	ND	0.00400	mg/kg	1	0115001	09/15/2010	09/17/2010	
Toluene	ND	0.00400	"	"	"	"	"	
Ethylbenzene	ND	0.00400	"	"	"	"	"	
m,p-Xylene	ND	0.00800	"	"	"	"	"	
o-Xylene	ND	0.00400	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	91.6 %	77.6-134			"	"	"	
Surrogate: Toluene-d8	94.0 %	81.4-121			"	"	"	
Surrogate: 4-Bromofluorobenzene	94.1 %	74.7-123			"	"	"	

Conductivity by E120.1

Conductivity	576	2	US/CM	1	823549	09/17/2010	09/17/2010	
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Percent Moisture by AD2216A

Percent Moisture	19.1	1	%	1	823322	09/16/2010	09/16/2010	
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pH by SW9045C

pH	8.2		SU	1	823349	09/16/2010	09/16/2010	
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Sodium Absorption Ratio (SAR) by S29B08

Origins Laboratory, Inc.



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Noble Energy Inc.
804 Grand Avenue
Platteville CO 80651

Todd Cullum
Project Number: [none]
Project: Lilli Unit Battery C-9

SS-C-EP

9/10/2010 3:15:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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XENCO

X009076-01 (Soil)

Sodium Absorption Ratio (SAR) by S29B08

Sodium absorption ratio	0.277			1	823652	09/20/2010	09/20/2010
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TPH-Carbon Chain by EPA Method 8015M

Gasoline (C6-C10)	ND	50.0	mg/kg	1	0115003	09/15/2010	09/16/2010
Diesel (C10-C28)	ND	50.0	"	"	"	"	"
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"
TPH - Carbon Chain Total	ND	50.0	"	"	"	"	"

Surrogate: o-Terphenyl	88.9 %	65-140	"	"	"
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Noble Energy Inc.
804 Grand Avenue
Platteville CO 80651

Todd Cullum
Project Number: [none]
Project: Lilli Unit Battery C-9

SS-SP-C

9/13/2010 1:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X009076-02 (Soil)

BTEX by EPA 8260B

Benzene	ND	0.00400	mg/kg	1	0115001	09/15/2010	09/15/2010	
Toluene	ND	0.00400	"	"	"	"	"	
Ethylbenzene	ND	0.00400	"	"	"	"	"	
m,p-Xylene	ND	0.00800	"	"	"	"	"	
o-Xylene	ND	0.00400	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	109 %	77.6-134			"	"	"	
Surrogate: Toluene-d8	114 %	81.4-121			"	"	"	
Surrogate: 4-Bromofluorobenzene	104 %	74.7-123			"	"	"	

Conductivity by E120.1

Conductivity	2490	2	US/CM	1	823549	09/17/2010	09/17/2010	
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Percent Moisture by AD2216A

Percent Moisture	8.62	1	%	1	823322	09/16/2010	09/16/2010	
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pH by SW9045C

pH	7.42		SU	1	823349	09/16/2010	09/16/2010	
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Sodium Absorption Ratio (SAR) by S29B08

Origins Laboratory, Inc.



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Noble Energy Inc.
804 Grand Avenue
Platteville CO 80651

Todd Cullum
Project Number: [none]
Project: Lilli Unit Battery C-9

SS-SP-C**9/13/2010 1:00:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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XENCO**X009076-02 (Soil)****Sodium Absorption Ratio (SAR) by S29B08**

Sodium absorption ratio	0.262			1	823652	09/20/2010	09/20/2010
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TPH-Carbon Chain by EPA Method 8015M

Gasoline (C6-C10)	ND	50.0	mg/kg	1	0115003	09/15/2010	09/16/2010
Diesel (C10-C28)	ND	50.0	"	"	"	"	"
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"
TPH - Carbon Chain Total	ND	50.0	"	"	"	"	"

Surrogate: o-Terphenyl	83.4 %	65-140	"	"	"
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Noble Energy Inc.
804 Grand Avenue
Platteville CO 80651

Todd Cullum
Project Number: [none]
Project: Lilli Unit Battery C-9

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
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Batch OI15003 - Default Prep GC-Semi

Blank (OI15003-BLK1)

Prepared: 09/15/2010 Analyzed: 09/16/2010

Gasoline (C6-C10)	ND	50.0	mg/kg
Diesel (C10-C28)	ND	50.0	"
Residual Range Organics (C28-C36)	ND	200	"
TPH - Carbon Chain Total	ND	50.0	"

Surrogate: o-Terphenyl

42.6

g

50.0

85.2

65-140

LCS (OI15003-BS1)

Prepared: 09/15/2010 Analyzed: 09/16/2010

Gasoline (C6-C10)	177	50.0	mg/kg
Diesel (C10-C28)	360	50.0	"

65-140

72.0 60-140

Surrogate: o-Terphenyl

44.1

g

50.0

88.3

65-140

Matrix Spike (OI15003-MS1)

Source: X009076-02

Prepared: 09/15/2010 Analyzed: 09/16/2010

Gasoline (C6-C10)	182	50.0	mg/kg
Diesel (C10-C28)	381	50.0	"

ND 65-130

ND 76.2 60-140

Surrogate: o-Terphenyl

45.3

g

50.0

90.6

65-140

Matrix Spike Dup (OI15003-MSD1)

Source: X009076-02

Prepared: 09/15/2010 Analyzed: 09/16/2010

Gasoline (C6-C10)	170	50.0	mg/kg
Diesel (C10-C28)	359	50.0	"

ND 65-130 6.94 20

ND 71.9 60-140 5.83 25

Surrogate: o-Terphenyl

42.8

g

50.0

85.7

65-140

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Project Number: [none]
Project: Lilli Unit Battery C-9

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 0115001 - EPA 5030B

Blank (0115001-BLK1)

Prepared: 09/15/2010 Analyzed: 09/15/2010

Benzene	ND	0.004	mg/kg
Toluene	ND	0.004	"
Ethylbenzene	ND	0.004	"
m,p-Xylene	ND	0.008	"
o-Xylene	ND	0.004	"

Surrogate: 1,2-Dichloroethane-d4	68.0	ug/L	62.5	109	77.6-134
Surrogate: Toluene-d8	72.3	"	62.5	116	81.4-121
Surrogate: 4-Bromofluorobenzene	65.1	"	62.5	104	74.7-123

LCS (0115001-BS1)

Prepared: 09/15/2010 Analyzed: 09/15/2010

Benzene	0.18	0.004	mg/kg	0.200	87.3	75.2-128
Toluene	0.22	0.004	"	0.200	107	76.3-130

Surrogate: 1,2-Dichloroethane-d4	58.0	ug/L	62.5	92.7	77.6-134
Surrogate: Toluene-d8	62.4	"	62.5	99.8	81.4-121
Surrogate: 4-Bromofluorobenzene	62.5	"	62.5	100	74.7-123

Matrix Spike (0115001-MS1)

Source: X009076-01

Prepared: 09/15/2010 Analyzed: 09/15/2010

Benzene	0.14	0.004	mg/kg
Toluene	0.21	0.004	"

Surrogate: 1,2-Dichloroethane-d4	60.4	ug/L	62.5	96.6	77.6-134
Surrogate: Toluene-d8	64.7	"	62.5	103	81.4-121
Surrogate: 4-Bromofluorobenzene	63.0	"	62.5	101	74.7-123

Matrix Spike Dup (0115001-MSD1)

Source: X009076-01

Prepared: 09/15/2010 Analyzed: 09/15/2010

Benzene	0.16	0.004	mg/kg	0.200	ND	81.7	77.6-132	11.8	13.1
Toluene	0.23	0.004	"	0.200	ND	116	74-136	11.6	20.9

Surrogate: 1,2-Dichloroethane-d4	66.2	ug/L	62.5	106	77.6-134
Surrogate: Toluene-d8	71.1	"	62.5	114	81.4-121
Surrogate: 4-Bromofluorobenzene	62.9	"	62.5	101	74.7-123

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Todd Cullum
Project Number: [none]
Project: Lilli Unit Battery C-9

Conductivity by E120.1 - Quality Control XENCO

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 823549 - NONE										
LCS (823549-1-BKS)		Source: 823549-1-BKS			Prepared: 09/17/2010 Analyzed: 09/17/2010					
Conductivity	1390	2	US/CM	1410	±1.00	99	80-120	0	20	
BLANK (823549-1-BLK)		Source: 823549-1-BLK			Prepared: 09/17/2010 Analyzed: 09/17/2010					
Conductivity	ND	2	US/CM	0.00			-	0	20	

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Project: Lilli Unit Battery C-9

Percent Moisture by AD2216A - Quality Control XENCO

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 823322 - NONE

BLANK (823322-1-BLK)

Source: 823322-1-BLK

Prepared: 09/16/2010 Analyzed: 09/16/2010

Percent Moisture	ND	1	%	0.00	-	0	20
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Todd Cullum
Project Number: [none]
Project: Lilli Unit Battery C-9

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 recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference

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