

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 _____ of _____



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

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

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	BTX	TPH	SPR		PH	EC	
55-C-EP	9-10-10	3:15 PM	2						X				X	X	X	X		1
55-SP-C	9-13-10	1:00 PM	2						X				X	X	X	X		2
																		3
																		4
																		5
																		6
																		7
																		8
																		9
																		10
Relinquished by:	Date	Time	Received by:	Date	Time	Temperature Upon Receipt:												
<u>Todd Cullum</u>	9-14-10	10:30 AM	<u>[Signature]</u>	9/14/10	1030													
Relinquished by:	Date	Time	Received by:	Date	Time	Turn Around Time:												
						Same Day												
						48-hr												
						72-hr												
						Standard	X											

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: <i>o</i> -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: <i>o</i> -Terphenyl	83.4 %	65-140			"	"	"	
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 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
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	"							
<i>Surrogate: o-Terphenyl</i>	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				65-140			
Diesel (C10-C28)	360	50.0	"	500		72.0	60-140			
<i>Surrogate: o-Terphenyl</i>	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		ND		65-130			
Diesel (C10-C28)	381	50.0	"	500	ND	76.2	60-140			
<i>Surrogate: o-Terphenyl</i>	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		ND		65-130	6.94	20	
Diesel (C10-C28)	359	50.0	"	500	ND	71.9	60-140	5.83	25	
<i>Surrogate: o-Terphenyl</i>	42.8		g	50.0		85.7	65-140			

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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
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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>68.0</i>		<i>ug/L</i>	<i>62.5</i>		<i>109</i>	<i>77.6-134</i>			
<i>Surrogate: Toluene-d8</i>	<i>72.3</i>		<i>"</i>	<i>62.5</i>		<i>116</i>	<i>81.4-121</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>65.1</i>		<i>"</i>	<i>62.5</i>		<i>104</i>	<i>74.7-123</i>			
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			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>58.0</i>		<i>ug/L</i>	<i>62.5</i>		<i>92.7</i>	<i>77.6-134</i>			
<i>Surrogate: Toluene-d8</i>	<i>62.4</i>		<i>"</i>	<i>62.5</i>		<i>99.8</i>	<i>81.4-121</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>62.5</i>		<i>"</i>	<i>62.5</i>		<i>100</i>	<i>74.7-123</i>			
Matrix Spike (0115001-MS1)					Source: X009076-01		Prepared: 09/15/2010 Analyzed: 09/15/2010			
Benzene	0.14	0.004	mg/kg	0.200	ND	72.6	77.6-132			QM-07
Toluene	0.21	0.004	"	0.200	ND	104	74-136			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>60.4</i>		<i>ug/L</i>	<i>62.5</i>		<i>96.6</i>	<i>77.6-134</i>			
<i>Surrogate: Toluene-d8</i>	<i>64.7</i>		<i>"</i>	<i>62.5</i>		<i>103</i>	<i>81.4-121</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>63.0</i>		<i>"</i>	<i>62.5</i>		<i>101</i>	<i>74.7-123</i>			
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	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>66.2</i>		<i>ug/L</i>	<i>62.5</i>		<i>106</i>	<i>77.6-134</i>			
<i>Surrogate: Toluene-d8</i>	<i>71.1</i>		<i>"</i>	<i>62.5</i>		<i>114</i>	<i>81.4-121</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>62.9</i>		<i>"</i>	<i>62.5</i>		<i>101</i>	<i>74.7-123</i>			

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804 Grand Avenue
Platteville CO 80651

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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Todd Cullum
Project Number: [none]
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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804 Grand Avenue
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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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