

GROUNDWATER MONITORING REPORT MARCH 2010

SCHMIDT 30-11G, 12G WELL SITE

On February 16, 2010, LT Environmental, Inc. (LTE) conducted groundwater sampling on behalf of Noble Energy, Inc., at the Schmidt 30-11G, 12G Well Site (Site). This sampling event constitutes the fourth post remediation monitoring event at this Site. Site history, remediation activities, well installation, and performance monitoring have been described in preceding reports.

Groundwater level measurements were collected from the monitoring wells and are summarized in Table 1. The three monitoring wells, installed on April 14, 2009 (MW01, MW02, and MW03), were used to conduct groundwater sampling. A Site map is presented in Figure 1.

Depth to groundwater ranged from 9.17 feet below top of casing (btoc) in MW03 to 9.88 feet btoc in MW02 and was used to calculate well-specific purge volumes. Following purging, groundwater samples were collected and preserved on ice. Samples were submitted under strict chain of custody protocol to Origins Laboratory, Inc. of Denver, Colorado for analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX) by United States Environmental Protection Agency Method 8260B.

Analytical results from the monitoring wells, presented in Table 1, indicate BTEX concentrations are below laboratory reporting limits and in compliance with Colorado Department of Public Health and Environment – Water Quality Control Commission Regulation 41. The laboratory analytical report is included in the Appendix.

LTE will continue to conduct quarterly groundwater monitoring events with the goal of observing four consecutive quarters of analytical results in compliance with applicable regulatory standards. The next quarterly groundwater sampling event is scheduled for June 2010.

TABLE

TABLE 1

**GROUNDWATER ANALYTICAL DATA
SCHMIDT 30-11G, 12G TANK BATTERY SITE
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.**

MONITORING		DEPTH TO				TOTAL
WELL	DATE	WATER (feet btoc)	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYLBENZENE (ug/L)	XYLENES (ug/L)
MW01	4/28/2009	6.87	<1.0	<1.0	1.35	<3.0
	8/24/2009	3.18	<1.0	<1.0	<1.0	<3.0
	11/20/2009	7.59	<1.0	<1.0	<1.0	<3.0
	2/16/2010	9.39	<1.0	<1.0	<1.0	<3.0
MW02	4/28/2009	6.37	5.67	<1.0	<1.0	3.36
	8/24/2009	4.81	<1.0	<1.0	<1.0	<3.0
	11/20/2009	7.94	<1.0	<1.0	<1.0	<3.0
	2/16/2010	9.88	<1.0	<1.0	<1.0	<3.0
MW03	4/28/2009	6.23	<1.0	<1.0	<1.0	<3.0
	8/24/2009	5.21	3.55	<1.0	36.5	1.295
	11/20/2009	7.61	<1.0	<1.0	<1.0	<3.0
	2/16/2010	9.17	<1.0	<1.0	<1.0	<3.0
CDPHE WQCC Reg 41			5.0	560	700	1,400

NOTES:

btoc - below top of casing

Benzene, toluene, ethylbenzene, and xylenes analyzed by EPA Method 8260B

ug/L - micrograms per liter

< indicates result is less than the stated laboratory reporting limit

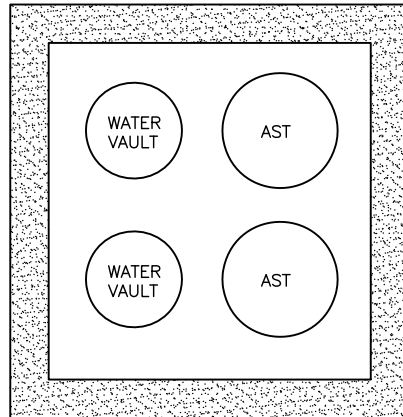
BOLD - indicates result is above the applicable standard

CDPHE WQCC Reg 41 - Colorado Department of Public Health and Environment - Water Quality Control
Commission Regulation 41 covering Basic Standards for Groundwater

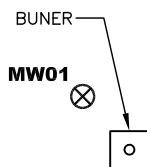


FIGURE

⊗
MW03



⊗
MW02



LEGEND

MW01 ⊗ MONITORING WELL LOCATION

 METER HOUSE

 BERM

 ESTIMATED GROUNDWATER FLOW DIRECTION

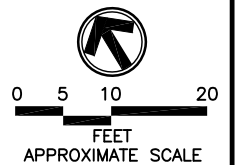


FIGURE 1
SITE MAP
SCHMIDT 30-11G, 12G
WELD COUNTY, CO
NOBLE ENERGY, INC.



APPENDIX
ANALYTICAL REPORT

2/18/2010

LT Environmental, Inc.

Matthew Harrison

4600 West 60th Avenue

Arvada

CO

80003

Project Name- Noble - Schmidt 30-11G, 12G

Project Number- NEP0902

Attached are your analytical results for Noble - Schmidt 30-11G, 12G received by Origins Laboratory, Inc. February 16, 2010 4:00 pm. This project is associated with Origins project number X002058-01 .

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



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Matthew Harrison
Project Number: NEP0902
Project: Noble - Schmidt 30-11G, 12G

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Sampled	Date Received
MW01	X002058-01	Water	2/16/2010 2:15:00PM	02/16/2010 16:00
MW02	X002058-02	Water	2/16/2010 2:20:00PM	02/16/2010 16:00
MW03	X002058-03	Water	2/16/2010 2:25:00PM	02/16/2010 16:00

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle E Doyle, Laboratory Manager

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Matthew Harrison
Project Number: NEP0902
Project: Noble - Schmidt 30-11G, 12G

www.originslaboratory.com

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ORIGINS
LABORATORY, INC

Client: L7C
Address: 4600 W 60th Ave
Telephone Number: 303-433-9788
Email Address: mharrison@ltenv.com

Project Manager: Matthew Harrison
Project Name: Schmidt 30-11G, 12G
Project Number: NEP0902
Samples Collected By: GC/BF

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #			
MW01	2/16/10	1415	2	X				X				1	
MW02	2/16/10	1420	2	X				X				2	
MW03	2/16/10	1425	2	X				X				3	
												4	
												5	
												6	
												7	
												8	
												9	
												10	

Relinquished By: [Signature] Date: 2.16.10 Time: 1600
Relinquished By: [Signature] Date: 2/16/10 Time: 1000

Turnaround Time: Same Day ☐ 24 Hr ☐ 48 Hr ☒ 72 Hr ☐ Standard ☐

Origins Laboratory, Inc.

Noelle E Doyle

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Noelle E Doyle, Laboratory Manager

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Matthew Harrison
Project Number: NEP0902
Project: Noble - Schmidt 30-11G, 12G

MW01**2/16/2010 2:15:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X002058-01 (Water)

BTEX by EPA 8260B

Benzene	ND	0.00100	mg/L	1	OB17001	02/17/2010	02/17/2010
Toluene	ND	0.00100	"	"	"	"	"
Ethylbenzene	ND	0.00100	"	"	"	"	"
o-Xylene	ND	0.00100	"	"	"	"	"
m,p-Xylene	ND	0.00200	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	104 %	73.5-130	"	"	"
Surrogate: Toluene-d8	90.1 %	79.3-113	"	"	"
Surrogate: 4-Bromofluorobenzene	97.8 %	81.5-117	"	"	"

Origins Laboratory, Inc.



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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Matthew Harrison
Project Number: NEP0902
Project: Noble - Schmidt 30-11G, 12G

MW02**2/16/2010 2:20:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X002058-02 (Water)

BTEX by EPA 8260B

Benzene	ND	0.00100	mg/L	1	OB17001	02/17/2010	02/17/2010
Toluene	ND	0.00100	"	"	"	"	"
Ethylbenzene	ND	0.00100	"	"	"	"	"
o-Xylene	ND	0.00100	"	"	"	"	"
m,p-Xylene	ND	0.00200	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	104 %	73.5-130	"	"	"
Surrogate: Toluene-d8	90.8 %	79.3-113	"	"	"
Surrogate: 4-Bromofluorobenzene	96.3 %	81.5-117	"	"	"

Origins Laboratory, Inc.



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Noelle E Doyle, Laboratory Manager

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Arvada CO 80003

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MW03**2/16/2010 2:25:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X002058-03 (Water)

BTEX by EPA 8260B

Benzene	ND	0.00100	mg/L	1	OB17001	02/17/2010	02/17/2010
Toluene	ND	0.00100	"	"	"	"	"
Ethylbenzene	ND	0.00100	"	"	"	"	"
o-Xylene	ND	0.00100	"	"	"	"	"
m,p-Xylene	ND	0.00200	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	104 %	73.5-130	"	"	"
Surrogate: Toluene-d8	90.8 %	79.3-113	"	"	"
Surrogate: 4-Bromofluorobenzene	98.0 %	81.5-117	"	"	"

Origins Laboratory, Inc.



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Noelle E Doyle, Laboratory Manager

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Matthew Harrison
Project Number: NEP0902
Project: Noble - Schmidt 30-11G, 12G

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 OB17001 - EPA 5030B

Blank (OB17001-BLK1)

Prepared: 02/17/2010 Analyzed: 02/17/2010

Benzene	ND	0.001	mg/L
Toluene	ND	0.001	"
Ethylbenzene	ND	0.001	"
o-Xylene	ND	0.001	"
m,p-Xylene	ND	0.002	"

Surrogate: 1,2-Dichloroethane-d4	63.1	ug/L	62.5	101	73.5-130
Surrogate: Toluene-d8	57.5	"	62.5	92.0	79.3-113
Surrogate: 4-Bromofluorobenzene	60.1	"	62.5	96.1	81.5-117

Blank (OB17001-BLK2)

Prepared: 02/17/2010 Analyzed: 02/17/2010

Benzene	ND	0.001	mg/L
Toluene	ND	0.001	"
Ethylbenzene	ND	0.001	"
o-Xylene	ND	0.001	"
m,p-Xylene	ND	0.002	"

Surrogate: 1,2-Dichloroethane-d4	65.6	ug/L	62.5	105	73.5-130
Surrogate: Toluene-d8	57.3	"	62.5	91.7	79.3-113
Surrogate: 4-Bromofluorobenzene	60.3	"	62.5	96.5	81.5-117

LCS (OB17001-BS1)

Prepared: 02/17/2010 Analyzed: 02/17/2010

Benzene	0.05	0.001	mg/L	0.0500	98.1	77.3-128
Toluene	0.05	0.001	"	0.0500	93.3	81.7-118

Surrogate: 1,2-Dichloroethane-d4	64.0	ug/L	62.5	102	73.5-130
Surrogate: Toluene-d8	58.2	"	62.5	93.0	79.3-113
Surrogate: 4-Bromofluorobenzene	62.1	"	62.5	99.3	81.5-117

LCS (OB17001-BS2)

Prepared: 02/17/2010 Analyzed: 02/17/2010

Benzene	0.05	0.001	mg/L	0.0500	103	77.3-128
Toluene	0.05	0.001	"	0.0500	95.8	81.7-118

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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 OB17001 - EPA 5030B										
LCS (OB17001-BS2)					Prepared: 02/17/2010 Analyzed: 02/17/2010					
Surrogate: 1,2-Dichloroethane-d4	64.0		ug/L	62.5		102	73.5-130			
Surrogate: Toluene-d8	57.1		"	62.5		91.4	79.3-113			
Surrogate: 4-Bromofluorobenzene	61.8		"	62.5		98.8	81.5-117			
Matrix Spike (OB17001-MS1)					Source: X002057-01		Prepared: 02/17/2010 Analyzed: 02/17/2010			
Benzene	0.05	0.001	mg/L	0.0500	ND	101	74.5-132			
Toluene	0.05	0.001	"	0.0500	ND	94.3	74.2-116			
Surrogate: 1,2-Dichloroethane-d4	63.3		ug/L	62.5		101	73.5-130			
Surrogate: Toluene-d8	57.0		"	62.5		91.2	79.3-113			
Surrogate: 4-Bromofluorobenzene	62.6		"	62.5		100	81.5-117			
Matrix Spike (OB17001-MS2)					Source: X002057-02		Prepared: 02/17/2010 Analyzed: 02/17/2010			
Benzene	0.11	0.001	mg/L	0.0500	0.07	88.0	74.5-132			
Toluene	0.04	0.001	"	0.0500	ND	82.4	74.2-116			
Surrogate: 1,2-Dichloroethane-d4	65.2		ug/L	62.5		104	73.5-130			
Surrogate: Toluene-d8	56.1		"	62.5		89.7	79.3-113			
Surrogate: 4-Bromofluorobenzene	61.3		"	62.5		98.1	81.5-117			
Matrix Spike Dup (OB17001-MSD1)					Source: X002057-01		Prepared: 02/17/2010 Analyzed: 02/17/2010			
Benzene	0.05	0.001	mg/L	0.0500	ND	98.8	74.5-132	1.80	13.1	
Toluene	0.05	0.001	"	0.0500	ND	93.5	74.2-116	0.916	21.2	
Surrogate: 1,2-Dichloroethane-d4	64.1		ug/L	62.5		103	73.5-130			
Surrogate: Toluene-d8	57.3		"	62.5		91.7	79.3-113			
Surrogate: 4-Bromofluorobenzene	61.2		"	62.5		97.9	81.5-117			
Matrix Spike Dup (OB17001-MSD2)					Source: X002057-02		Prepared: 02/17/2010 Analyzed: 02/17/2010			
Benzene	0.11	0.001	mg/L	0.0500	0.07	89.6	74.5-132	0.730	13.1	
Toluene	0.04	0.001	"	0.0500	ND	82.7	74.2-116	0.339	21.2	
Surrogate: 1,2-Dichloroethane-d4	65.0		ug/L	62.5		104	73.5-130			
Surrogate: Toluene-d8	56.2		"	62.5		89.9	79.3-113			
Surrogate: 4-Bromofluorobenzene	60.7		"	62.5		97.2	81.5-117			

Origins Laboratory, Inc.



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Noelle E Doyle, Laboratory Manager

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4600 West 60th Avenue
Arvada CO 80003

Matthew Harrison
Project Number: NEP0902
Project: Noble - Schmidt 30-11G, 12G

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 OB17001 - EPA 5030B

Origins Laboratory, Inc.



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Noelle E Doyle, Laboratory Manager

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4600 West 60th Avenue
Arvada CO 80003

Matthew Harrison
Project Number: NEP0902
Project: Noble - Schmidt 30-11G, 12G

Notes and Definitions

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

Origins Laboratory, Inc.



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Noelle E Doyle, Laboratory Manager