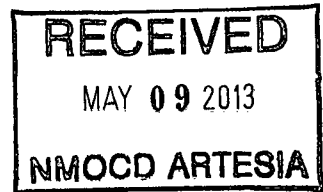




April 29, 2013



Mr. Mike Bratcher  
**NMOCD District 2**  
1301 West. Grand Avenue  
Artesia, NM 88210

AMARILLO  
921 North Bivins  
Amarillo, Texas 79107  
Phone 806.467.0607  
Fax 806.467.0622

ARTESIA  
408 West Texas Ave.  
Artesia, New Mexico 88210  
Phone 575.746.8768  
Fax 575.746.8905

AUSTIN  
911 West Anderson Lane  
Suite 202  
Austin, Texas 78757  
Phone 512.989.3428  
Fax 512.989.3487

HOBBS  
318 East Taylor Street  
Hobbs, New Mexico 88240  
Phone 575.393.4261  
Fax 575.393.4658

MIDLAND  
2801 State Hwy 349  
Midland, Texas 79706  
Phone 432.522.2133  
Fax 432.522.2180

SAN ANTONIO  
11 Commercial Place  
Schertz, Texas 78154  
Phone 210.265.8025  
Fax 210.568.2191

TULSA  
525 South Main Street  
Suite 535  
Tulsa, Oklahoma 74103  
Phone 918.742.0871  
Fax 918.382.0232

ENVIRONMENTAL CONSULTING  
ENGINEERING  
DRILLING  
CONSTRUCTION  
SPILL MANAGEMENT  
GENERAL CONTRACTING

Toll Free: 866.742.0742  
www.talonlpe.com

Subject: **Remedial Activities and Closure Report**  
Lime Rock Resources II-A, L.P.  
Atoka San Andres Unit No. 100  
30-015-00298 2RP-1289

Dear Mr. Bratcher,

Lime Rock Resources II-A L.P. (Lime Rock) contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the above referenced Atoka San Andres Unit No. 100. The incident description, soil sampling results, remediation activities and closure request are submitted herein.

#### Incident Date

The leak was discovered on August 20, 2012 at approximately 3:30 p.m.

#### Background Information

The Atoka San Andres Unit No. 100 is located approximately nine (9) miles southeast of Artesia, New Mexico. The legal location for the site is Section 2 Township 18S and Range 26E, in Eddy County, New Mexico. More specifically the latitude and longitude for the release are 32.76704 North and -104.342689 West.

According to the soil survey provided by the United States Department of Agriculture Natural Resources Conservation Service (NRCS), the soil in this area is made up of Reeves loam with a 0 to 1 percent slope. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology consists of Paleozoic age sedimentary deposits, and is comprised of the Guadeloupian Artesia Group, Tansil and Yates formations which include silty soils underlain by weathered gypsum and hard caliches. Drainage courses in this area are normally dry. The New Mexico State Engineer web site indicates the nearest ground water data to be in S1-T18S-R26E. The groundwater in the area is reported to be 8' below ground surface (bgs). The referenced groundwater data is presented in Appendix II.

The ranking for this site is 20 based on the following:

Depth to groundwater	<50'
Wellhead Protection Area	>1000'
Distance to surface water body	>1000'

## **Incident Description**

On August 20, 2012 an injection line ruptured causing approximately 95 barrels of produced water to be released. The well was shut in and the line was replaced. No fluids were recovered.

## **Remedial Actions**

### **September 11, 2012**

- Talon personnel were mobilized to carry out soil sampling activities utilizing an air rotary drill rig.
- Using split spoons, grab soil samples were collected at sample location Borehole- 1 (BH-1) to a depth of 14-feet bgs (See Appendix III for site map of sample locations.)\*
- Background grab soil samples were collected at sample location BH-2, to a depth of 10-feet bgs. (See Appendix III for site map of sample locations.)\*
- Samples were sent to Cardinal Laboratories in Hobbs, New Mexico for analysis. A data table summarizing the results is attached. (See Appendix IV for complete laboratory results.)

### **January 9, 2013**

- Talon personnel were mobilized to excavate the impacted area to a depth of 8-feet to 10-feet bgs.
- All contaminated soil was transported to New Mexico Oil Conservation Division (NMOCD) approved solid waste disposal facility Lea Land, LLC.

### **January 10, 2013 through January 30, 2013**

- Soil excavation continued.

### **January 31, 2013**

- Soil excavation was completed to a depth of 8-feet to 10-feet bgs.

### **February 1, 2013**

- Confirmation grab soil samples were collected at sample locations S-3, S-4, S-5, and S-6. (See Appendix III for site map of sample locations.)\*
- Samples were sent to Cardinal Laboratories in Hobbs, New Mexico for analysis. A data table summarizing the results is attached. (See Appendix IV for complete laboratory results.)

### **February 4, 2013**

- Talon requested permission from NMOCD to backfill the excavation to a depth of 5-feet bgs, place a 20 mil liner and backfill the excavation to grade.

### February 5, 2013

- Mike Bratcher of NMOCD granted permission for Talon to proceed with the backfill operations described on February 4<sup>th</sup>.

### February 6, 2013

- Talon began backfilling the excavation using soil purchased from the land owner (Gary Fanning).

### February 14, 2013

- Talon completed backfill of the excavation.
- A stockpile of extra top soil was left at the site upon request of the land owner.

*\*All soil samples were collected by Talon personnel wearing clean nitrile gloves. The soil samples were placed in laboratory provided sample containers and transported to Cardinal Laboratories in Hobbs, New Mexico for analysis. The samples were tested for TPH (Total Petroleum Hydrocarbons) using EPA Method 8015M, volatile organics (BTEX) using EPA Method 8021B, and total Chloride concentration using Method SM4500CL-B. The complete laboratory reports are attached.*

### Analytical Results

Analytical results detailed on the attached laboratory report are summarized below:

### Results from sampling activities on September 11, 2012:

Sample ID	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
BH-1 (0')	ND	832	ND	ND
BH-1 (2')	ND	12300	ND	ND
BH-1 (4')	--	16200	--	--
BH-1 (6')	--	1200	--	--
BH-1 (8')	--	12400	--	--
BH-1 (10')	--	4080	--	--
BH-1 (14')	--	528	--	--
BH-2 (5')	--	96	--	--
BH-2 (10')	--	240	--	--

(ND) Analyte Not Detected

(--) Analyte Not Tested

**Results from sampling activities on February 1, 2013:**

Sample ID	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-3	ND	64	ND	ND
S-4	ND	112	ND	ND
S-5	ND	416	ND	ND
S-6	ND	96	ND	ND

(ND) Analyte Not Detected

Based upon the site ranking of 20, NMOCD Recommended Remedial Action Levels (RRAL) are 50 mg/kg for BTEX, 10 mg/kg for Benzene, 100 mg/kg for TPH and 1000 mg/kg for Chlorides.

**Summary and Conclusions**

- Ground water in the project vicinity is 8-feet bgs according to the New Mexico State Engineers Database. However groundwater was not encountered in this excavation.
- The impacted soil from this release was excavated to a depth of 8-feet to 10-feet bgs.
- Top soil from the same general area was used to backfill the excavation to a depth of 5-feet bgs.
- A 20 Mil liner was placed inside the excavation area, at a depth of 5-feet bgs.
- The excavation was backfilled to grade using top soil from the same general area.
- The land owner plans to return the area to alfalfa production.

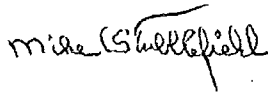
**Closure**

On behalf of Lime Rock Resources, we respectfully request that no further actions be required and that closure with regard to this release be granted.

If we can provide additional information or be of further assistance, please contact our office at (575)-746-8768.

Respectfully submitted,

TALON/LPE

A handwritten signature in cursive script that reads "Mike Stubblefield".

Mike Stubblefield  
Project Manager

A handwritten signature in cursive script that reads "David J. Adkins".

David J. Adkins  
District Manager

## **Appendix I**

### **Final C-141**

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

### Release Notification and Corrective Action

#### OPERATOR

☐ Initial Report ☒ Final Report

Name of Company LIME ROCK RESOURCES II-A, LP	Contact Michael Barrett
Address 1111 Bagby Street Suite 4600, Houston, TX 77002	Telephone No. 575-623-8424
Facility Name Atoka San Andres Unit #100	Facility Type Injection Line

Surface Owner Fanning Farms	Mineral Owner Unknown	API No. 30-015-00298 2RP-1289
-----------------------------	-----------------------	-------------------------------

#### LOCATION OF RELEASE

Unit Letter D	Section 12	Township 18S	Range 26E	Feet from the 990'	North/South Line FNL	Feet from the 330'	East/West Line FWL	County Eddy
------------------	---------------	-----------------	--------------	-----------------------	-------------------------	-----------------------	-----------------------	----------------

Latitude 32.767048 Longitude 104.342689

#### NATURE OF RELEASE


Type of Release Produced Water	Volume of Release 95 bbls	Volume Recovered 0 bbls
Source of Release Injection Line	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 8/20/2012 @ 3:30 p.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher, NMOCD	
By Whom? Michael Barrett	Date and Hour 8/21/2012 @ 11:30 am	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.\*  
N/A

Describe Cause of Problem and Remedial Action Taken.\*  
Injection line leak, line was isolated and taken out of service.

Describe Area Affected and Cleanup Action Taken.\*  
Talon/LPE (Talon) was contracted to conduct remedial actions. Talon conducted soil sampling, and subsequently excavated the impacted area to a depth of 8-feet below ground surface. All of the contaminated soil was transported to NMOCD approved disposal facility Lea Land, LLC. Talon personnel collected confirmation soil samples and backfilled the excavation to a depth of 5-feet below ground surface. A 20 Mil liner was placed in the excavation and the excavation was backfilled to grade. All backfill material was top soil from the same area as the release.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 	<b>OIL CONSERVATION DIVISION</b>		
Printed Name: Michael Barrett	Approved by Environmental Specialist:		
Title: Production Supervisor	Approval Date:	Expiration Date:	
E-mail Address: mbarrett@limerockresources.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date:	Phone: 575-628-8424		

\* Attach Additional Sheets If Necessary

## **Appendix II**

### **Groundwater Data**





# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,  
O=orphaned,  
C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Code	Subbasin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
<u>RA 02432</u>			ED	2	3	1	12	18S	26E	561764	3625443*	452	100		
<u>RA 02043</u>			ED				02	18S	26E	560654	3626749*	1280			
<u>RA 03634</u>			ED	3	1	4	11	18S	26E	560757	3624835*	1296	1797		
<u>RA 05989</u>			ED	3	2	4	01	18S	26E	562774	3626466*	1357	72	8	64
<u>RA 00012</u>	O		ED		3	4	11	18S	26E	560858	3624531*	1495	600		
<u>RA 03596</u>			ED		3	4	11	18S	26E	560858	3624531*	1495	1736		
<u>RA 01288</u>			ED	3	3	3	02	18S	26E	559950	3626045*	1626	186	50	136
<u>RA 01288 CLW319630</u>	O		ED	3	3	3	02	18S	26E	559950	3626045*	1626	200		
<u>RA 00012 A</u>			ED	3	3	4	11	18S	26E	560757	3624430*	1632	600		
<u>RA 03639</u>			ED	4	4	3	11	18S	26E	560555	3624429*	1742	1710		
<u>RA 02808</u>			ED		4	4	03	18S	26E	559648	3626145*	1939	100	30	70

Average Depth to Water: 29 feet

Minimum Depth: 8 feet

Maximum Depth: 50 feet

Record Count: 11

### UTMNAD83 Radius Search (in meters):

Easting (X): 561665

Northing (Y): 3625849

Radius: 2000

\*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

8/22/12 7:43 AM

Page 1 of 1

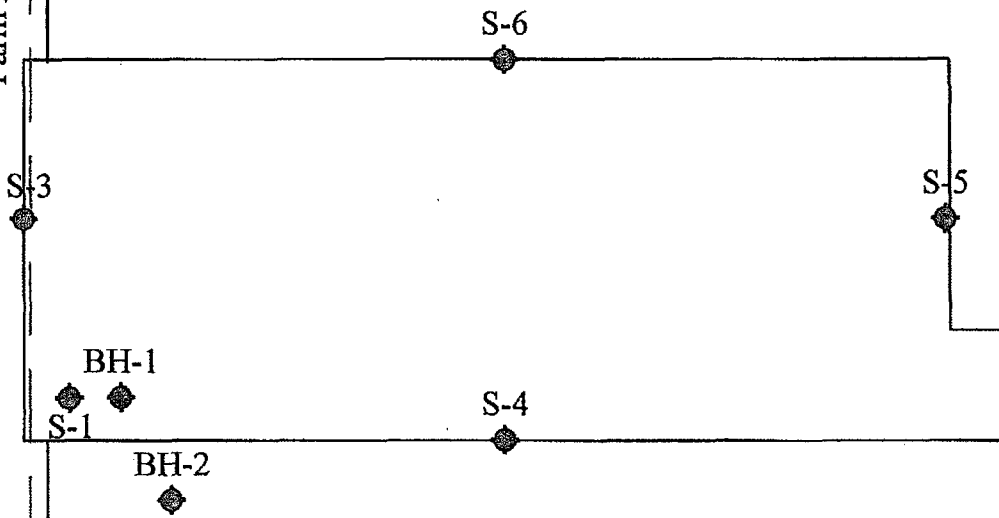
WATER COLUMN/ AVERAGE  
DEPTH TO WATER

## **Appendix III**

### **Site Map**

Farm Road

Injection Line



0 10 20  
Scale in Feet

Legend

◆ - Sample Location



Date: 04/30/2013

Scale: 1" = 20'

Drawn By: TJS

Atoka SA Unit No. 100  
Lime Rock Resources, LLC  
Eddy County, New Mexico  
Figure 1 - Site Plan

# **Appendix IV**

## **Laboratory Results**



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

September 21, 2012

MIKE STUBBLEFIELD

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: ATOKA SAN ANDRES UNIT NO. 100

Enclosed are the results of analyses for samples received by the laboratory on 09/14/12 14:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

TALON LPE  
MIKE STUBBLEFIELD  
408 W. TEXAS AVE.  
ARTESIA NM, 88210  
Fax To: (575) 745-8905

Received: 09/14/2012  
Reported: 09/21/2012  
Project Name: ATOKA SAN ANDRES UNIT NO. 100  
Project Number: 701307.040.01  
Project Location: SEC. 12 - T18S - R26E

Sampling Date: 09/11/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: BH - 1 0' (H202234-01)**

BTEX 8021B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2012	ND	1.84	92.0	2.00	13.8	
Toluene*	<0.050	0.050	09/20/2012	ND	2.07	103	2.00	11.4	
Ethylbenzene*	<0.050	0.050	09/20/2012	ND	2.04	102	2.00	11.1	
Total Xylenes*	<0.150	0.150	09/20/2012	ND	6.32	105	6.00	9.78	

Surrogate: 4-Bromofluorobenzene (PIE) 98.5 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	832	16.0	09/20/2012	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/19/2012	ND	177	88.4	200	8.27	
DRO >C10-C28	<10.0	10.0	09/19/2012	ND	172	86.1	200	12.5	

Surrogate: 1-Chlorooctane 79.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 80.1 % 63.6-154

**Cardinal Laboratories**

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 TALON LPE  
 MIKE STUBBLEFIELD  
 408 W. TEXAS AVE.  
 ARTESIA NM, 88210  
 Fax To: (575) 745-8905

 Received: 09/14/2012  
 Reported: 09/21/2012  
 Project Name: ATOKA SAN ANDRES UNIT NO. 100  
 Project Number: 701307.040.01  
 Project Location: SEC. 12 - T18S - R26E

 Sampling Date: 09/11/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: BH - 1 2' (H202234-02)**

BTEX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2012	ND	1.84	92.0	2.00	13.8	
Toluene*	<0.050	0.050	09/20/2012	ND	2.07	103	2.00	11.4	
Ethylbenzene*	<0.050	0.050	09/20/2012	ND	2.04	102	2.00	11.1	
Total Xylenes*	<0.150	0.150	09/20/2012	ND	6.32	105	6.00	9.78	

Surrogate: 4-Bromofluorobenzene (PIC) 99.5 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	12300	16.0	09/20/2012	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/19/2012	ND	177	88.4	200	8.27	
DRO >C10-C28	<10.0	10.0	09/19/2012	ND	172	86.1	200	12.5	

Surrogate: 1-Chlorooctane 76.3 % 65.2-140

Surrogate: 1-Chlorooctadecane 77.1 % 63.6-154

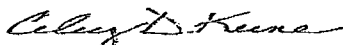
**Sample ID: BH - 1 4' (H202234-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16200	16.0	09/20/2012	ND	400	100	400	3.92	

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TALON LPE  
MIKE STUBBLEFIELD  
408 W. TEXAS AVE.  
ARTESIA NM, 88210  
Fax To: (575) 745-8905

Received: 09/14/2012  
Reported: 09/21/2012  
Project Name: ATOKA SAN ANDRES UNIT NO. 100  
Project Number: 701307.040.01  
Project Location: SEC. 12 - T18S - R26E

Sampling Date: 09/11/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: BH - 1 6' (H202234-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	12000	16.0	09/20/2012	ND	400	100	400	3.92	

**Sample ID: BH - 1 8' (H202234-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	12400	16.0	09/20/2012	ND	400	100	400	3.92	

**Sample ID: BH - 1 10' (H202234-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4080	16.0	09/20/2012	ND	400	100	400	3.92	

**Sample ID: BH - 1 12' (H202234-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	432	16.0	09/20/2012	ND	400	100	400	3.92	

**Sample ID: BH - 1 14' (H202234-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	528	16.0	09/20/2012	ND	400	100	400	3.92	

Cardinal Laboratories

\*=Accredited Analyte

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*Celey D. Keene*

Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

TALON LPE  
MIKE STUBBLEFIELD  
408 W. TEXAS AVE.  
ARTESIA NM, 88210  
Fax To: (575) 745-8905

Received: 09/14/2012  
Reported: 09/21/2012  
Project Name: ATOKA SAN ANDRES UNIT NO. 100  
Project Number: 701307.040.01  
Project Location: SEC. 12 - T18S - R26E

Sampling Date: 09/11/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: BH - 2 5' BACKGROUND (H202234-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	09/20/2012	ND	400	100	400	3.92	

**Sample ID: BH - 2 10' BACKGROUND (H202234-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	09/20/2012	ND	400	100	400	3.92	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

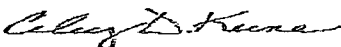
QM-4X	The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Company Name: <b>Talon/LPE</b>				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>											
Project Manager: <b>mike@stellafield</b>				P.O. #:															
Address: <b>402 West Texas Ave.</b>				Company: <b>Talon/LPE</b>															
City: <b>Artesia</b> State: <b>NM</b> Zip: <b>88210</b>				Attn:															
Phone #: <b>575-441-7254</b> Fax #:				Address:															
Project #: <b>201302-040-01</b> Project Owner: <b>Lime Rock Res., LLC</b>				City:															
Project Name: <b>Atoka San Andres Unit No. 100</b>				State: Zip:															
Project Location: <b>SEC. 12, T18S-R26E</b>				Phone #:															
Sampler Name: <b>mike@stellafield</b>				Fax #:															

FOR LAB USE ONLY		GRAB OR COMB.	# CONTAINERS	MATRIX						PRESERV.			SAMPLING		80157 TPH	80213 BTEX	Total chlorides
Lab I.D.	Sample I.D.			GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER	DATE	TIME			
<b>H202234</b>																	
1	BH-1 0'	/										9/11/12	11:20A	/	/	/	
2	BH-1 2'	/										9/11/12	11:23A	/	/	/	
3	BH-1 4'	/										9/11/12	11:26A	/	/	/	
4	BH-1 6'	/										9/11/12	11:33A	/	/	/	
5	BH-1 8'	/										9/11/12	11:37A	/	/	/	
6	BH-1 10'	/										9/11/12	12:15A	/	/	/	
7	BH-1 12'	/										9/11/12	12:20A	/	/	/	
8	BH-1 14'	/										9/11/12	12:51A	/	/	/	
9	BH-2 5' background	/										9/11/12	1:05P	/	/	/	
10	BH-2 10' background	/										9/11/12	1:10P	/	/	/	

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Relinquished By: 	Date: <b>9-14-12</b> Time: <b>3:50</b>	Received By: 	Date: _____ Time: _____	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #: _____ Add'l Fax #: _____
Relinquished By: _____					
Delivered By: (Circle One) Sampler - UPS - Bus - <u>Other</u>					
Sample Condition: Cool Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
CHECKED BY: 					



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

February 04, 2013

MIKE STUBBLEFIELD

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: ATOKA SAN ANDRES UNIT NO. 100

Enclosed are the results of analyses for samples received by the laboratory on 02/01/13 17:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 TALON LPE  
 MIKE STUBBLEFIELD  
 408 W. TEXAS AVE.  
 ARTESIA NM, 88210  
 Fax To: (575) 745-8905

 Received: 02/01/2013  
 Reported: 02/04/2013  
 Project Name: ATOKA SAN ANDRES UNIT NO. 100  
 Project Number: 701307.040.01  
 Project Location: SEC. 12 - T18S - R26E

 Sampling Date: 02/01/2013  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: S - 3 (H300306-01)**

BTX 8021B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/03/2013	ND	2.14	107	2.00	15.7	
Toluene*	<0.050	0.050	02/03/2013	ND	2.13	106	2.00	15.8	
Ethylbenzene*	<0.050	0.050	02/03/2013	ND	2.10	105	2.00	15.4	
Total Xylenes*	<0.150	0.150	02/03/2013	ND	6.38	106	6.00	15.2	
Total BTX	<0.300	0.300	02/03/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 104 % 89.4-126

Chloride, SM4500Cl-B			mg/kg		Analyzed By: DW				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	02/04/2013	ND	416	104	400	3.77	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/04/2013	ND	218	109	200	2.45	
DRO >C10-C28	<10.0	10.0	02/04/2013	ND	183	91.6	200	6.21	

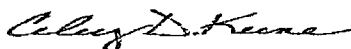
Surrogate: 1-Chlorooctane 85.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 89.4 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 TALON LPE  
 MIKE STUBBLEFIELD  
 408 W. TEXAS AVE.  
 ARTESIA NM, 88210  
 Fax To: (575) 745-8905

 Received: 02/01/2013  
 Reported: 02/04/2013  
 Project Name: ATOKA SAN ANDRES UNIT NO. 100  
 Project Number: 701307.040.01  
 Project Location: SEC. 12 - T18S - R26E

 Sampling Date: 02/01/2013  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: S - 4 (H300306-02)**

BTX 80218			mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/03/2013	ND	2.14	107	2.00	15.7		
Toluene*	<0.050	0.050	02/03/2013	ND	2.13	106	2.00	15.8		
Ethylbenzene*	<0.050	0.050	02/03/2013	ND	2.10	105	2.00	15.4		
Total Xylenes*	<0.150	0.150	02/03/2013	ND	6.38	106	6.00	15.2		
Total BTX	<0.300	0.300	02/03/2013	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 104 % 89.4-126

Chloride, SM4500Cl-B			mg/kg							Analyzed By: DW	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	112	16.0	02/04/2013	ND	416	104	400	3.77			

TPH 8015M			mg/kg							Analyzed By: MS	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
GRO C6-C10	<10.0	10.0	02/04/2013	ND	218	109	200	2.45			
DRO >C10-C28	<10.0	10.0	02/04/2013	ND	183	91.6	200	6.21			

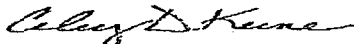
Surrogate: 1-Chlorooctane 92.6 % 65.2-140

Surrogate: 1-Chlorooctadecane 99.5 % 63.6-154

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 TALON LPE  
 MIKE STUBBLEFIELD  
 408 W. TEXAS AVE.  
 ARTESIA NM, 88210  
 Fax To: (575) 745-8905

Received:	02/01/2013	Sampling Date:	02/01/2013
Reported:	02/04/2013	Sampling Type:	Soil
Project Name:	ATOKA SAN ANDRES UNIT NO. 100	Sampling Condition:	Cool & Intact
Project Number:	701307.040.01	Sample Received By:	Jodi Henson
Project Location:	SEC. 12 - T18S - R26E		

**Sample ID: S - 5 (H300306-03)**

BTX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/03/2013	ND	2.14	107	2.00	15.7	
Toluene*	<0.050	0.050	02/03/2013	ND	2.13	106	2.00	15.8	
Ethylbenzene*	<0.050	0.050	02/03/2013	ND	2.10	105	2.00	15.4	
Total Xylenes*	<0.150	0.150	02/03/2013	ND	6.38	106	6.00	15.2	
Total BTX	<0.300	0.300	02/03/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 105 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	02/04/2013	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/04/2013	ND	218	109	200	2.45	
DRO >C10-C28	<10.0	10.0	02/04/2013	ND	183	91.6	200	6.21	

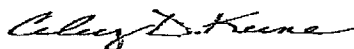
Surrogate: 1-Chlorooctane 83.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 89.8 % 63.6-154

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 TALON LPE  
 MIKE STUBBLEFIELD  
 408 W. TEXAS AVE.  
 ARTESIA NM, 88210  
 Fax To: (575) 745-8905

Received:	02/01/2013	Sampling Date:	02/01/2013
Reported:	02/04/2013	Sampling Type:	Soil
Project Name:	ATOKA SAN ANDRES UNIT NO. 100	Sampling Condition:	Cool & Intact
Project Number:	701307.040.01	Sample Received By:	Jodi Henson
Project Location:	SEC. 12 - T18S - R26E		

**Sample ID: S - 6 (H300306-04)**

BTEX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/03/2013	ND	2.14	107	2.00	15.7	
Toluene*	<0.050	0.050	02/03/2013	ND	2.13	106	2.00	15.8	
Ethylbenzene*	<0.050	0.050	02/03/2013	ND	2.10	105	2.00	15.4	
Total Xylenes*	<0.150	0.150	02/03/2013	ND	6.38	106	6.00	15.2	
Total BTEX	<0.300	0.300	02/03/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 105 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	02/04/2013	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/04/2013	ND	218	109	200	2.45	
DRO >C10-C28	<10.0	10.0	02/04/2013	ND	183	91.6	200	6.21	

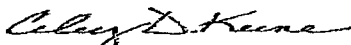
Surrogate: 1-Chlorooctane 92.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 104 % 63.6-154

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



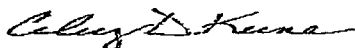
**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

[illegible]