



July 21, 2015

Ms. Heather Patterson  
**NMOCD District 2**

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

811 S. 1<sup>st</sup> Street  
Artesia, NM 88210

Subject: **Remedial Activities and Closure Report**  
Lime Rock Resources II-A, L.P.  
Logan 35 Transfer Line  
30-015-30439 (2RP-3084)

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

Dear Ms. Patterson,

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

Lime Rock Resources II-A, L.P. (Lime Rock) has contract Talon/LPE (Talon) to perform soil assessment and remediation services at the above referenced location. The incident description, soil sampling results, and closure request are submitted herein.

### Background Information

MIDLAND  
2901 State Hwy 349  
Midland, Texas 79706  
Phone 432.522.2133  
Fax 432.522.2180

The Logan 35 Transfer Line is located approximately twelve miles southeast of Artesia, New Mexico. The legal location for this release is Unit Letter N, Section 35, Township 17 South and Range 27 East. More specifically the latitude and longitude for this release are 32.7863696 North and -104.25100100 West. A site plan is presented in [Appendix I](#).

OKLAHOMA CITY  
7700 North Hudson Avenue  
Suite 10  
Oklahoma City, Oklahoma 73116  
Phone 405.486.7030  
Fax 806.467.0622

According to the soil survey provided by the United States Department of Agriculture Natural Resources Conservation Service, the soil in this area is made up of the Gypsum land-Cottonwood complex with 0 to 3 percent slopes. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology is comprised of older alluvial deposits of upland plains and piedmont areas. Drainage courses in this area are normally dry. Groundwater in the project vicinity is approximately 100-feet below ground surface (bgs) according to the 2006 Chevron Texaco Groundwater Trend Map. See [Appendix II](#) for the referenced groundwater data.

SAN ANTONIO  
13111 Lookout Way  
San Antonio, Texas 78233  
Phone 210.265.8025  
Fax 210.568.2191

The ranking for this site is **0** Based on the following:

Depth to ground water	>100'
Wellhead Protection Area	>1000'
Distance to surface water body	>1000'

ENVIRONMENTAL CONSULTING  
ENGINEERING  
DRILLING  
CONSTRUCTION  
SPILL MANAGEMENT  
GENERAL CONTRACTING

Toll Free: 866.742.0742  
[www.talonlpe.com](http://www.talonlpe.com)

## Incident Description

A downed power line caused a fire which ignited flowlines resulting in a release of approximately 300bbls of produced water and 5bbls of oil. BLM fire crews responded to extinguish the fire. Once the fire was extinguished and the area was made safe, crews began working to stop the flow of fluid from the lines and vacuum trucks were used to recover the standing fluid. Approximately 300bbls of produced water and 1bbl of oil were recovered.

Talon mobilized personnel to conduct an initial site assessment, begin emergency remedial activities and perform soil sampling within the impacted area. Laboratory results from the soil sampling activities are summarized in the table below.

## Laboratory Results

See [Appendix III](#) for complete report of laboratory results.

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	0	ND	4560	14.5	1580
S-1	1	ND	9730	ND	11.4
S-1	2	--	48	--	--
S-1	3	--	160	--	--
S-2	0	1.13	15900	66.3	3580
S-2	1	ND	1960	ND	17.3
S-2	2	--	4000	--	--
S-2	3	--	704	--	--
S-2	4	--	272	--	--
S-3	0	14.8	19800	68.2	703
S-3	1	0.67	10900	ND	159
S-3	2	--	4880	--	--
S-3	3	--	9330	--	--
S-3	4	--	8800	--	--
S-3	5	--	128	--	--
S-4	0	ND	12000	ND	ND
S-4	1	ND	10700	ND	ND
S-4	2	--	1780	--	--
S-4	3	--	1440	--	--
S-4	4	--	96	--	--
S-5	0	ND	8260	ND	ND
S-5	1	ND	512	ND	ND
S-5	2	--	ND	--	--

(--) Analyte Not Tested

(ND) Analyte Not Detected

Based upon the site ranking of **0**, NMOCD Recommended Remedial Action Levels (RRAL) are 50 mg/kg for BTEX, 10 mg/kg for Benzene, and 5,000 mg/kg for TPH.

## Remedial Actions

- The area in the vicinity of sample location S-1 was excavated to a depth of 2-feet bgs.
- The area in the vicinity of sample location S-2 was excavated to a depth of 3-feet bgs.
- The area in the vicinity of sample location S-3 was excavated to a depth of 5-feet bgs.
- The area in the vicinity of sample location S-4 was excavated to a depth of 4-feet bgs.
- The area in the vicinity of sample location S-5 was excavated to a depth of 1-foot bgs.
- All of the excavated material was hauled to an NMOCD approved solid waste disposal facility.
- The excavated area was backfilled with top soil, contoured to match the surrounding terrain and seeded with BLM #3/4 seed mixture. See [Appendix IV](#) for seeding label.


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,

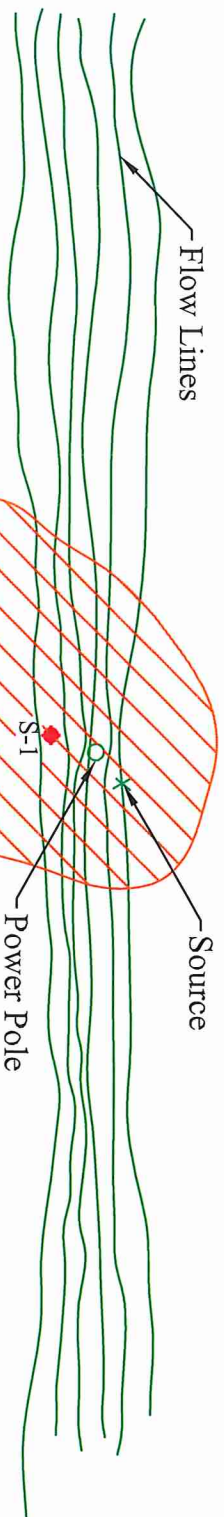
TALON/LPE

  
Sheldon L. Hitchcock  
Project Manager

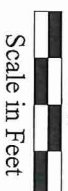
  
David J. Adkins  
District Manager

# SITE PLAN





NTS



CR 225



Date: 06/30/2015

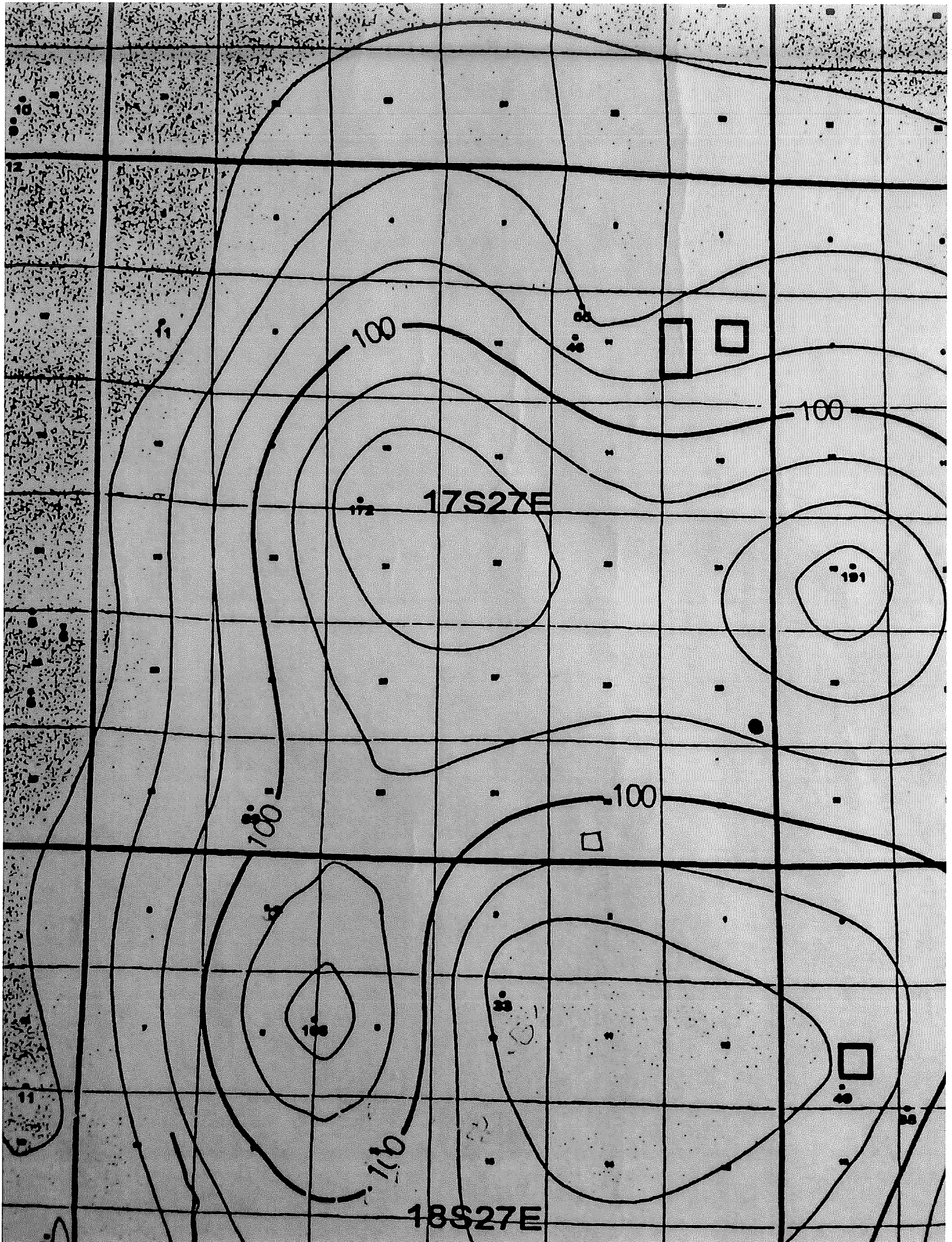
Scale: NTS

Drawn By: TJS

Logan 35 Transfer Line  
 Lime Rock Resources  
 Eddy County, New Mexico  
 Figure 1 - Site Plan

**GROUNDWATER DATA**  
**INITIAL C-141**  
**&**  
**FINAL C-141**







District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, 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 October 10, 2003  
Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

**Release Notification and Corrective Action**

**OPERATOR**

☒ Initial Report ☐ Final Report

Name of Company : <b>LIME ROCK RESOURCES II-A, LP</b>	Contact : <b>Mike Barrett</b>
Address : <b>1111 Bagby Street Suite 4600, Houston, TX 77002</b>	Telephone No. : <b>575-623-8424</b>
Facility Name: <b>Logan 35 Water Transfer Line</b>	Facility Type: <b>Transfer Line</b>

Surface Owner :	Mineral Owner:	<b>API:30-015-30439</b>
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**LOCATION OF RELEASE**

Unit Letter <b>N</b>	Section <b>35</b>	Township <b>17S</b>	Range <b>27E</b>	Feet from the	North/South Line	Feet from the	East/West Line	County <b>Eddy</b>
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Latitude **32.78584 N** Longitude **-104.25050 W**

**NATURE OF RELEASE**


Type of Release : <b>Mix Fluids</b>	Volume of Release : <b>350 bbls PW 5 bbls Oil</b>	Volume Recovered: <b>300 bbls PW 5 bbls Oil</b>
Source of Release : <b>Downed Power Line</b>	Date and Hour of Occurrence: <b>6/25/2015 3:30 pm</b>	Date and Hour of Discovery: <b>6/25/2015 @ 3:30 pm</b>
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? <b>BLM/Jeffery Robertson &amp; OCD/Mike Bratcher - voicemail</b>	
By Whom? <b>Sheldon Hitchcock with Talon/LPE</b>	Date and Hour : <b>6/25/2015 @ 4:00 pm</b>	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*☐A downed power line ignited causing a fire which melted the flow lines. The facility and wells were shut in. The BLM fire department responded. The lines were cut and capped. A vac truck was immediately called to the site and recovered 300 barrels of produced water and 1 barrel of oil. Talon/LPE was contacted for the emergency response.

Describe Area Affected and Cleanup Action Taken.\*☐Talon mobilized personnel and equipment for emergency cleanup and sampling.

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: <b>Michael Barrett</b>	Approved by District Supervisor:		
Title: <b>Production Supervisor</b>	Approval Date:	Expiration Date:	
E-mail Address: <b>mbarrett@limerockresources.com</b>	Conditions of Approval:		Attached <input type="checkbox"/>
Date: <b>6/26/2015</b> Phone: <b>575-623-8424</b>			

\* Attach Additional Sheets If Necessary

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, 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 October 10, 2003

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

**Release Notification and Corrective Action**

**OPERATOR**

☐ Initial Report ☒ Final Report

Name of Company : LIME ROCK RESOURCES II-A, LP	Contact : Mike Barrett
Address : 1111 Bagby Street Suite 4600, Houston ,TX 77002	Telephone No. : 575-623-8424
Facility Name: Logan 35 Water Transfer Line	Facility Type: Transfer Line

Surface Owner : BLM	Mineral Owner: BLM	API:30-015-30439
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**LOCATION OF RELEASE**

Unit Letter N	Section 35	Township 17S	Range 27E	Feet from the	North/South Line	Feet from the	East/West Line	County Eddy
------------------	---------------	-----------------	--------------	---------------	------------------	---------------	----------------	-------------

Latitude 32.78584 N Longitude -104.25050 W

**NATURE OF RELEASE**

Type of Release : Mix Fluids	Volume of Release : 350 bbls PW 5 bbls Oil	Volume Recovered: 300 bbls PW 1 bbl Oil
Source of Release : Downed Power Line	Date and Hour of Occurrence: 6/25/2015 3:30 pm	Date and Hour of Discovery: 6/25/2015 @ 3:30 pm
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? BLM/Jeffery Robertson & OCD/Mike Bratcher - voicemail	
By Whom? Sheldon Hitchcock with Talon/LPE	Date and Hour :6/25/2015 @ 4:00 am	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	


If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* A downed power line ignited causing a fire which melted the flow lines. The facility and wells were shut in. The BLM fire department responded to extinguish the fire. Once the fire was out the flowlines were cut and capped with valves and later repaired and put back into service. Vacuum trucks were immediately called to the site and recovered 300 barrels of produced water and 1 barrel of oil. Talon/LPE was contacted for the emergency response.

Describe Area Affected and Cleanup Action Taken.\* Talon mobilized personnel and equipment for emergency response, site assessment, soil sampling and generation of the work plan. Upon approval of the work plan the remediation was conducted per the approved work plan. The excavation was backfilled, contoured to match the surrounding terrain and seeded.

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.

**OIL CONSERVATION DIVISION**

Signature: 	Approved by District Supervisor:	
Printed Name: Michael Barrett		
Title: Production Supervisor	Approval Date:	Expiration Date:
E-mail Address: mbarrett@limerockresources.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 7/21/2015 Phone: 575-623-8424		

\* Attach Additional Sheets If Necessary



# LABORATORY RESULTS



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

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June 29, 2015

SHELDON HITCHCOCK

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: LOGAN 35 TRANSFER LINE

Enclosed are the results of analyses for samples received by the laboratory on 06/26/15 14:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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

**Analytical Results For:**

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

Received:	06/26/2015	Sampling Date:	06/26/2015
Reported:	06/29/2015	Sampling Type:	Soil
Project Name:	LOGAN 35 TRANSFER LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: S-1 0 ' (H501658-01)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/26/2015	ND	1.96	98.1	2.00	3.40	
Toluene*	<0.050	0.050	06/26/2015	ND	2.00	100	2.00	1.61	
Ethylbenzene*	<0.050	0.050	06/26/2015	ND	2.03	102	2.00	3.17	
Total Xylenes*	<0.150	0.150	06/26/2015	ND	5.73	95.5	6.00	2.41	
Total BTEx	<0.300	0.300	06/26/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4560	16.0	06/29/2015	ND	416	104	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	14.5	10.0	06/26/2015	ND	176	88.0	200	2.67	
DRO >C10-C28	1580	10.0	06/26/2015	ND	202	101	200	2.63	

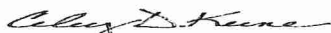
Surrogate: 1-Chlorooctane 120 % 47.2-157

Surrogate: 1-Chlorooctadecane 154 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	06/26/2015	Sampling Date:	06/26/2015
Reported:	06/29/2015	Sampling Type:	Soil
Project Name:	LOGAN 35 TRANSFER LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: S-1 1 ' (H501658-02)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/26/2015	ND	1.96	98.1	2.00	3.40	
Toluene*	<0.050	0.050	06/26/2015	ND	2.00	100	2.00	1.61	
Ethylbenzene*	<0.050	0.050	06/26/2015	ND	2.03	102	2.00	3.17	
Total Xylenes*	<0.150	0.150	06/26/2015	ND	5.73	95.5	6.00	2.41	
Total BTEX	<0.300	0.300	06/26/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 108 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9730	16.0	06/29/2015	ND	416	104	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	06/26/2015	ND	176	88.0	200	2.67	
DRO >C10-C28	11.4	10.0	06/26/2015	ND	202	101	200	2.63	

Surrogate: 1-Chlorooctane 111 % 47.2-157

Surrogate: 1-Chlorooctadecane 130 % 52.1-176

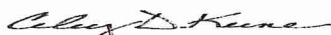
**Sample ID: S-1 2 ' (H501658-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/29/2015	ND	416	104	400	3.92	

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	06/26/2015	Sampling Date:	06/26/2015
Reported:	06/29/2015	Sampling Type:	Soil
Project Name:	LOGAN 35 TRANSFER LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: S-1 3' (H501658-04)**

Chloride, SM4500CI-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	06/29/2015	ND	416	104	400	0.00	

**Sample ID: S-2 0' (H501658-05)**

BTX 8021B		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.060	0.050	06/29/2015	ND	1.96	98.1	2.00	3.40	
Toluene*	0.252	0.050	06/29/2015	ND	2.00	100	2.00	1.61	
Ethylbenzene*	0.297	0.050	06/29/2015	ND	2.03	102	2.00	3.17	
Total Xylenes*	0.525	0.150	06/29/2015	ND	5.73	95.5	6.00	2.41	
Total BTX	1.13	0.300	06/29/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 109 % 61-154

Chloride, SM4500CI-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	15900	16.0	06/29/2015	ND	416	104	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	66.3	50.0	06/26/2015	ND	176	88.0	200	2.67	
DRO >C10-C28	3580	50.0	06/26/2015	ND	202	101	200	2.63	

Surrogate: 1-Chlorooctane 135 % 47.2-157

Surrogate: 1-Chlorooctadecane 189 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

Received:	06/26/2015	Sampling Date:	06/26/2015
Reported:	06/29/2015	Sampling Type:	Soil
Project Name:	LOGAN 35 TRANSFER LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: S-2 1' (H501658-06)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/26/2015	ND	1.96	98.1	2.00	3.40	
Toluene*	<0.050	0.050	06/26/2015	ND	2.00	100	2.00	1.61	
Ethylbenzene*	<0.050	0.050	06/26/2015	ND	2.03	102	2.00	3.17	
Total Xylenes*	<0.150	0.150	06/26/2015	ND	5.73	95.5	6.00	2.41	
Total BTX	<0.300	0.300	06/26/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 110 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1960	16.0	06/29/2015	ND	416	104	400	0.00	

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	06/26/2015	ND	176	88.0	200	2.67	
DRO >C10-C28	17.3	10.0	06/26/2015	ND	202	101	200	2.63	

Surrogate: 1-Chlorooctane 114 % 47.2-157

Surrogate: 1-Chlorooctadecane 134 % 52.1-176

**Sample ID: S-2 2' (H501658-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4000	16.0	06/29/2015	ND	416	104	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	06/26/2015	Sampling Date:	06/26/2015
Reported:	06/29/2015	Sampling Type:	Soil
Project Name:	LOGAN 35 TRANSFER LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: S-2 3' (H501658-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	704	16.0	06/29/2015	ND	416	104	400	0.00	

**Sample ID: S-2 4' (H501658-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	06/29/2015	ND	416	104	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	06/26/2015	Sampling Date:	06/26/2015
Reported:	06/29/2015	Sampling Type:	Soil
Project Name:	LOGAN 35 TRANSFER LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: S-3 0' (H501658-10)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>1.77</b>	0.050	06/26/2015	ND	1.96	98.1	2.00	3.40	
<b>Toluene*</b>	<b>4.28</b>	0.050	06/26/2015	ND	2.00	100	2.00	1.61	
<b>Ethylbenzene*</b>	<b>3.47</b>	0.050	06/26/2015	ND	2.03	102	2.00	3.17	
<b>Total Xylenes*</b>	<b>5.24</b>	0.150	06/26/2015	ND	5.73	95.5	6.00	2.41	
<b>Total BTX</b>	<b>14.8</b>	0.300	06/26/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 103 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>19800</b>	16.0	06/29/2015	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10</b>	<b>68.2</b>	10.0	06/26/2015	ND	176	88.0	200	2.67	
<b>DRO &gt;C10-C28</b>	<b>703</b>	10.0	06/26/2015	ND	202	101	200	2.63	


Surrogate: 1-Chlorooctane 125 % 47.2-157

Surrogate: 1-Chlorooctadecane 160 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	06/26/2015	Sampling Date:	06/26/2015
Reported:	06/29/2015	Sampling Type:	Soil
Project Name:	LOGAN 35 TRANSFER LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: S-3 1' (H501658-11)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.056	0.050	06/26/2015	ND	1.96	98.1	2.00	3.40	
Toluene*	0.138	0.050	06/26/2015	ND	2.00	100	2.00	1.61	
Ethylbenzene*	0.184	0.050	06/26/2015	ND	2.03	102	2.00	3.17	
Total Xylenes*	0.287	0.150	06/26/2015	ND	5.73	95.5	6.00	2.41	
Total BTX	0.665	0.300	06/26/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 114 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10900	16.0	06/29/2015	ND	416	104	400	0.00	

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	06/26/2015	ND	176	88.0	200	2.67	
DRO >C10-C28	159	10.0	06/26/2015	ND	202	101	200	2.63	

Surrogate: 1-Chlorooctane 115 % 47.2-157

Surrogate: 1-Chlorooctadecane 139 % 52.1-176

**Sample ID: S-3 2' (H501658-12)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4880	16.0	06/29/2015	ND	416	104	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	06/26/2015	Sampling Date:	06/26/2015
Reported:	06/29/2015	Sampling Type:	Soil
Project Name:	LOGAN 35 TRANSFER LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: S-3 3' (H501658-13)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9330	16.0	06/29/2015	ND	416	104	400	0.00	

**Sample ID: S-3 4' (H501658-14)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8800	16.0	06/29/2015	ND	416	104	400	0.00	

**Sample ID: S-3 5' (H501658-15)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	06/29/2015	ND	416	104	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

Received:	06/26/2015	Sampling Date:	06/26/2015
Reported:	06/29/2015	Sampling Type:	Soil
Project Name:	LOGAN 35 TRANSFER LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: S-4 0' (H501658-16)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/26/2015	ND	1.96	98.1	2.00	3.40	
Toluene*	<0.050	0.050	06/26/2015	ND	2.00	100	2.00	1.61	
Ethylbenzene*	<0.050	0.050	06/26/2015	ND	2.03	102	2.00	3.17	
Total Xylenes*	<0.150	0.150	06/26/2015	ND	5.73	95.5	6.00	2.41	
Total BTEX	<0.300	0.300	06/26/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 111 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	12000	16.0	06/29/2015	ND	416	104	400	0.00	

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	06/26/2015	ND	176	88.0	200	2.67	
DRO >C10-C28	<10.0	10.0	06/26/2015	ND	202	101	200	2.63	

Surrogate: 1-Chlorooctane 113 % 47.2-157

Surrogate: 1-Chlorooctadecane 135 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	06/26/2015	Sampling Date:	06/26/2015
Reported:	06/29/2015	Sampling Type:	Soil
Project Name:	LOGAN 35 TRANSFER LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: S-4 1' (H501658-17)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/26/2015	ND	1.96	98.1	2.00	3.40	
Toluene*	<0.050	0.050	06/26/2015	ND	2.00	100	2.00	1.61	
Ethylbenzene*	<0.050	0.050	06/26/2015	ND	2.03	102	2.00	3.17	
Total Xylenes*	<0.150	0.150	06/26/2015	ND	5.73	95.5	6.00	2.41	
Total BTEX	<0.300	0.300	06/26/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 112 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10700	16.0	06/29/2015	ND	416	104	400	0.00	

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	06/26/2015	ND	176	88.0	200	2.67	
DRO >C10-C28	<10.0	10.0	06/26/2015	ND	202	101	200	2.63	

Surrogate: 1-Chlorooctane 111 % 47.2-157

Surrogate: 1-Chlorooctadecane 131 % 52.1-176

**Sample ID: S-4 2' (H501658-18)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1780	16.0	06/29/2015	ND	416	104	400	0.00		

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	06/26/2015	Sampling Date:	06/26/2015
Reported:	06/29/2015	Sampling Type:	Soil
Project Name:	LOGAN 35 TRANSFER LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: S-4 3' (H501658-19)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1440	16.0	06/29/2015	ND	416	104	400	0.00	

**Sample ID: S-4 4' (H501658-20)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	06/29/2015	ND	416	104	400	0.00	

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**Analytical Results For:**

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

Received:	06/26/2015	Sampling Date:	06/26/2015
Reported:	06/29/2015	Sampling Type:	Soil
Project Name:	LOGAN 35 TRANSFER LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: S-5 0' (H501658-21)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/26/2015	ND	1.96	98.1	2.00	3.40	
Toluene*	<0.050	0.050	06/26/2015	ND	2.00	100	2.00	1.61	
Ethylbenzene*	<0.050	0.050	06/26/2015	ND	2.03	102	2.00	3.17	
Total Xylenes*	<0.150	0.150	06/26/2015	ND	5.73	95.5	6.00	2.41	
Total BTX	<0.300	0.300	06/26/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 112 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8260	16.0	06/29/2015	ND	416	104	400	0.00	

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	06/26/2015	ND	176	88.0	200	2.67	
DRO >C10-C28	<10.0	10.0	06/26/2015	ND	202	101	200	2.63	

Surrogate: 1-Chlorooctane 119 % 47.2-157

Surrogate: 1-Chlorooctadecane 141 % 52.1-176

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**Analytical Results For:**

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

Received:	06/26/2015	Sampling Date:	06/26/2015
Reported:	06/29/2015	Sampling Type:	Soil
Project Name:	LOGAN 35 TRANSFER LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: S-5 1' (H501658-22)**

BTEx 8021B			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/26/2015	ND	1.96	98.1	2.00	3.40		
Toluene*	<0.050	0.050	06/26/2015	ND	2.00	100	2.00	1.61		
Ethylbenzene*	<0.050	0.050	06/26/2015	ND	2.03	102	2.00	3.17		
Total Xylenes*	<0.150	0.150	06/26/2015	ND	5.73	95.5	6.00	2.41		
Total BTEx	<0.300	0.300	06/26/2015	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	512	16.0	06/29/2015	ND	416	104	400	0.00	

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	06/26/2015	ND	176	88.0	200	2.67		
DRO >C10-C28	<10.0	10.0	06/26/2015	ND	202	101	200	2.63		

Surrogate: 1-Chlorooctane 115 % 47.2-157

Surrogate: 1-Chlorooctadecane 134 % 52.1-176

**Sample ID: S-5 2' (H501658-23)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/29/2015	ND	416	104	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager



### Notes and Definitions

- S-06      The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
- 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



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ANALYSIS REQUEST

FOR LAB USE ONLY

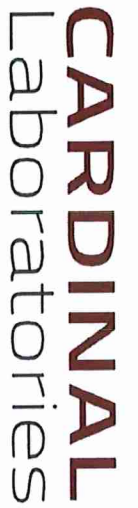
[illegible]

Relinquished By:

Relinquished By: <u>Sheldon Green</u>		Date: _____		Received By: <u>Shirley Garcia</u>		Date: _____	
Time: _____		Time: _____		Time: _____		Time: _____	
Relinquished By: _____		Date: <u>6/26/15</u>		Received By: _____		Date: _____	
Time: <u>2:00</u>		Time: _____		Time: _____		Time: _____	
Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No    Add'l Phone #: _____ Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No    Add'l Fax #: _____ REMARKS: <u>Cash !!</u>							

**Delivered By: (Circle One)**  
**Sampler - UPS - Bus - Other:**

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326



Pb 207

ANALYSIS REQUEST

still





## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

pg 3 of 3



# SEEDING LABEL

Curtis & Curtis Seed  
4500 N. Prince  
Clovis, NM 88101  
Phone: 575-762-4759

7.9.15

Logan 35 line leak  
lime rock *LT*

Talea Drilling LP  
3 Acres BLM #3 & #4, Broadcast Rate  
6 - 1/2 Acre Bag @ 23.47 Bulk Pounds  
~~Job - Strawberry Field #~~  
B-7, 194-31E  
200-9402702

Logan 35 WTL

701307.078-01

Lot# M-11148

Item	Origin	Purity	Germ	Dormant	Germ & Dormant	Test Date	Total PL Pounds
Sideoats Grama Vaughn	New Mexico	40.30%	73.00%	1.00%	74.00%	03/12	42.00
Blue Grama Lovington	Colorado	8.19%	57.00%	21.00%	78.00%	03/12	9.00
Alkali Sacaton VNS	New Mexico	4.44%	21.00%	75.00%	96.00%	03/12	6.00
Four Wing Saltbush VNS	New Mexico	35.51%	34.00%	36.00%	60.00%	01/12	30.00

Other Crop: 00.05%  
Weed Seed: 00.32%  
Inert Matter: 11.19%

There Is 6 Bags For This Lot  
This Bag Weighs 23.47 Bulk Pounds  
Use This Bag For 1/2 Acres

Total Bulk Pounds: 141