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Work Plan

Lime Rock Resources II-A, L.P.: West Redlake Water Station #1

March 24, 2016

Prepared By:

TALON/LPE
408 W. Texas Avenue
Artesia, New Mexico 88210

Prepared For:

Lime Rock Resources II-A, L.P.

Ms. Heather Patterson
NMOCD District 2
811 S. 1st Street
Artesia, NM 88210

Subject: **Soil Assessment and Remediation Work Plan**
Lime Rock Resources II-A, L.P.
West Redlake Water Station #1

Dear Ms. Patterson,

Lime Rock Resources (Lime Rock) has contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the above referenced location. The results of our soil assessment and proposed remediation activities consist of the following.

Site Information

The West Redlake Water Station #1 is located approximately ten (10) miles east of Artesia, New Mexico. The legal location for this release is Unit Letter B, Section 7, Township 18 South and Range 27 East in Eddy County, New Mexico. More specifically the latitude and longitude for the release are 32.768991 North and -104.314224 West. A site plan is presented in Appendix I.

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 gypsum lands. 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.

Ground Water and Site Ranking

According to the Chevron Texaco ground water trend map, the ground water in this area is between 50 to 100 feet below ground surface (BGS). Therefore the ranking for this site is a **10** based on the following:

Depth to ground water	50' – 100'
Wellhead Protection Area	>1000'
Distance to surface water body	>1000'

Based upon the site ranking of **10**, NMOCD Recommended Remedial Action Levels (RRAL) are 50 mg/kg for BTEX, 10 mg/kg for Benzene, 1,000 mg/kg for TPH and 1,000 mg/kg for total chlorides. See Appendix II.

Incident Description and Initial Remedial Actions

A flow line ruptured causing a release of approximately 190bbbls of produced water. The fluid was contained within the berms of the battery. The line was repaired and put back into service. A vacuum truck was dispatched to the location and was able to recover approximately 170bbbls of produced water. See Appendix III.

Talon mobilized personnel to conduct a site assessment and perform soil sampling within the impacted area utilizing a hand auger. Upon receipt of analytical results from the soil sampling event with the hand auger it was determined that further vertical delineation of chloride impacts would be required.

An excavator was then mobilized for further vertical delineation of the impacted area. Due to the numerous above and below ground lines at this location, vertical delineation sampling was carried out in the vicinity of sample locations S-2 and S-4, which had the highest chloride (worst case) levels. The laboratory results from the soil sampling activities are summarized in the table below.

Laboratory Results

See Appendix IV for complete report of laboratory results.

Initial Site Assessment

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	0	0.387	18200	ND	ND
S-1 Refusal	1	ND	17400	ND	ND
S-2	0	1.65	26800	ND	ND
S-2 Refusal	1	ND	16800	ND	ND
S-3	0	ND	15000	ND	ND
S-3 Refusal	0.5	ND	5800	ND	ND
S-4	0	ND	20400	ND	ND
S-4 Refusal	0.5	ND	16800	ND	ND

Chloride Delineation with Excavator

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-2	2	--	6800	--	--
	3	--	4560	--	--
	4	--	1720	--	--
	5	--	1070	--	--
Refusal	6	--	496	--	--
S-4	1	--	4080	--	--
	2	--	6000	--	--
	3	--	1800	--	--
	4	--	800	--	--
	5	--	1840	--	--
Refusal	6	--	592	--	--

(--) Analyte Not Tested

(ND) Analyte Not Detected

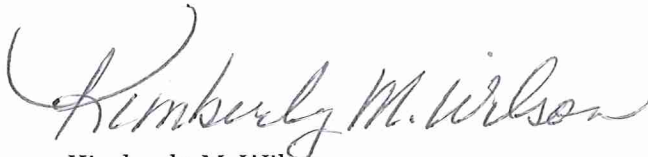
Proposed Remedial Actions

- Due to the rocky conditions and the numerous above and below ground lines in the area of sample point S-1 the impacted soil will be excavated to a depth of 3-feet deep or to the greatest extent safely as possible.
- The rest of the impacted areas S-2 through S-4 will be excavated to a depth of 3-feet deep.
- All of the excavated soil will be hauled to an NMOCD approved solid waste disposal facility.
- The excavation will be backfilled with caliche and contoured to match the surrounding location.
- A final closure report documenting all remedial actions and analytical results will be provided to the BLM and NMOCD Artesia Office along with a Final C-141 Form.

Should you have any questions or if further information is required, please do not hesitate to contact our office at (575)-746-8768

Respectfully submitted,

TALON/LPE



Kimberly M. Wilson
Project Manager



David J. Adkins
District Manager

Attachments:

- Appendix I Site Map
- Appendix II Groundwater
- Appendix III Initial C-141
- Appendix IV Laboratory Results

APPENDIX I

SITE MAP



Google earth

© 2016 Google

W Red Lake #1

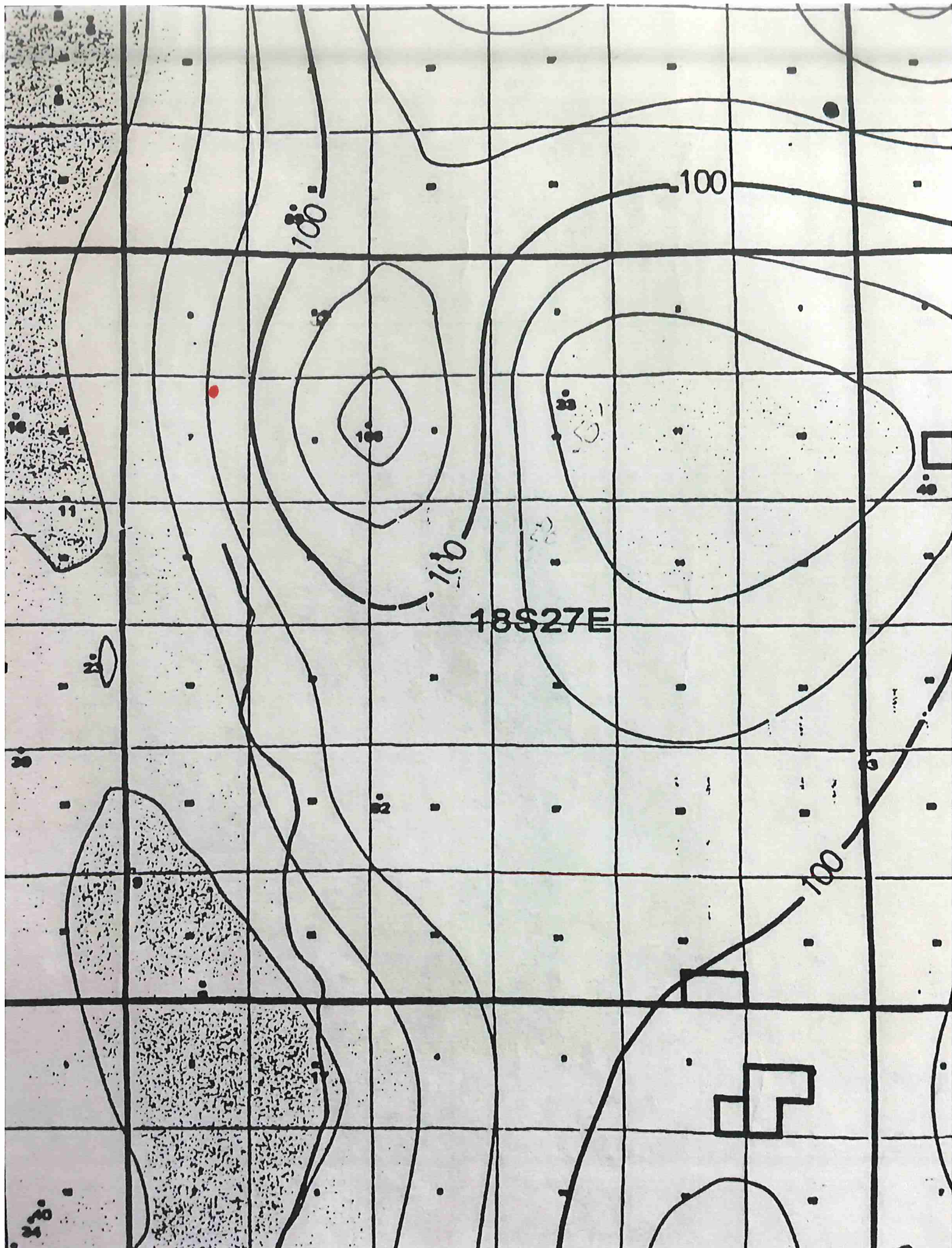
Lime Rock
701307.082.01

Legend

- Buried Flow Line
- Feature 1
- Source
- Spill Area



APPENDIX II
GROUNDWATER DATA



APPENDIX III
INITIAL 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 : 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 : WEST REDLAKE WATER STATION #1	Facility Type: Water Station

Surface Owner :	Mineral Owner:	Lease No.
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LOCATION OF RELEASE

Unit Letter B	Section 7	Township 18S	Range 27E	Feet from the	North/South Line	Feet from the	East/West Line	County Eddy
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Latitude 32.768991 N Longitude -104.314224 W

NATURE OF RELEASE


Type of Release : Produced Water	Volume of Release : 190 bbls	Volume Recovered: 170 bbls
Source of Release : Flow line leak	Date and Hour of Occurrence: 11/27/15 10:00 am	Date and Hour of Discovery: 11/27/15
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? OCD/Mike Bratcher	
By Whom? Kimberly Wilson	Date and Hour: 11/27/15 @ 11:30 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 flow line ruptured causing a release of 190 barrels of produced water to be released within the earthen berms of the secondary containment. The release didn't breach the berm. The line was isolated, shut in and repaired. A vac truck was immediately called to location and recovered 170 barrels of fluid. Talon mobilized personnel to the location for initial site assessment and soil sampling activities to generate a work plan.

Describe Area Affected and Cleanup Action Taken.* All fluids were contained with earthen berms.

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: 	<u>OIL CONSERVATION DIVISION</u>		
Printed Name: Michael Barrett	Approved by District Supervisor:		
Title: Production Supervisor	Approval Date:	Expiration Date:	
E-mail Address: mbarrett@limerockresources.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 12/10/2015 Phone: 575-623-8424			

* Attach Additional Sheets If Necessary

APPENDIX IV
LABORATORY RESULTS

December 03, 2015

SHELDON HITCHCOCK

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: WEST RED LAKE #1

Enclosed are the results of analyses for samples received by the laboratory on 11/30/15 15:35.

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.

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: 11/30/2015
 Reported: 12/03/2015
 Project Name: WEST RED LAKE #1
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 11/25/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: S-1 0' (H503129-01)

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	12/02/2015	ND	1.97	98.6	2.00	2.58	
Toluene*	0.135	0.050	12/02/2015	ND	1.97	98.5	2.00	2.40	
Ethylbenzene*	0.099	0.050	12/02/2015	ND	2.01	101	2.00	2.90	
Total Xylenes*	0.154	0.150	12/02/2015	ND	5.97	99.5	6.00	3.01	
Total BTEX	0.387	0.300	12/02/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	18200	16.0	12/01/2015	ND	400	100	400	11.3	

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	12/01/2015	ND	194	97.2	200	0.907	
DRO >C10-C28	<10.0	10.0	12/01/2015	ND	193	96.6	200	2.84	


Surrogate: 1-Chlorooctane 87.3 % 35-147

Surrogate: 1-Chlorooctadecane 93.8 % 28-171

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: 11/30/2015
 Reported: 12/03/2015
 Project Name: WEST RED LAKE #1
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 11/25/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: S-1 1' REFUSAL (H503129-02)

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	12/02/2015	ND	1.97	98.6	2.00	2.58	
Toluene*	<0.050	0.050	12/02/2015	ND	1.97	98.5	2.00	2.40	
Ethylbenzene*	<0.050	0.050	12/02/2015	ND	2.01	101	2.00	2.90	
Total Xylenes*	<0.150	0.150	12/02/2015	ND	5.97	99.5	6.00	3.01	
Total BTEX	<0.300	0.300	12/02/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.6-140

Chloride, SM4500Cl-B			mg/kg Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	17400	16.0	12/01/2015	ND	400	100	400	11.3	

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	12/01/2015	ND	194	97.2	200	0.907	
DRO >C10-C28	<10.0	10.0	12/01/2015	ND	193	96.6	200	2.84	


Surrogate: 1-Chlorooctane 95.6 % 35-147

Surrogate: 1-Chlorooctadecane 103 % 28-171

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*=Accredited Analyte

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

Received: 11/30/2015
Reported: 12/03/2015
Project Name: WEST RED LAKE #1
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/25/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S-2 0' (H503129-03)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.548	0.050	12/02/2015	ND	1.97	98.6	2.00	2.58	
Toluene*	0.680	0.050	12/02/2015	ND	1.97	98.5	2.00	2.40	
Ethylbenzene*	0.151	0.050	12/02/2015	ND	2.01	101	2.00	2.90	
Total Xylenes*	0.269	0.150	12/02/2015	ND	5.97	99.5	6.00	3.01	
Total BTEX	1.65	0.300	12/02/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	26800	16.0	12/01/2015	ND	400	100	400	11.3	

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	12/01/2015	ND	194	97.2	200	0.907	
DRO >C10-C28	<10.0	10.0	12/01/2015	ND	193	96.6	200	2.84	

Surrogate: 1-Chlorooctane 97.8 % 35-147

Surrogate: 1-Chlorooctadecane 104 % 28-171

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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: 11/30/2015
 Reported: 12/03/2015
 Project Name: WEST RED LAKE #1
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 11/25/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: S-2 1' REFUSAL (H503129-04)

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	12/02/2015	ND	1.97	98.6	2.00	2.58		
Toluene*	<0.050	0.050	12/02/2015	ND	1.97	98.5	2.00	2.40		
Ethylbenzene*	<0.050	0.050	12/02/2015	ND	2.01	101	2.00	2.90		
Total Xylenes*	<0.150	0.150	12/02/2015	ND	5.97	99.5	6.00	3.01		
Total BTEX	<0.300	0.300	12/02/2015	ND						

Surrogate: 4-Bromofluorobenzene (PIL) 104 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16800	16.0	12/01/2015	ND	400	100	400	11.3	

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	12/01/2015	ND	194	97.2	200	0.907	
DRO >C10-C28	<10.0	10.0	12/01/2015	ND	193	96.6	200	2.84	

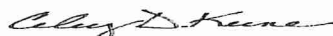
Surrogate: 1-Chlorooctane 89.8 % 35-147

Surrogate: 1-Chlorooctadecane 100 % 28-171

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

 Received: 11/30/2015
 Reported: 12/03/2015
 Project Name: WEST RED LAKE #1
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 11/25/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: S-3 0' (H503129-05)

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	12/02/2015	ND	1.97	98.6	2.00	2.58	
Toluene*	<0.050	0.050	12/02/2015	ND	1.97	98.5	2.00	2.40	
Ethylbenzene*	<0.050	0.050	12/02/2015	ND	2.01	101	2.00	2.90	
Total Xylenes*	<0.150	0.150	12/02/2015	ND	5.97	99.5	6.00	3.01	
Total BTEx	<0.300	0.300	12/02/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 104 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	15000	16.0	12/01/2015	ND	400	100	400	11.3	

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	12/02/2015	ND	192	96.1	200	0.104	
DRO >C10-C28	<10.0	10.0	12/02/2015	ND	185	92.6	200	0.860	

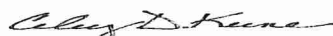
Surrogate: 1-Chlorooctane 103 % 35-147

Surrogate: 1-Chlorooctadecane 112 % 28-171

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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

Received: 11/30/2015
Reported: 12/03/2015
Project Name: WEST RED LAKE #1
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/25/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S-3 0.5' REFUSAL (H503129-06)

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	12/02/2015	ND	1.97	98.6	2.00	2.58		
Toluene*	<0.050	0.050	12/02/2015	ND	1.97	98.5	2.00	2.40		
Ethylbenzene*	<0.050	0.050	12/02/2015	ND	2.01	101	2.00	2.90		
Total Xylenes*	<0.150	0.150	12/02/2015	ND	5.97	99.5	6.00	3.01		
Total BTEX	<0.300	0.300	12/02/2015	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.6-140

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5800	16.0	12/01/2015	ND	400	100	400	11.3		

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	12/02/2015	ND	192	96.1	200	0.104	
DRO >C10-C28	<10.0	10.0	12/02/2015	ND	185	92.6	200	0.860	

Surrogate: 1-Chlorooctane 94.0 % 35-147

Surrogate: 1-Chlorooctadecane 101 % 28-171

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: 11/30/2015
 Reported: 12/03/2015
 Project Name: WEST RED LAKE #1
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 11/25/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: S-4 0' (H503129-07)

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	12/02/2015	ND	1.97	98.6	2.00	2.58		
Toluene*	<0.050	0.050	12/02/2015	ND	1.97	98.5	2.00	2.40		
Ethylbenzene*	<0.050	0.050	12/02/2015	ND	2.01	101	2.00	2.90		
Total Xylenes*	<0.150	0.150	12/02/2015	ND	5.97	99.5	6.00	3.01		
Total BTEX	<0.300	0.300	12/02/2015	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	20400	16.0	12/01/2015	ND	400	100	400	11.3	

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	12/02/2015	ND	192	96.1	200	0.104	
DRO >C10-C28	<10.0	10.0	12/02/2015	ND	185	92.6	200	0.860	

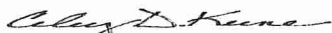
Surrogate: 1-Chlorooctane 97.1 % 35-147

Surrogate: 1-Chlorooctadecane 109 % 28-171

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: 11/30/2015
Reported: 12/03/2015
Project Name: WEST RED LAKE #1
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/25/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S-4 0.5' REFUSAL (H503129-08)

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	12/02/2015	ND	1.97	98.6	2.00	2.58	
Toluene*	<0.050	0.050	12/02/2015	ND	1.97	98.5	2.00	2.40	
Ethylbenzene*	<0.050	0.050	12/02/2015	ND	2.01	101	2.00	2.90	
Total Xylenes*	<0.150	0.150	12/02/2015	ND	5.97	99.5	6.00	3.01	
Total BTEx	<0.300	0.300	12/02/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIB) 103 % 73.6-140

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16800	16.0	12/01/2015	ND	400	100	400	11.3	

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	12/02/2015	ND	192	96.1	200	0.104	
DRO >C10-C28	<10.0	10.0	12/02/2015	ND	185	92.6	200	0.860	

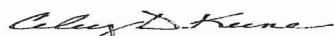
Surrogate: 1-Chlorooctane 94.3 % 35-147

Surrogate: 1-Chlorooctadecane 103 % 28-171

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



CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Talon/LE

Project Manager: D. Adkins

Address: 408 W. Texas Ave.

City: Artesia

State: NM zip: 88210

Phone #: 575-746-8768

Fax #: 575-746-8905

Project #:

Project Owner: Lime Rock

Project Name: West Red Lake #1

City: State: Zip:

Project Location:

Phone #: Fax #:

Sampler Name: R. DeRosier

For LAB USE ONLY

Lab I.D. Sample I.D.

(G)RAB OR (C)OMP.

CONTAINERS

MATRIX

PRESERV. SAMPLING

DATE TIME

TPH BTEx Chloride

ANALYSIS REQUEST

BILL TO

P.O. #:

Company: Talon/LE

Attn:

Address:

City:

State:

Zip:

Phone #:

Fax #:

Sample Condition

Cool Intact

Yes Yes

No No

CHECKED BY:

(Initials)

5.02

Sample - UPS - Bus - Other:

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

REMARKS:

Phone Result: Yes No

Fax Result: Yes No

Add'l Phone #:

Add'l Fax #:

Relinquished By:

Received By:

Date:

Time:

Delivered By: (Circle One)

Sample - UPS - Bus - Other:

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

REMARKS:

Phone Result: Yes No

Fax Result: Yes No

Add'l Phone #:

Add'l Fax #:

Relinquished By:

Received By:

Date:

Time:

Delivered By: (Circle One)

Sample - UPS - Bus - Other:

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

REMARKS:

Phone Result: Yes No

Fax Result: Yes No

Add'l Phone #:

Add'l Fax #:

Relinquished By:

Received By:

Date:

Time:

Delivered By: (Circle One)

Sample - UPS - Bus - Other:

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Fax Result: Yes No

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Add'l Fax #:

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Date:

Time:

Delivered By: (Circle One)

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Add'l Fax #:

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Fax Result: Yes No

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REMARKS:

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Fax Result: Yes No

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Add'l Fax #:

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Fax Result: Yes No

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Add'l Fax #:

Relinquished By:

Received By:

Date:

Time:

Delivered By: (Circle One)

Sample - UPS - Bus - Other:

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

REMARKS:

Phone Result: Yes No

Fax Result: Yes No

Add'l Phone #:

Add'l Fax #:

Relinquished By:

Received By:

Date:

Time

January 21, 2016

KIMBERLY WILSON

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: WEST RED LAKE #1

Enclosed are the results of analyses for samples received by the laboratory on 01/20/16 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.

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
KIMBERLY WILSON
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 01/20/2016
Reported: 01/21/2016
Project Name: WEST RED LAKE #1
Project Number: 701307.082.01
Project Location: EDDY CTY.

Sampling Date: 01/19/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S-2 2' (H600130-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6800	16.0	01/21/2016	ND	400	100	400	3.92	

Sample ID: S-2 3' (H600130-02)

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	01/21/2016	ND	400	100	400	3.92	

Sample ID: S-2 4' (H600130-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1720	16.0	01/21/2016	ND	400	100	400	3.92	

Sample ID: S-2 5' (H600130-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1070	16.0	01/21/2016	ND	400	100	400	3.92	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 01/20/2016
 Reported: 01/21/2016
 Project Name: WEST RED LAKE #1
 Project Number: 701307.082.01
 Project Location: EDDY CTY.

 Sampling Date: 01/19/2016
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: S-2 6' (H600130-05)

Chloride, SM4500Cl-B			mg/kg							Analyzed By: AP	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	496	16.0	01/21/2016	ND	400	100	400	3.92			

Sample ID: S-4 1' (H600130-06)

Chloride, SM4500Cl-B			mg/kg							Analyzed By: AP	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	4080	16.0	01/21/2016	ND	400	100	400	3.92			

Sample ID: S-4 2' (H600130-07)

Chloride, SM4500Cl-B			mg/kg							Analyzed By: AP	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	6000	16.0	01/21/2016	ND	400	100	400	3.92			

Sample ID: S-4 3' (H600130-08)

Chloride, SM4500Cl-B			mg/kg							Analyzed By: AP	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	1800	16.0	01/21/2016	ND	400	100	400	7.69			

Sample ID: S-4 4' (H600130-09)

Chloride, SM4500Cl-B			mg/kg							Analyzed By: AP	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	800	16.0	01/21/2016	ND	400	100	400	7.69			

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 01/20/2016
Reported: 01/21/2016
Project Name: WEST RED LAKE #1
Project Number: 701307.082.01
Project Location: EDDY CTY.

Sampling Date: 01/19/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S-4 5' (H600130-10)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1840	16.0	01/21/2016	ND	400	100	400	7.69	


Sample ID: S-4 6' (H600130-11)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	592	16.0	01/21/2016	ND	400	100	400	7.69	

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

Cardinal Laboratories

*=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

ANALYSIS REQUEST

FILE #

ANALYSIS REQUEST

Company Name: Talon/LPE		P.O. #:	
Project Manager: Kimberley Wilson		Company: Talon/LPE	
Address: 408 W. Texas Ave.		Attn:	
City: Artesia		Address:	
State: NM Zip: 88210		City:	
Phone #: 575-746-8768 Fax #: 575-746-8905		State:	
Project #: 741307 082.01 Project Owner:		Zip:	
Project Name: W Red Lake #1		Phone #:	
Project Location: Eddy Cty		Fax #:	
Sampler Name: Kim Wilson		PRESERV. SAMPLING	
FOR LAB USE ONLY			
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS
HL00330	3-2 2'	GROUNDWATER	1
	3 3'	WASTEWATER	1
	3 4'	SOIL	1
	3 5'	OIL	1
	3 6'	SLUDGE	1
	3 7'	OTHER:	1
	3 8'	ACID/BASE:	1
	3 9'	ICE/COOL	1
	3 10'	OTHER:	1
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101 East Marland, Hobbs, NM 88240

(575) 393-2326 FAX (575) 393-2476

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