

September 12, 2012

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

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

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

Subject: **Soil Assessment and Remediation Work Plan**
Cimarex Energy
Red lake Disposal Line

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

Dear Mr. Bratcher,

Cimarex Energy has contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the referenced Red lake Disposal Line (pipeline) release. Our soil sampling results and proposed remediation activities consist of the following:

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

Incident Date

July 22, 2012

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

Background Information

The Red lake Disposal Line (pipeline) is located approximately fifteen (15) miles east of Artesia, New Mexico. The legal location for the site is Section 22, Township 17 South and Range 28 East in Eddy County, New Mexico. More Specifically the latitude and longitude for the release are 32.815055 North and -104.167486 West.

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

According to the soil survey provided by the United States Department of Agriculture National Resources Conservation Services, the soil in this area is made up of Largo-Stony land complex soils with 0 to 25 percent slopes. The local surface and shallow geology, Quaternary Age sedimentary deposits, is comprised of older alluvial deposits of upland plains and piedmont areas which include calcareous alluvium and silty loamy soils underlain by 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 7,784 meters away in S23-T17-R27E. The ground water in Section 23 is reported to be at depth of 40' below ground surface (bgs). Ground water in the project vicinity is approximately 125-feet below land surface according to the Texaco/Chevron Eddy County Water Trend Data Map (2005). The referenced groundwater data is presented in Appendix I.

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

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

Depth to ground water <50'
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

Incident Description

On July 22, 2012 the Red Lake Disposal Line was found to be leaking. A release of 80 to 100 barrels of produced water is estimated. The line was shut-in, repaired and brought back into service. A vacuum truck was called to pick up standing fluids; approximately 5 barrels of fluids were recovered. The release traveled 300-feet east of the disposal line and 75-feet south of the line.

Actions Taken

On July 27, 2012 Talon mobilized personnel to begin the assessment and soil sampling for the construction of a work plan. The soil samples were collected from the impacted area using a backhoe.

On August 8, 2011 Talon returned to the release site to collect additional soil samples utilizing a split spoon auger rig to obtain soil samples for vertical delineation for chlorides. Grab samples were collected from a depth of 15 to 55 feet below land surface.

The soil samples were collected by Talon personnel wearing clean nitrile gloves. The samples were placed in laboratory provided sample containers, iced and transported to Cardinal Laboratories in Hobbs, New Mexico for analysis. The samples were tested for TPH (Total Petroleum Hydrocarbons) using EPA Method 8015M, and volatile organics (BTEX) using EPA Method 8021B. The chlorides were analyzed per method SM4500Cl-B. The complete laboratory report is attached as Appendix II.

Analytical Results

Analytical results received from Cardinal Laboratories are summarized below:

August 11, 2012

<u>Sample</u>	<u>Depth</u>	<u>BTEX</u>	<u>Chlorides</u>	<u>TPH (mg/kg)</u>
S-1,	0'	0.576	31,200	2401.6
	2'	<0.050	16,000	<10
	4'	--	13,200	--
	6'	--	15,600	--
	8'	--	14,800	--
	10'	--	19,400	--
	12'	--	22,000	--
S-2,	0'	<0.050	20,000	<10
	2'	<0.050	15,000	<10
	4'	--	11,800	--
	6'	--	14,800	--
	8'	--	15,400	--
	12'	--	15,200	--
S-3	0'	--	32	--

August 28, 2012

<u>Sample</u>	<u>Depth</u>	<u>Chlorides (mg/kg)</u>
B-1	15'	11,400
	20'	9,200
	25'	2,680
	30'	5,840
	35'	3,840
	40'	5,120
	45'	64
	50'	96
	55'	128
B-2	15'	16
	20'	16
	25'	<16

Summary

- Ground water in the project vicinity is approximately 125-feet below land surface according to the Texaco/Chevron Eddy County Water Trend Data Map (2005).
- Per the New Mexico State Engineers Database, groundwater is identified at 40-feet below land surface 7,784 meters west of the project location.
- Based on the depth to groundwater, it is unlikely that the impacts identified from this release will pose a threat to groundwater after proposed remediation activities are complete.

Proposed Remedial Actions

- The impacted soil will be excavated to a depth of 4-feet and transported to an NMOCD approved solid waste disposal facility.
- Confirmation samples will be collected from the sidewalls of the excavation and presented to the OCD for permission to complete excavation activities.
- Upon completion of excavation activities, a 20 mil. liner will be placed into the bottom of excavated area. The excavated area will be backfilled back to grade using new material transported from a local borrow pit and will be contoured to match the surrounding location.
- A final report documenting all field activities and lab reports will be provided to the NMOCD Artesia Office, including Form C-141.

If we can provide additional information or be of further assistance please contact our office at 575.746.8768.

Respectfully submitted,

TALON/LPE

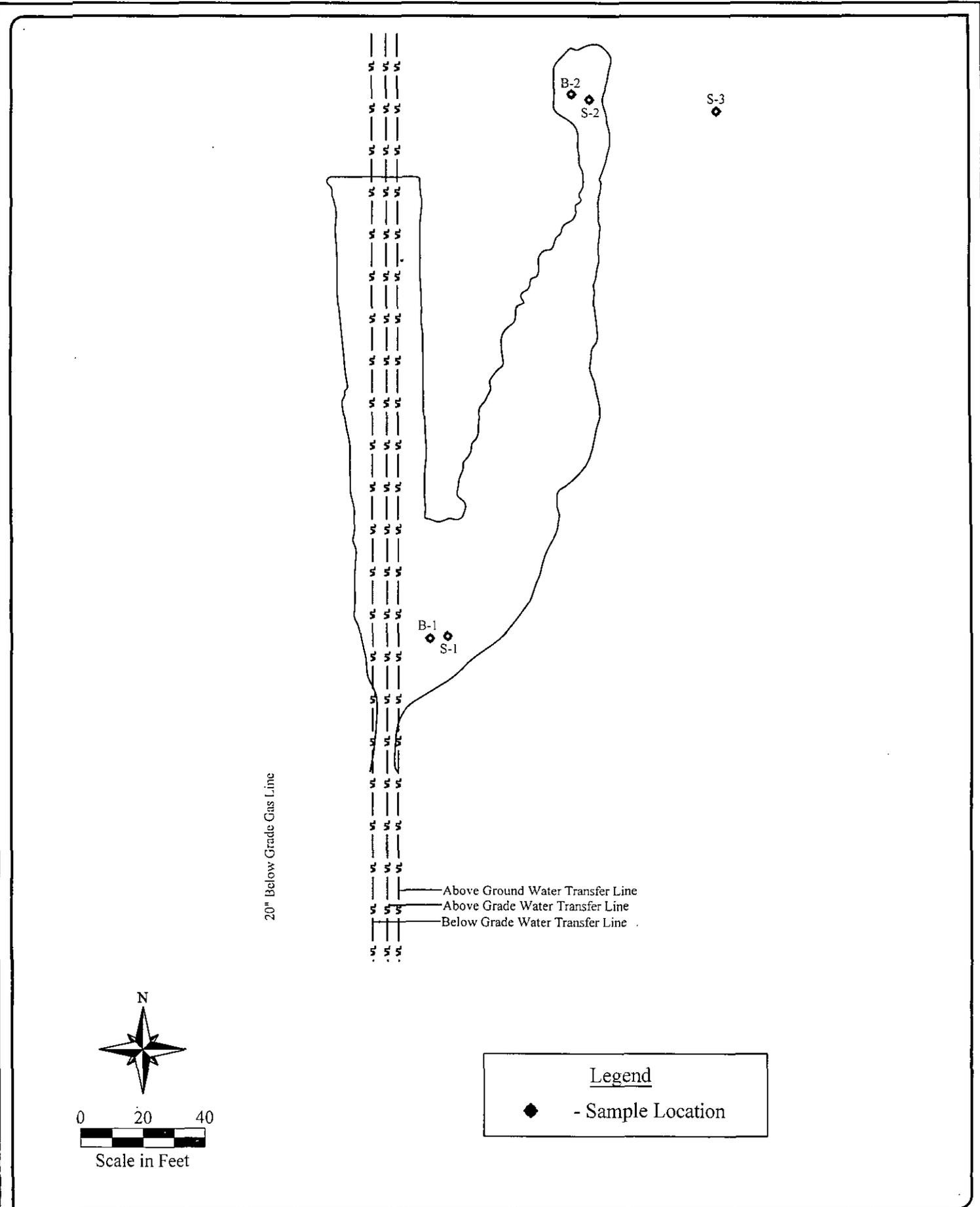
Handwritten signature of Mike Stubblefield in black ink.

Mike Stubblefield
Project Manager

Handwritten signature of David J. Adkins in black ink.

David J. Adkins
District Manager

SITE MAP



Date: 09/05/2012
 Scale: 1" = 40'
 Drawn By: TJS

Red Lake Disposal Line
 Cimarex Energy Corporation
 Artesia, New Mexico
 Figure 1 - Site Plan

APPENDIX I
GROUNDWATER DATA
INITIAL C-141



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 04561</u>			ED	4	2	26	17S	27E		570871	3630142*	6752	250		
<u>L 01142</u> POD1	L		LE	2	4	15	18S	28E		578921	3623453*	7600	80		
<u>RA 04554</u>			ED		1	23	17S	27E		569859	3631947*	7784	220	40	180
													Average Depth to Water:		40 feet
													Minimum Depth:		40 feet
													Maximum Depth:		40 feet

Record Count: 3

UTMNAD83 Radius Search (in meters):

Easting (X): 577577

Northing (Y): 3630934

Radius: 8000

*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.

District I
1625 N. French Dr., Hobbs, NM 88340
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-Cimarex Energy	Contact- James Tinney
Address-600 N Marienfeld St 600, Midland Tx 79701	Telephone No. 575 706 0095
Facility Name-Red Lake Disposal Line (pipeline)	Facility Type- Disposal Line

Surface Owner	Mineral Owner	Lease No.
---------------	---------------	-----------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County - Eddy
	22	17S	28E					

Latitude- 32-48'-5" Longitude- 104-4'-34"

NATURE OF RELEASE

Type of Release- Produce Water	Volume of Release- 80-100 bbls	Volume Recovered-5 bbls
--------------------------------	--------------------------------	-------------------------

Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Message was left for Mike Bratcher @ NMOCD
--	---

Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.
---	---

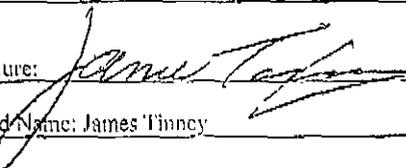
If a Watercourse was Impacted, Describe Fully.*

RECEIVED
JUL 23 2012
NMOCD ARTESIA

Describe Cause of Problem and Remedial Action Take: Disposal line leaked locked out pumps at battery. Vacuum truck picked up water from top of bad line. Cut and repaired disposal line.

Describe Area Affected and Cleanup Action Take: impacted area is 300' to the east and 75' to the south. Called out vac truck to pick up standing water. Notified Talon to sample and start clean up plan

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: 	OIL CONSERVATION DIVISION	
Printed Name: James Tinney	Approved by District Supervisor:-	
Title: Production Foreman	Approval Date:	Expiration Date:
E-mail Address: jtinney@cimarex.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 7-22-12 Phone: 575-706-0095		

* Attach Additional Sheets If Necessary

APPENDIX II
LABORATORY RESULTS



August 11, 2012

MIKE STUBBLEFIELD

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: RED LAKE DISPOSAL LINE

Enclosed are the results of analyses for samples received by the laboratory on 07/27/12 14:30.

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.

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

Method EPA 552.2	Halocetic 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 black ink 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:	07/27/2012	Sampling Date:	07/27/2012
Reported:	08/11/2012	Sampling Type:	Soil
Project Name:	RED LAKE DISPOSAL LINE	Sampling Condition:	Cool & Intact
Project Number:	701162.050.01	Sample Received By:	Jodi Henson
Project Location:	32.81501-104.16747		

Sample ID: S - 1 0' (H201752-01)

BTEX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.069	0.050	08/03/2012	ND	1.71	85.7	2.00	0.0615	
Toluene*	0.074	0.050	08/03/2012	ND	1.75	87.7	2.00	3.22	
Ethylbenzene*	0.113	0.050	08/03/2012	ND	1.76	88.1	2.00	5.06	
Total Xylenes*	0.320	0.150	08/03/2012	ND	5.24	87.4	6.00	6.20	

Surrogate: 4-Bromofluorobenzene (PII) 103 % 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	31200	16.0	07/30/2012	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	51.6	50.0	07/30/2012	ND	183	91.6	200	0.268	
DRO >C10-C28	2350	50.0	07/30/2012	ND	208	104	200	7.17	

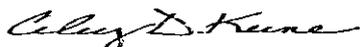
Surrogate: 1-Chlorooctane 91.8 % 65.2-140

Surrogate: 1-Chlorooctadecane 137 % 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:	07/27/2012	Sampling Date:	07/27/2012
Reported:	08/11/2012	Sampling Type:	Soil
Project Name:	RED LAKE DISPOSAL LINE	Sampling Condition:	Cool & Intact
Project Number:	701162.050.01	Sample Received By:	Jodi Henson
Project Location:	32.81501-104.16747		

Sample ID: S - 1 2' BGS (H201752-02)

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	08/03/2012	ND	1.71	85.7	2.00	0.0615	
Toluene*	<0.050	0.050	08/03/2012	ND	1.75	87.7	2.00	3.22	
Ethylbenzene*	<0.050	0.050	08/03/2012	ND	1.76	88.1	2.00	5.06	
Total Xylenes*	<0.150	0.150	08/03/2012	ND	5.24	87.4	6.00	6.20	

Surrogate: 4-Bromofluorobenzene (PIC) 101 % 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	16000	16.0	07/30/2012	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	07/30/2012	ND	183	91.6	200	0.268	
DRO >C10-C28	<10.0	10.0	07/30/2012	ND	208	104	200	7.17	

Surrogate: 1-Chlorooctane 85.6 % 65.2-140

Surrogate: 1-Chlorooctadecane 96.3 % 63.6-154

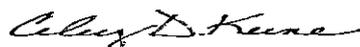
Sample ID: S - 1 4' BGS (H201752-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	13200	16.0	07/30/2012	ND	416	104	400	0.00	

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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:	07/27/2012	Sampling Date:	07/27/2012
Reported:	08/11/2012	Sampling Type:	Soil
Project Name:	RED LAKE DISPOSAL LINE	Sampling Condition:	Cool & Intact
Project Number:	701162.050.01	Sample Received By:	Jodi Henson
Project Location:	32.81501-104.16747		

Sample ID: S - 1 6' BGS (H201752-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	15600	16.0	07/30/2012	ND	416	104	400	0.00	

Sample ID: S - 1 8' BGS (H201752-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	14800	16.0	07/30/2012	ND	416	104	400	0.00	

Sample ID: S - 1 10' BGS (H201752-06)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	19400	16.0	08/08/2012	ND	384	96.0	400	0.00	

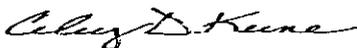
Sample ID: S - 1 12' BGS (H201752-07)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	22000	16.0	08/10/2012	ND	416	104	400	0.00	

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*=Accredited Analyte

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 ARTESIA NM, 88210
 Fax To: (575) 745-8905

Received:	07/27/2012	Sampling Date:	07/27/2012
Reported:	08/11/2012	Sampling Type:	Soil
Project Name:	RED LAKE DISPOSAL LINE	Sampling Condition:	Cool & Intact
Project Number:	701162.050.01	Sample Received By:	Jodi Henson
Project Location:	32.81501-104.16747		

Sample ID: S - 2 0' (H201752-08)

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	08/03/2012	ND	1.71	85.7	2.00	0.0615	
Toluene*	<0.050	0.050	08/03/2012	ND	1.75	87.7	2.00	3.22	
Ethylbenzene*	<0.050	0.050	08/03/2012	ND	1.76	88.1	2.00	5.06	
Total Xylenes*	<0.150	0.150	08/03/2012	ND	5.24	87.4	6.00	6.20	

Surrogate: 4-Bromofluorobenzene (PIE) 100 % 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	20000	16.0	07/30/2012	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	07/30/2012	ND	183	91.6	200	0.268	
DRO >C10-C28	<10.0	10.0	07/30/2012	ND	208	104	200	7.17	

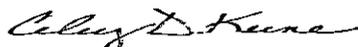
Surrogate: 1-Chlorooctane 87.8 % 65.2-140

Surrogate: 1-Chlorooctadecane 98.0 % 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
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 ARTESIA NM, 88210
 Fax To: (575) 745-8905

Received:	07/27/2012	Sampling Date:	07/27/2012
Reported:	08/11/2012	Sampling Type:	Soil
Project Name:	RED LAKE DISPOSAL LINE	Sampling Condition:	Cool & Intact
Project Number:	701162.050.01	Sample Received By:	Jodi Henson
Project Location:	32.81501-104.16747		

Sample ID: S - 2 2' BGS (H201752-09)

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	08/03/2012	ND	1.71	85.7	2.00	0.0615	
Toluene*	<0.050	0.050	08/03/2012	ND	1.75	87.7	2.00	3.22	
Ethylbenzene*	<0.050	0.050	08/03/2012	ND	1.76	88.1	2.00	5.06	
Total Xylenes*	<0.150	0.150	08/03/2012	ND	5.24	87.4	6.00	6.20	

Surrogate: 4-Bromofluorobenzene (PIE) 101 % 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	15000	16.0	07/30/2012	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	07/30/2012	ND	183	91.6	200	0.268	
DRO >C10-C28	<10.0	10.0	07/30/2012	ND	208	104	200	7.17	

Surrogate: 1-Chlorooctane 92.4 % 65.2-140

Surrogate: 1-Chlorooctadecane 101 % 63.6-154

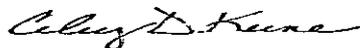
Sample ID: S - 2 4' BGS (H201752-10)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	11800	16.0	07/30/2012	ND	416	104	400	0.00	

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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:	07/27/2012	Sampling Date:	07/27/2012
Reported:	08/11/2012	Sampling Type:	Soil
Project Name:	RED LAKE DISPOSAL LINE	Sampling Condition:	Cool & Intact
Project Number:	701162.050.01	Sample Received By:	Jodi Henson
Project Location:	32.81501-104.16747		

Sample ID: S - 2 6' BGS (H201752-11)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	14800	16.0	07/30/2012	ND	416	104	400	0.00		

Sample ID: S - 2 8' BGS (H201752-12)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	15400	16.0	07/30/2012	ND	416	104	400	0.00		

Sample ID: S - 2 12' BGS (H201752-14)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	15200	16.0	08/08/2012	ND	384	96.0	400	0.00		

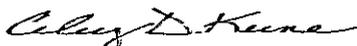
Sample ID: S - 3 0' BACKGROUND (H201752-15)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	07/30/2012	ND	416	104	400	0.00		

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Celey D. Keene, Lab Director/Quality Manager

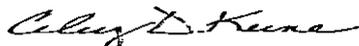
Notes and Definitions

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



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

Company Name: Tolon/LPE
 Project Manager: Mike Stobbe field
 Address: 408 West Texas Ave.
 City: Arksia State: NM Zip: 88210
 Phone #: 525-491-7254 Fax #:
 Project #: 201167.050.01 Project Owner: C.M.A.R.C. Energy
 Project Name: Red Lake Disposal Line
 Project Location: 32.81501 - 104.16747
 Sampler Name: Mike Stobbe field

P.O. #: Company: Tolon/LPE
 Attn: Address: City: State: Zip: Phone #: Fax #:

Lab I.D.	Sample I.D.	FOR LAB USE ONLY			PRESERV.		SAMPLING		ANALYSIS REQUEST			
		(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	8015H TPH	8021G BTEX	Total Hydrocarbons
H201752	1	5-1 0'		WASTEWATER				7/27/12	10:00A			
	2	5-1 2' bgs		WASTEWATER				7/27/12	10:05A			
	3	5-1 4' bgs		WASTEWATER				7/27/12	10:10A			
	4	5-1 6' bgs		WASTEWATER				7/27/12	10:15A			
	5	5-1 8' bgs		WASTEWATER				7/27/12	10:20A			
	6	5-1 10' bgs		WASTEWATER				7/27/12	10:25A			
	7	5-1 12' bgs		WASTEWATER				7/27/12	10:30A			
	8	5-2 0'		WASTEWATER				7/27/12	11:30A			
	9	5-2 2' bgs		WASTEWATER				7/27/12	11:35A			
	10	5-2 4' bgs		WASTEWATER				7/27/12	11:40A			

Chloride *
 50A hold
 added 8/9/12

Relinquished By: Mike Stobbe field Date: 7/27/2012
 Received By: [Signature] Date: 7/30/2012
 Relinquished By: Date: Time:
 Received By: Date: Time:

Delivered By: (Circle One) 50
 Sampler - UPS - Bus - Other

Checked By: [Signature]
 Sample Condition: Cool Contact [] Yes [] No [] Yes [] No

REMARKS: *Chlor. as added q's per Mike - 8/7/12

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476



August 28, 2012

MIKE STUBBLEFIELD

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: RED LAKE DISPOSAL LINE

Enclosed are the results of analyses for samples received by the laboratory on 08/23/12 17:07.

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.

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

Received:	08/23/2012	Sampling Date:	08/22/2012
Reported:	08/28/2012	Sampling Type:	Soil
Project Name:	RED LAKE DISPOSAL LINE	Sampling Condition:	** (See Notes)
Project Number:	701162.021.01	Sample Received By:	Jodi Henson
Project Location:	SEC 22-T17S-R28E		

Sample ID: B - 1 15' BGS (H202029-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	11400	16.0	08/27/2012	ND	400	100	400	0.00		

Sample ID: B - 1 20' (H202029-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	9200	16.0	08/27/2012	ND	400	100	400	0.00		

Sample ID: B - 1 25' (H202029-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2680	16.0	08/27/2012	ND	400	100	400	0.00		

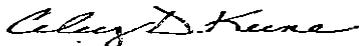
Sample ID: B - 1 30' (H202029-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5840	16.0	08/27/2012	ND	400	100	400	0.00		

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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:	08/23/2012	Sampling Date:	08/22/2012
Reported:	08/28/2012	Sampling Type:	Soil
Project Name:	RED LAKE DISPOSAL LINE	Sampling Condition:	** (See Notes)
Project Number:	701162.021.01	Sample Received By:	Jodi Henson
Project Location:	SEC 22-T17S-R28E		

Sample ID: B - 1 35' (H202029-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3840	16.0	08/27/2012	ND	400	100	400	0.00		

Sample ID: B - 1 40' (H202029-06)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5120	16.0	08/27/2012	ND	400	100	400	0.00		

Sample ID: B - 1 45' (H202029-07)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	08/27/2012	ND	400	100	400	0.00		

Sample ID: B - 1 50' (H202029-08)

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	08/27/2012	ND	400	100	400	0.00		

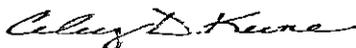
Sample ID: B - 1 55' (H202029-09)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	08/27/2012	ND	400	100	400	0.00		

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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:	08/23/2012	Sampling Date:	08/22/2012
Reported:	08/28/2012	Sampling Type:	Soil
Project Name:	RED LAKE DISPOSAL LINE	Sampling Condition:	** (See Notes)
Project Number:	701162.021.01	Sample Received By:	Jodi Henson
Project Location:	SEC 22-T17S-R28E		

Sample ID: B - 2 15' (H202029-10)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	08/27/2012	ND	400	100	400	0.00		

Sample ID: B - 2 20' (H202029-11)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	08/27/2012	ND	400	100	400	0.00		

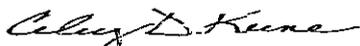
Sample ID: B - 2 25' (H202029-12)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	08/27/2012	ND	416	104	400	0.00		

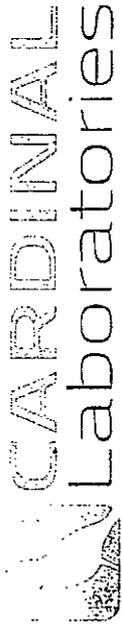
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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Talon/LPE Project Manager: Mike Stubblefield Address: 408 West Texas Ave City: Aztec State: N.M. Zip: 88210 Phone #: 505.491.7254 Fax #: Project #: 70112.021.03 Project Owner: Cimarron Energy Co. Project Name: Red Lake disposal Unit Project Location: sec. 22 T10S R22E Sampler Name: Mike Stubblefield		BILLY P.O. #: Company: Talon/LPE Attn: Address: City: State: Zip: Phone #: Fax #:		ANALYSIS REQUEST									
Lab I.D.	Sample I.D.	MATRIX	CONTAINERS	GROUNDWATER	SLUDGE	OTHER:	ACID/BASE	ICE/COOL	OTHER:	PRESERV	SAMPLING	DATE	TIME
1	B-1 15' 655	WASTEWATER	1	1	1	1	1	1	1	1	1	8/27/12	9:25 A
2	B-1 20' 1	WASTEWATER	1	1	1	1	1	1	1	1	1	8/29/12	9:47
3	B-1 25'	WASTEWATER	1	1	1	1	1	1	1	1	1	8/29/12	9:50
4	B-1 30'	WASTEWATER	1	1	1	1	1	1	1	1	1	8/29/12	10:11
5	B-1 35'	WASTEWATER	1	1	1	1	1	1	1	1	1	8/29/12	10:25
6	B-1 40'	WASTEWATER	1	1	1	1	1	1	1	1	1	8/29/12	10:45
7	B-1 45'	WASTEWATER	1	1	1	1	1	1	1	1	1	8/29/12	11:05
8	B-1 50'	WASTEWATER	1	1	1	1	1	1	1	1	1	8/29/12	11:15
9	B-1 55'	WASTEWATER	1	1	1	1	1	1	1	1	1	8/29/12	11:15
Total chloride													

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Relinquished By: Mike Stubblefield Date: 8/29/12 Time: 5:07
 Received By: Debi Anderson Date: _____ Time: _____

Delivered By: (Circle One) UPS 310 Sample Condition: Intact CHECKED BY: Debi Anderson
 Sampler - UPS - Bus - Other

Phone Result: Yes No Add'l Phone #: _____
 Fax Result: Yes No Add'l Fax #: _____

REMARKS:

RBDMS Map



Oil Conservation Division

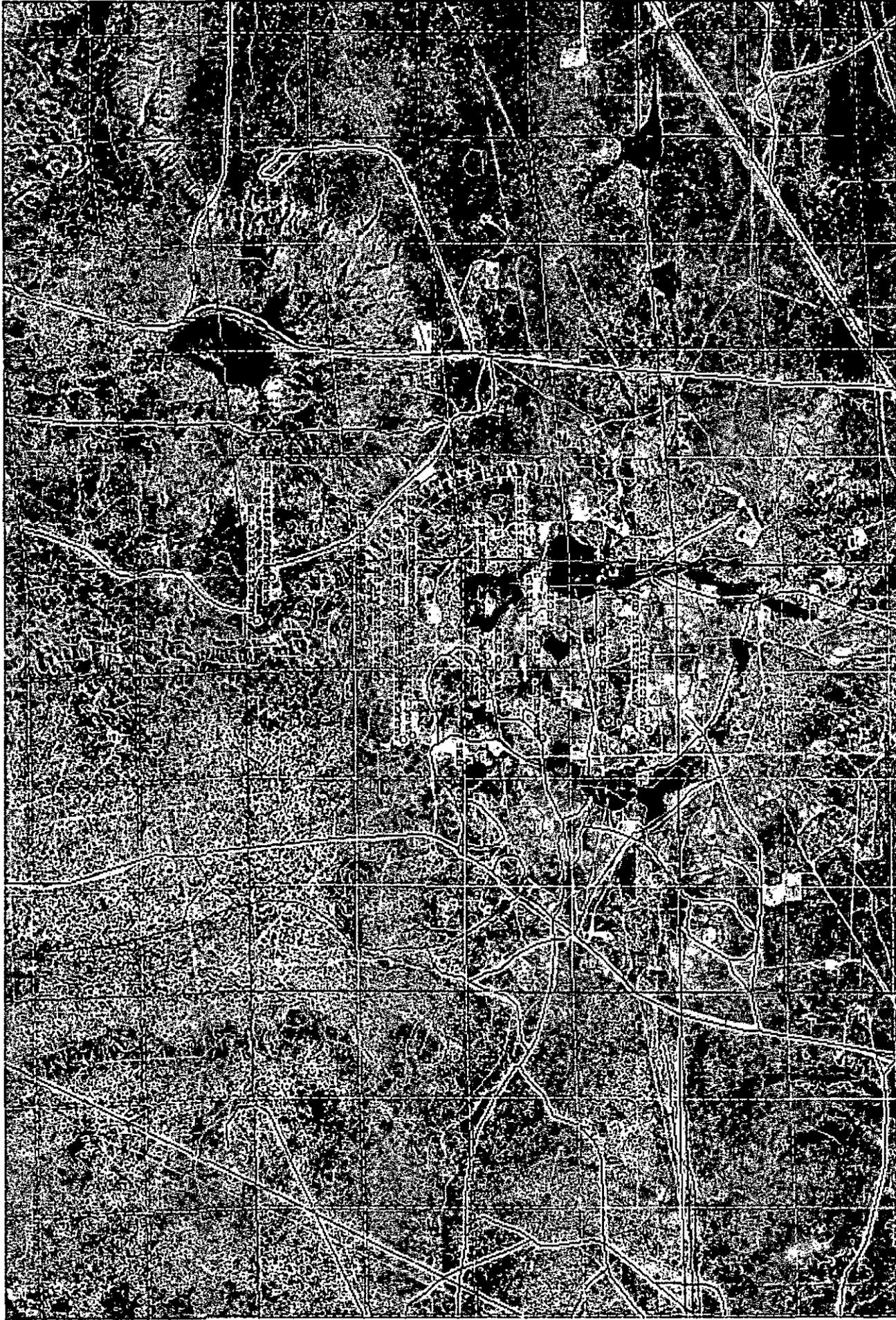
MapNotes

27-17-28

DrawnBy

8/8/2012 2:21:20 PM

Cimarex wells in 22-17s-28e



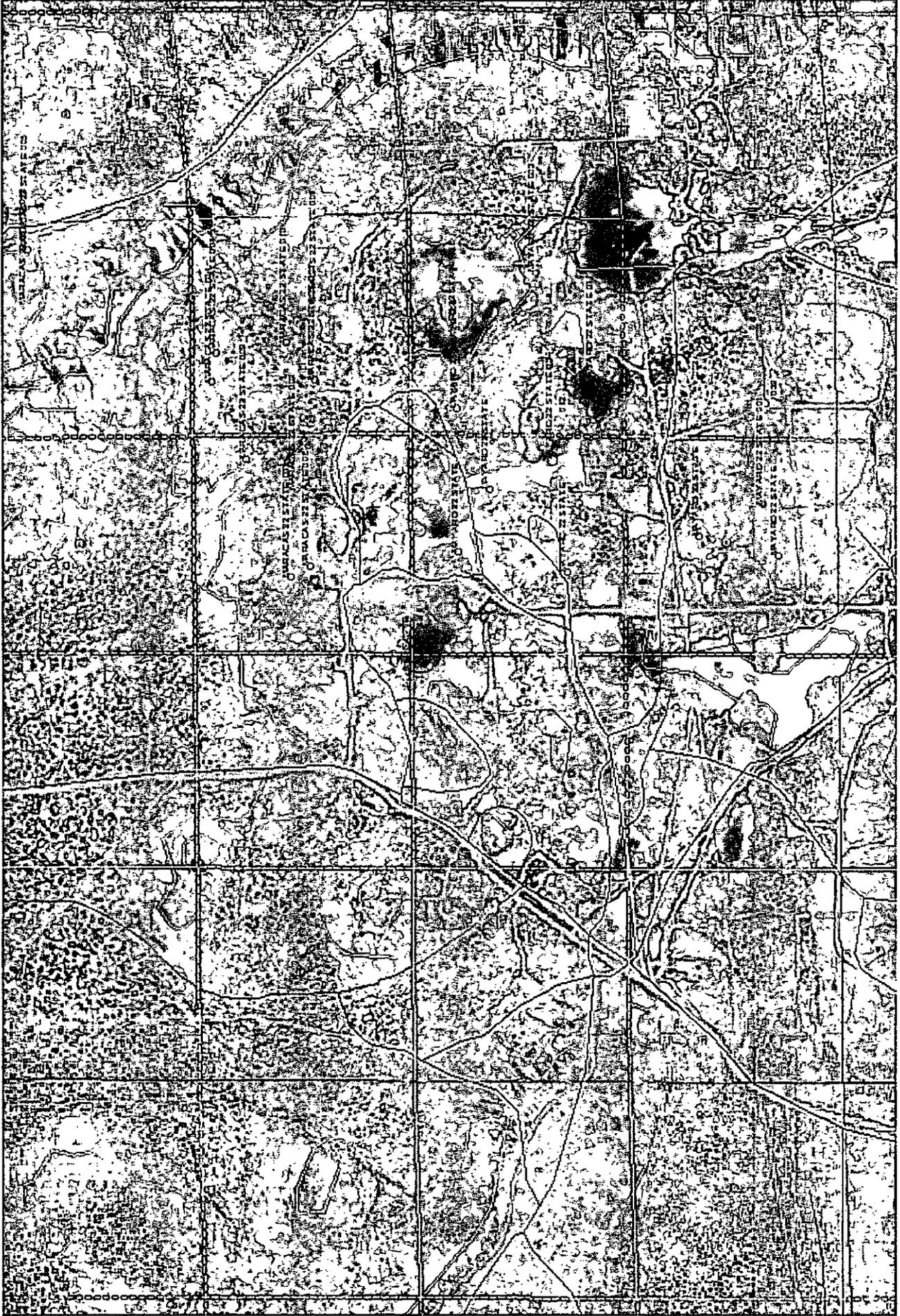
Oil Conservation Division

MapNotes

DrawnBy

8/8/2012 2:07:55 PM

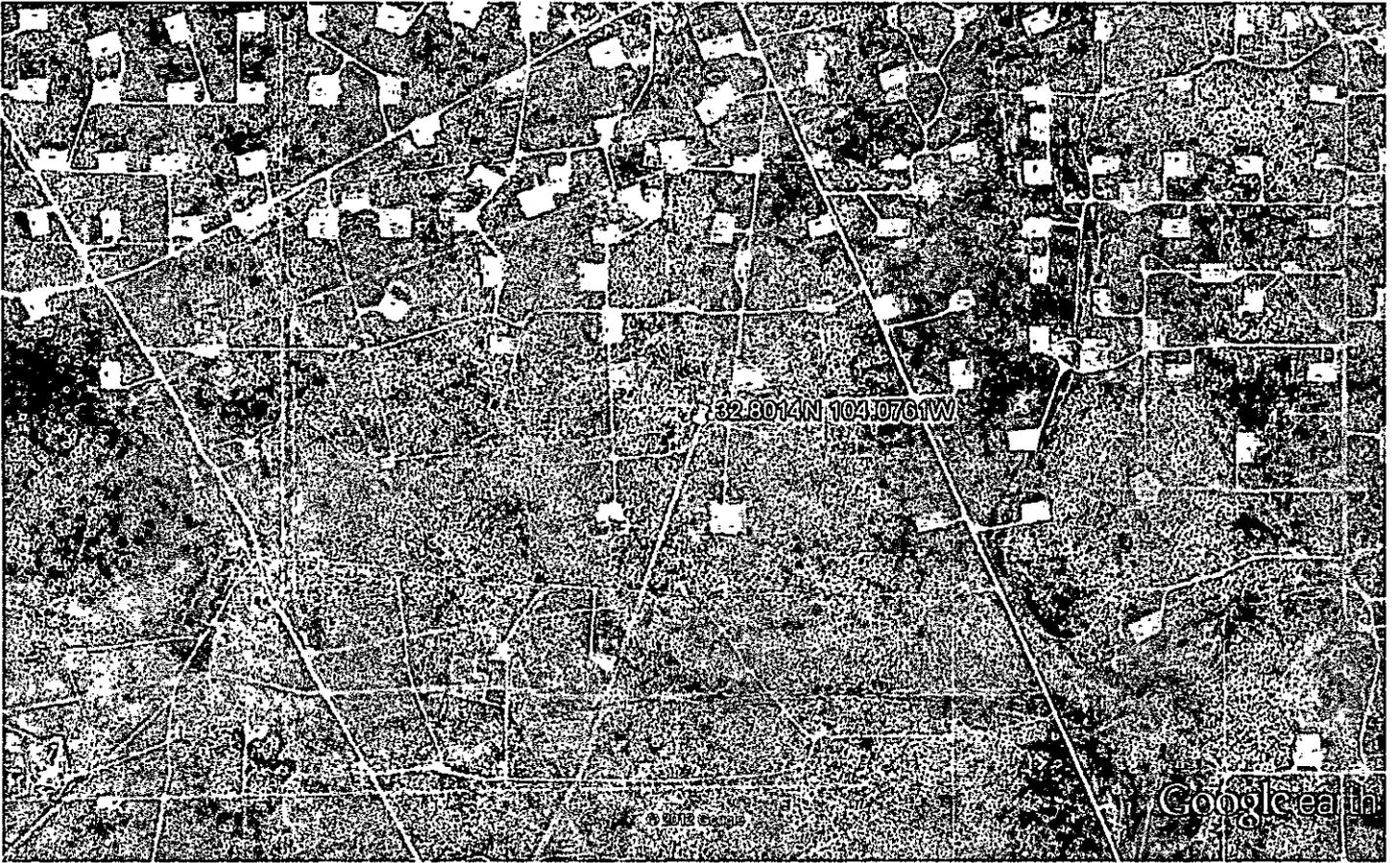
RBDMS Map



DrawnBy

8/8/2012 2:14:07 PM

MapNotes



Google earth

miles
km

