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## **Closure Report**

West Redlake Water Station #1 Battery  
Talon Project No. 701307.082.01

## **Prepared For:**

Lime Rock Resources II-A, LP  
1111 Bagby Street Suite 4600,  
Houston, TX 77002

## **Prepared By:**

Kimberly M. Wilson  
Talon/LPE  
408 West Texas  
Artesia, New Mexico 88210

**July 12, 2016**

Ms. Heather Patterson  
**NMOCD District 2**  
811 S. 1<sup>st</sup> Street  
Artesia, NM 88210

Subject:       **Remediation and Closure Report**  
                  Lime Rock Resources II-A, L.P.  
                  West Redlake Water Station #1 Battery

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 incident description, soil sampling results, remediation activities and closure request are submitted herein.

#### **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 attached.

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.

## **Incident Description and Initial Remedial Actions**

A flow line ruptured resulting in a release of approximately 1,100bbls of produced water. Upon discovery the line was shut in and repaired. Vacuum trucks were immediately dispatched and were able to recover approximately 1,040bbls of fluid. The heavily impacted soil was scraped up to minimize further impacts.

Talon mobilized personnel to conduct a site assessment and soil sampling within the impacted area. Refusal was encountered with a backhoe where noted. The laboratory results from the soil sampling event are summarized in the table below. Upon receipt of analytical results from the soil sampling event it was determined that further vertical delineation of chloride impacts would be required.

An air rotary drill rig was then mobilized for further vertical delineation of the impacted areas. Vertical delineation sampling was carried out in the vicinity of sample locations S-2, S-5 and S-6 which had the highest chloride (worst case) levels. The laboratory results from the soil sampling activities are summarized in the March 31, 2016 data table.

## **Remedial Actions Taken**

The remediation activities were completed pursuant to the work plan approved by the NMOCD and BLM.

The impacted areas in the vicinity of sample location S-1, S-2, S-5 and S-6 were excavated to a depth of 2-feet deep.

The impacted area around sample location S-3 was excavated to a depth of 1-foot deep and the area in the vicinity of sample location S-4 was excavated to a depth of 0.5-feet deep.

All of the excavated soil was hauled to Lea Land, LLC, a NMOCD approved disposal facility.

The excavation backfilled with caliche from a local borrow pit and contoured to match the surrounding location.

## **Closure**

On behalf of Lime Rock Resources we respectfully request that no further actions be required and that closure with respect to this release be granted. A Final C-141 is also attached.

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



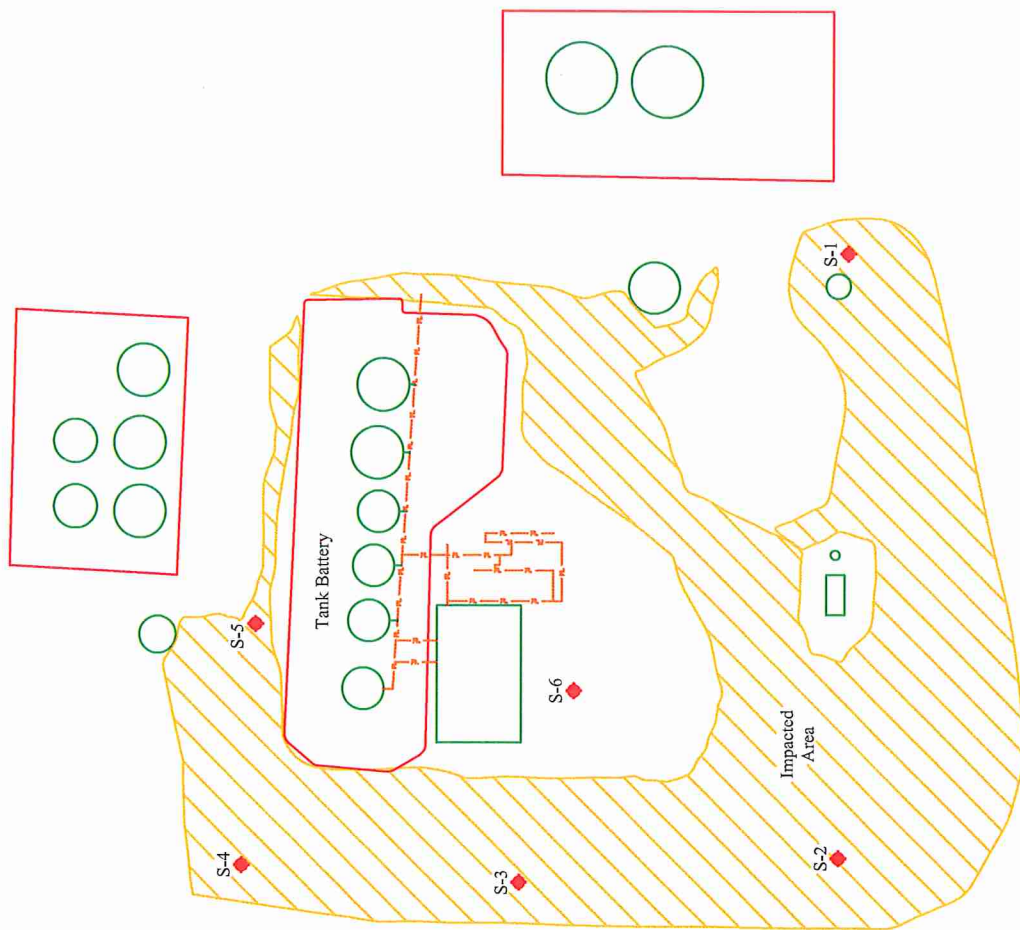
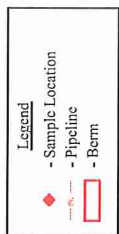
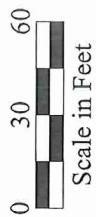
Kimberly M. Wilson  
Project Manager



David J. Adkins  
District Manager

Attachments

Site Plan  
Final C-141



West Red Lake Station #1  
Lime Rock Resources  
Eddy County, New Mexico  
Figure 1 - Site Plan

Date: 02/23/2016

Scale: 1" = 60'

Drawn By: TJS





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 : 1100 bbls	Volume Recovered: 1040 bbls
Source of Release : Flow line leak	Date and Hour of Occurrence: 2/14/16	Date and Hour of Discovery: 2/15/16 9:30 am
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 Shelly Tucker/BLM, voicemail	
By Whom? Kimberly Wilson	Date and Hour: 2/15/16 @ 3:20 pm	
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 resulting in a release of approximately 1,100bbls of produced water. Upon discovery the line was shut in and repaired. Vacuum trucks were immediately dispatched and were able to recover approximately 1,040bbls of fluid. The heavily impacted soil was scraped up to minimize further impacts.

Describe Area Affected and Cleanup Action Taken.\* Talon/LPE was contracted by Lime Rock Resources for the correction of this release. Pursuant to our work plan approved by the BLM and NMOCD, The impacted areas in the vicinity of sample location S-1, S-2, S-5 and S-6 were excavated to a depth of 2-feet deep. The impacted area around sample location S-3 was excavated to a depth of 1-foot deep and the area in the vicinity of sample location S-4 was excavated to a depth of 0.5-feet deep. All of the excavated soil was hauled to Lea Land, LLC. The excavation backfilled with caliche from a local borrow pit and contoured to match the surrounding location. On behalf Lime Rock Resources, we respectfully request that no further actions be required.

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: 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: 7/12/16 Phone: 575-623-8424			

\* Attach Additional Sheets If Necessary