TALON LPE

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

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

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

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

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

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

ENVIRONMENTAL CONSULTING
ENGINEERING
DRILLING
CONSTRUCTION
SPILL MANAGEMENT
GENERAL CONTRACTING

Toll Free: 866.742.0742
www.talonlpe.com

September 27, 2013

NM OIL CONSERVATION
ARTESIA DISTRICT
JUN 03 2014
RECEIVED

2RP-1675
NMLB1318440851

Mr. Jim Amos
Bureau of Land Management
620 E. Greene Street
Carlsbad, NM 88220

Mr. Mike Bratcher
NMOCD District 2
811 S. 1st Street
Artesia, NM 88210

Subject: **Remedial Activities and Closure Report**
Lime Rock Resources
West Red Lake Water Station No.1 2RP-1675

Dear Mr. Bratcher,

Lime Rock Resources (Lime Rock) has contracted Talon/LPE (Talon) to perform soil and surface water remediation services at the above referenced location. The incident description, soil and water sampling results, remediation activities and closure request are submitted herein.

Incident Date

The release was discovered May 27, 2013 at approximately 7:00 am

Location Information

The West Red Lake Water Station #1 is located approximately fifteen (15) miles southeast of Artesia, New Mexico. The legal location for the site is Unit B Section 7 Township 18S Range 27E, in Eddy County, New Mexico. More specifically the latitude and longitude for the release are 32.76852 north -104.31437 west.

Incident Description

On May 27, 2013 an alarm malfunctioned causing tanks to overflow into secondary containment. The secondary containment subsequently failed causing the release of produced fluids, mainly water. The fluids flowed south across the location and into a draw. Once the fluids reached the draw it flowed south and west down the draw for approximately ½ mile. The draw drains into the Pecos River. The fluid entered the river at the end of the draw and flowed for approximately 3 miles downriver.

Emergency Response

Talon/LPE, the Bureau of Land Management (BLM), the New Mexico Oil Conservation Division (NMOCD), the US Environmental Protection Agency (US EPA), the New Mexico State Police and New Mexico Game and Fish (NMGF) were notified immediately upon discovery of the release by Lime Rock personnel management. Talon personnel mobilized to conduct emergency response activities and arrived onsite approximately one hour after notification. Oil sorbent booms were placed at the "river entry point" to keep any more product from entering the river. Oil sorbent booms were also placed at the end of the product flow in the river to stop the flow of oil from moving further down the river. Oil sorbent booms were also placed in 4 separate locations in the river to impede and minimize the amount of crude oil product migrating downriver. At the direction of Mike Bratcher of NMOCD booms were placed at a 5th location (approximately ½ mile downstream of the 4th oil sorbent boom location) to monitor for any oil making it that far down the river and potentially threatening Lake Brantley. No oil ever reached this last set of booms.

Talon placed oil skimmers in the river ahead of the booms where oil and debris were collecting. Eleven (11) vacuum trucks were utilized to recover free-phase oil along with impacted water. Vacuum trucks were utilized daily during the surface water remediation process.

Concurrent with the remedial activities taking place in the river, a containment area (lined sump) was constructed near the end of the draw leading to the river in order to collect and recover the released fluids that were continuing to flow down the draw. Vacuum trucks were used to recover product from the lined containment area and were sent for disposal at CRI landfill.

Talon mobilized an excavator to remove the impacted soil near the river entry point. Soil samples were taken from this excavation. Surface water samples were collected at the river entry point and background surface water samples were also taken upstream of the river entry point. Laboratory analysis results are discussed subsequently herein. Five site maps are attached.

Remediation activities also were undertaken at the upgradient tank battery which was the source area of this release. The hi-level alarm, tank and tank battery containment were repaired by Lime Rock personnel and contractors. The impacted soil in this area and in the flow path leading to the draw was excavated by Talon personnel and transported to Lea Land, LLC for disposal. The excavated areas were sampled and the soil samples were sent to Cardinal Laboratories in Hobbs, New Mexico for analysis. Upon receipt of acceptable sampling results, the excavation was backfilled with permission from the BLM. Multiple caliche berms and water bars were subsequently constructed down gradient of the tank battery to act as additional containment in the event of another loss.

Water trucks were utilized at the head of the draw to flush fresh water through the flow path of the release. This water was captured and recovered from a second lined containment sump constructed near the top of the draw. Upon completion of their use, both the catch basins were subsequently excavated and sent to Lea Land for disposal.

A controlled burn was undertaken by the BLM in the rugged and heavily vegetated center of the draw leading to the river. This allowed for the removal of the oil-impacted grasses and provided access to the flow paths which were subsequently excavated by Talon personnel under the direction of the BLM.

Remedial Activities (Surface)

- The lower portion of the draw was excavated to a depth of 2 to 3-feet deep within the impacted flow paths. Grab soil samples were taken at sample locations S-1 (2'), S-1 (3'), S-2 (2'), S-3 (2'), S-4 (2'), S-5 (2'), and S-5 (3').
- Fluid catchment areas (lined sumps) were constructed at the upper and lower portions of the draw. The rocks and soil in this area were washed and the fluid was recovered from the catchment area with vac trucks.
- The impacted soil area at the river entry point was excavated to a depth of 3-feet deep. Grab soil samples were taken at sample locations S-1 (3') and S-2 (3').
- The impacted soil in the vicinity of the tank battery (source) was initially excavated to a depth of 0.5-feet below ground surface (bgs). Grab soil samples were collected at sample locations S-3, S-4, and S-5. The lab data reported for sample location S-5 was above NMOCD Recommended Remedial Action Levels (RRAL). The impacted area was then excavated further to a depth of 1.5-feet bgs. Additional grab soil samples were taken at sample locations S-5 (1.5'), S-6 (1.5'), and S-7 (1.5') (See site maps of sample locations).

Remedial Activities (River)

- Oil sorbent booms were placed in the river to retard the flow of the free product so that the lost fluids could be recovered using oil skimmers and vacuum trucks. The booms were placed in a total of (5) locations. (See site map of boom locations).
- At the river entry point of the release, water samples were collected at W-1 and BG-1 (background, upgradient water sample). A sample of the iron sulfide material collecting in the slow-water eddys along the bottom of the river was obtained at RS-1 (river sediment samples) (See site map of sample locations).
- Additional surface water samples were taken approximately 20-feet upstream and downstream of the 4th boom location at sample locations W-2 and W-3. A water sample was also obtained approximately 1/2 mile downstream of the 4th boom location at sample location W-4. (See site map of sample locations).
- Approximately 0.7 miles downstream from the entry point of the release, surface water and river sediment samples were taken in a deep area of the river. These sample points are identified as RS-2 and W-5. (See site map of sample locations).

- Roustabout crews were utilized in the river to remove vegetation, soil and other debris that were saturated by or obstructing the flow of oil. The objective was to facilitate the flow of oil to our booms so that it could be removed using oil skimmers and vacuum trucks. The roustabout crews with Talon personnel made 3 "passes" through the impacted area of the Pecos River.

**All soil samples were collected by Talon personnel wearing clean nitrile gloves. The soil samples were placed in laboratory provided sample containers and transported to Cardinal Laboratories in Hobbs, New Mexico for analysis. The samples were tested for a combination TPH (Total Petroleum Hydrocarbons) using EPA Method 8015M, volatile organics (BTEX) using EPA Method 8021B, total Chloride concentration using Method SM4500CL-B, and Metals using Method 8 RCRA The complete laboratory reports are attached.*

Laboratory Results (Tank Battery Location)

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

(ND) Analyte Not Detected
(--) Analyte Not Tested

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-3	0.5	ND	160	ND	ND
S-4	0.5	ND	448	ND	ND
S-5	0.5	ND	1200	ND	336
S-5	1.5	2.74	64	ND	ND
S-6	1.5	0.364	160	14.1	ND
S-7	1.5	0.160	112	ND	ND

Laboratory Results (Draw)

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	2	ND	80	ND	ND
S-1	3	ND	112	ND	ND
S-2	2	ND	848	ND	ND
S-3	2	ND	112	ND	ND
S-4	2	ND	544	ND	ND
S-5	2	ND	1840	ND	683
S-5	3	ND	432	ND	ND
S-5 Confirmation	3	ND	112	ND	ND

Laboratory Results (Excavation at River Entry)

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	3	--	384	ND	ND
S-2	3	--	416	ND	ND

Laboratory Results (River Water)

Sample ID	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
BG-1	4200	ND	ND
W-1	4300	ND	ND
W-2	4300	ND	ND
W-3	4300	ND	ND
W-4	4200	ND	2.66
W-5	4450	ND	683

Laboratory Results (River Sediment)

RS-1

BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO	Arsenic (mg/kg)	Barium (mg/kg)
ND	1300	104	53600	ND	215

Cadmium (mg/kg)	Chromium (mg/kg)	Lead (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Mercury (mg/kg)
ND	6.21	ND	ND	ND	ND

RS-2

BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO	Arsenic (mg/kg)	Barium (mg/kg)
ND	816	ND	35.1	ND	92.8

Cadmium (mg/kg)	Chromium (mg/kg)	Lead (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Mecury (mg/kg)
ND	ND	ND	ND	ND	ND

Summary and Conclusions

Remedial activities for the land surface portion of this project were conducting following BLM and NMOCD direction and using laboratory data as a guide for completion of activities. All impacted soil from this incident that was feasible to excavate has been removed. Upon permission to backfill from the BLM, the excavated areas were backfilled using clean fill materials that matched the specific terrain.

Remedial activities for the river aspect of this project was also conducted following BLM supervision. Contaminated vegetation, soil, debris and free-phase floating oil product were removed from the river. There is currently no visible signs of product remaining in the river relating to this release. All oil sorbent booms have been removed from the river.

A total of 3,787 yards of contaminated soil were disposed of at Lea Land, LLC. Sixteen (16) truckloads of debris from the Pecos River and 4,100 barrels of impacted surface water were land filled at CRI, Inc. Two thousand one hundred sixty-five (2,165) yards of top soil were utilized to back fill the excavated areas within the draw and river entry point. The remediated area at the tank battery was restored (excavated areas and berm constructions) using 1,061 yards of caliche.

Closure Request

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.

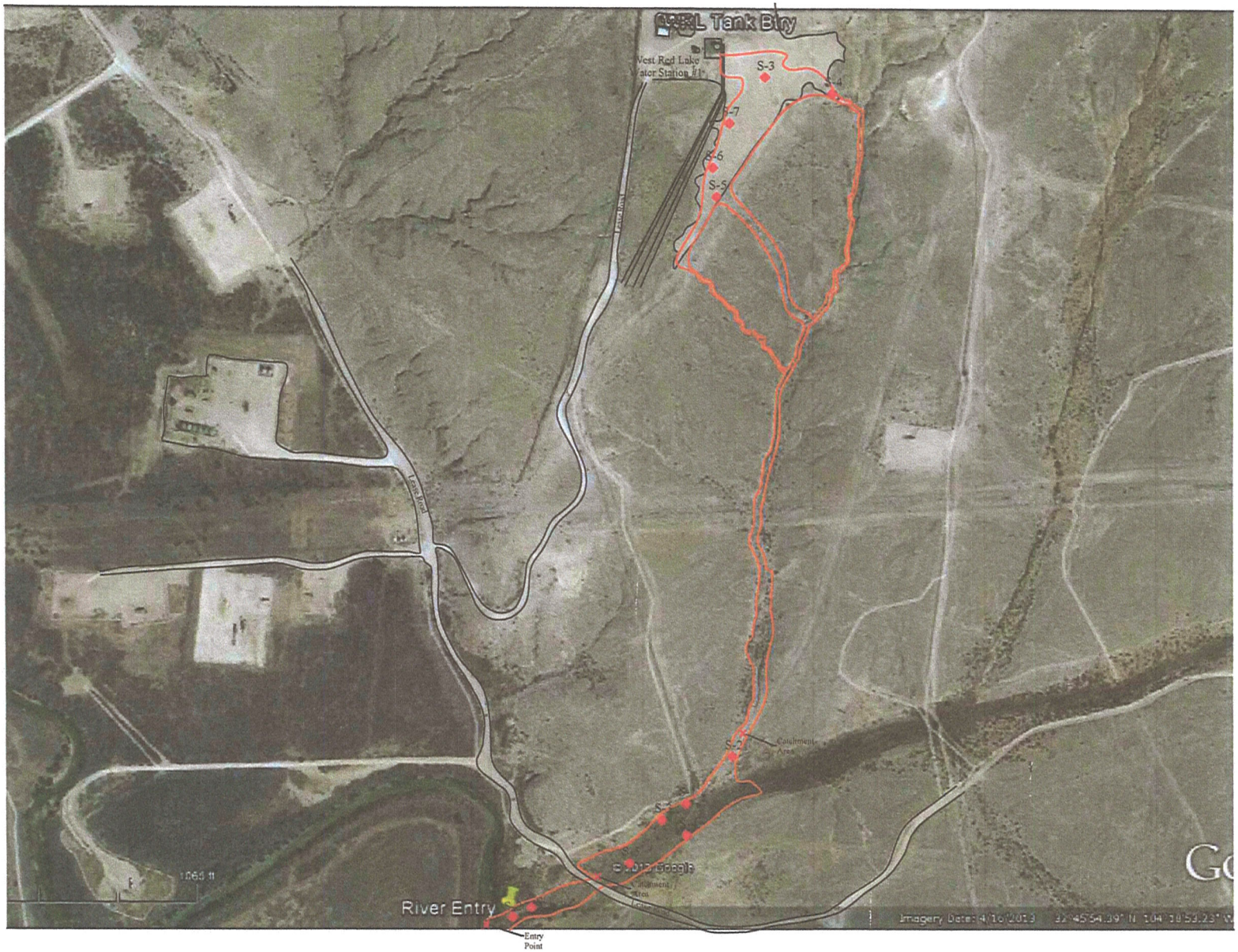
If we can provide additional information or be of further assistance, please contact our office at (575)-746-8768.

Respectfully submitted,

TALON/LPE

Sheldon Hitchcock
Environmental Scientist

David J. Adkins
District Manager



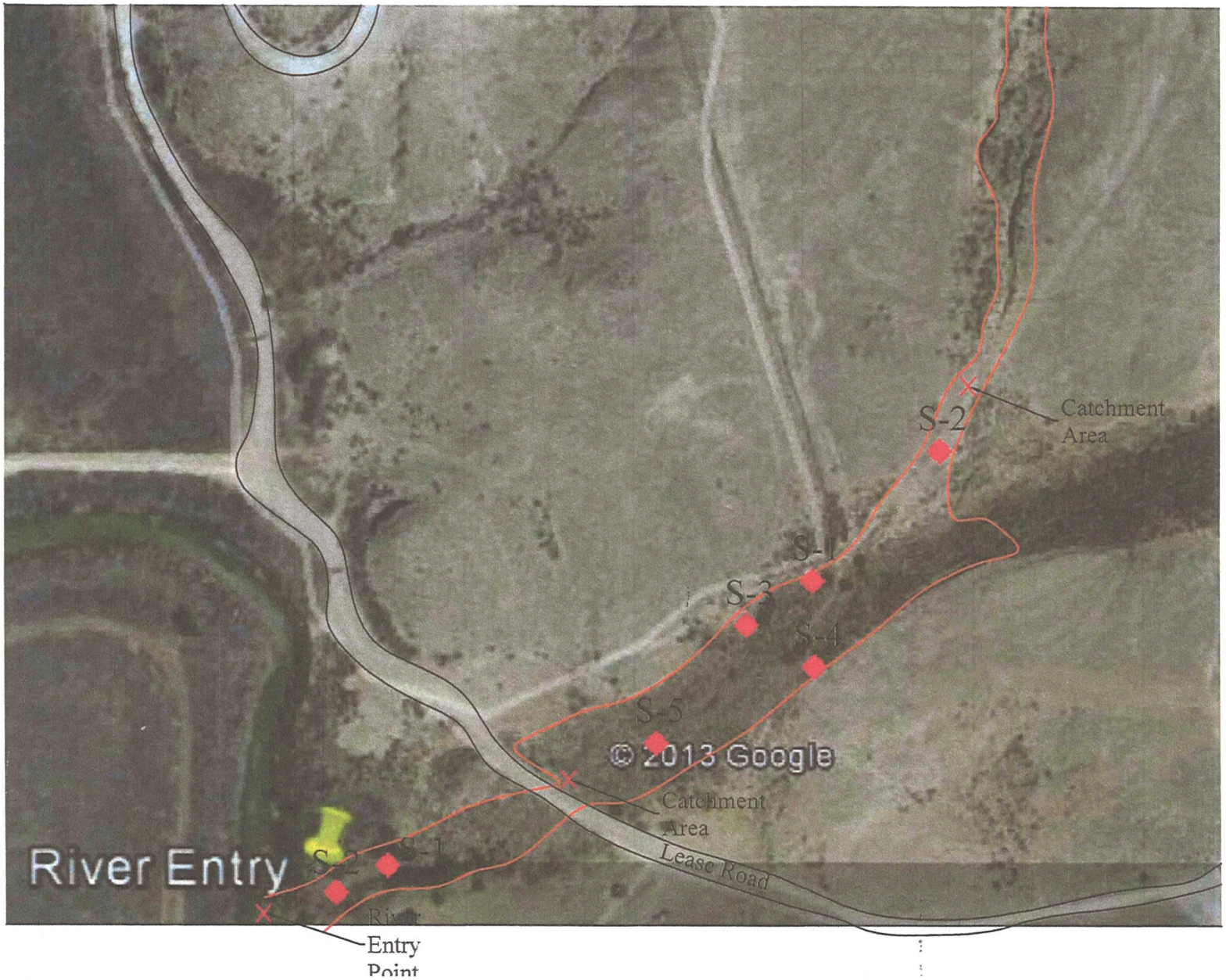
N

0 250 500

Scale in Feet

Legend
- Sample Location
- Release Flow Path

Date: 06/10/2013	West Red Lake Water Station #1
Scale: 1" = 500'	Lime Rock Resources
Drawn By: TJS	Eddy County, New Mexico
	Figure 1 - Site Plan



Date:	07/01/2013
Scale:	1" = 180'
Drawn By:	TJS

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

N

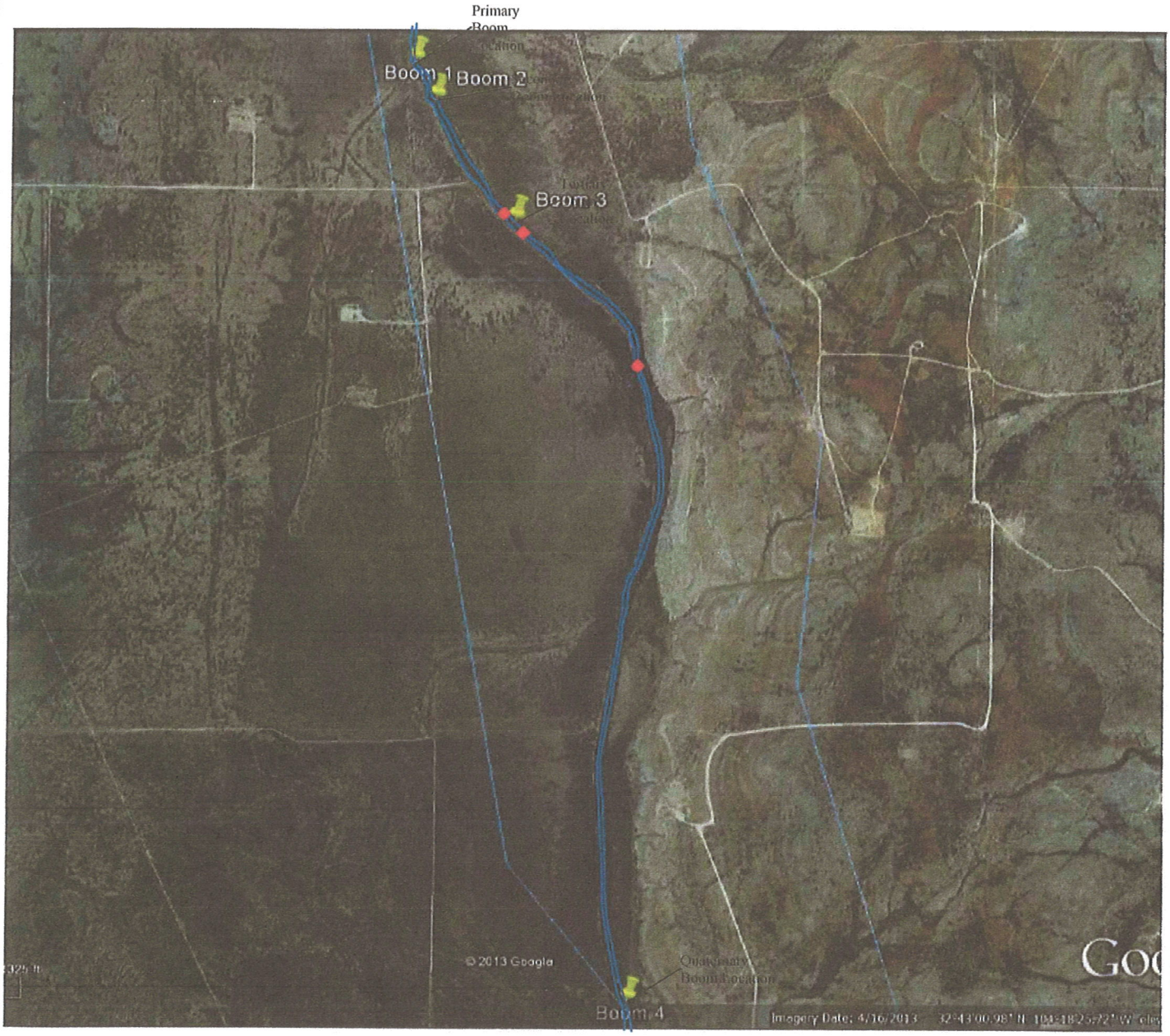
0 300 600

Scale in Feet

Legend

- Sample Location
- Release Flow Path

Date: 06/11/2013	West Red Lake Water Station #1
Scale: 1" = 600'	Lime Rock Resources
Drawn By: TJS	Eddy County, New Mexico
	Figure 1 - Site Plan



N

0 750 1500

Scale in Feet

Legend

- Sample Location
- Release Flow Path

TALON LPE

Date: 06/11/2013
Scale: 1" = 1500'
Drawn By: TJS

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

NM OIL CONSERVATION
ARTESIA DISTRICT
JUN 03 2014
RECEIVED

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 Red Lake #41	Facility Type: West Red Lake Unit Water Station #1

Surface Owner : BLM	Mineral Owner: BLM	Lease No. : API #30-015-28443

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County Eddy
B	7	18S	27E	330'	FNL	1800'	FEL	

Latitude 32.76852 N Longitude -104.31437 W

NATURE OF RELEASE

Type of Release : Produced Fluids (70% PW & 30% OIL)	Volume of Release : 1685 bbls	Volume Recovered: 560 bbls recovered from containment & 1200 bbls recovered from Pecos River on 5/27/13
Source of Release : Alarm malfunction & secondary containment failure	Date and Hour of Occurrence: 5/26/13 am	Date and Hour of Discovery: 5/27/13 7:00 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? BLM , OCD, State Police, EPA	
By Whom? Mike Barrett w/LRR	Date and Hour : 5/27/13 @ 7:00 am	
Was a Watercourse Reached? ☒ Yes ☐ No	If YES, Volume Impacting the Watercourse. 563 bbls	

If a Watercourse was Impacted, Describe Fully.* Produced fluids exited location and flowed down the draw into the Pecos River for approximately 3 miles.

Describe Cause of Problem and Remedial Action Taken.* The alarm malfunctioned causing tanks to overflow into secondary containment. The secondary containment failed causing the release of produced fluids to flow ½ mile down the draw into the Pecos River. All wells were shut in, the alarm was replaced and the impacted flow path in the draw was flushed with fresh water into lined pit at the bottom. Vacuum trucks (11) were immediately called to the location on 5/27/13. A berm was constructed at the bottom of the draw.

Describe Area Affected and Cleanup Action Taken.* Talon/LPE was contracted for the correction of this release. Remediation activities were completed at the river, the draw and the tank battery location. A detailed closure report is attached.

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	Signed By Mike Bratcher Approved by District Supervisor:
Title: Production Supervisor	Approval Date: 6/17/14 Expiration Date: N/A
E-mail Address: mbarrett@limerockresources.com	Conditions of Approval: N/A Attached ☐
Date: 9/27/2013 Phone: 575-623-8424	

* 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 : West Red Lake #41	Facility Type: West Red Lake Unit Water Station #1

Surface Owner : BLM	Mineral Owner: BLM	Lease No. : API #30-015-28443

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	7	18S	27E	330'	FNL	1800'	FEL	Eddy

Latitude 32.76852 N **Longitude** -104.31437 W

NATURE OF RELEASE

Type of Release : Produced Fluids (70% PW & 30% OIL)	Volume of Release : 1685 bbls	Volume Recovered: 560 bbls recovered from containment & 1200 bbls recovered from Pecos River on 5/27/13
Source of Release : Alarm malfunction & secondary containment failure	Date and Hour of Occurrence: 5/26/13 am	Date and Hour of Discovery: 5/27/13 7:00 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? BLM , OCD, State Police, EPA	
By Whom? Mike Barrett w/LRR	Date and Hour : 5/27/13 @ 7:00 am	
Was a Watercourse Reached? ☒ Yes ☐ No	If YES, Volume Impacting the Watercourse. 563 bbls	

If a Watercourse was Impacted, Describe Fully.* Produced fluids exited location and flowed down the draw into the Pecos River for approximately 3 miles.

Describe Cause of Problem and Remedial Action Taken.* The alarm malfunctioned causing tanks to overflow into secondary containment. The secondary containment failed causing the release of produced fluids to flow ½ mile down the draw into the Pecos River. All wells were shut in, the alarm was replaced and the impacted flow path in the draw was flushed with fresh water into lined pit at the bottom. Vacuum trucks (11) were immediately called to the location on 5/27/13. A berm was constructed at the bottom of the draw.

Describe Area Affected and Cleanup Action Taken.* 1/2 mile down the draw and approximately 3 miles of the Pecos River was effected. Vac trucks were called to the location and west side of river. Sorbent boons were stretched across the river in 4 places, oil skimmers were used to recover free product and impacted water.

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: Michael Barrett	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 ☐
Date: 5/29/2013 Phone: 575-623-8424		

* Attach Additional Sheets If Necessary