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**Closure Report
Lime Rock Resources II-A, L.P.:**

**Falcon 3G Federal #7
|30-015-29126|2RP-4048|**

January 13, 2017

Prepared By:

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

Prepared For:

Lime Rock Resources II-A, L.P.

Ms. Crystal Weaver
NMOCD District 2
811 S. 1st Street
Artesia, NM 88210

Subject: **Remedial Activities and Closure Report**
Lime Rock Resources II-A, L.P.
Falcon 3G Federal #7 30-015-29126|2RP-4048

Dear Ms. Weaver,

Lime Rock Resources II-A, L.P. (Lime Rock) has contracted Talon/LPE (Talon) to perform initial spill response, soil sampling 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 Falcon 3G Federal #7 is located approximately ten (10) miles east of Artesia, New Mexico. The legal location for this release is Unit Letter G, Section 3, Township 18 South and Range 27 East in Eddy County, New Mexico. More specifically the latitude and longitude for the release are 32.779365 North and -104.265335 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 Reeves-Gypsum land complex with 0 to 3 percent slopes. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology is comprised of older alluvial deposits of upland plains and piedmont areas. Drainage courses in this area are normally dry.

Ground Water and Site Ranking

The New Mexico State Engineer web site indicates that groundwater in the project vicinity is 50-feet below ground surface (BGS). See [Appendix II](#) for the referenced groundwater data.

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'

Incident Description and Initial Remedial Actions

On December 18, 2016 a midstream operator's line went down causing a backup in Lime Rock's system. This resulted in a failure at the heater treater causing a release of approximately 30bbls of crude oil. Crews were immediately dispatched to the site to begin recovering fluid with a vacuum truck and scraping up the heavily impacted soil with a backhoe. No pasture land was impacted by this release. Talon mobilized personnel to perform a site assessment and collect soil samples within the impacted area utilizing a backhoe. The analytical results from the soil sampling event are summarized in the table below.

Laboratory Results

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

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	0	1030	4560	7860	15800
S-1	1	ND	1800	ND	ND
S-1	2	ND	1520	ND	ND
S-1	3	ND	1520	ND	ND
S-1 Refusal	4	ND	416	ND	10.6
S-2	0	1200	6530	9510	26300
S-2	1	0.361	2200	ND	ND
S-2 Refusal	2.5	32.6	1560	90.7	295
S-2	2.75*	--	85.08	--	--
S-3	0	2360	160	18500	30700
S-3	1	2.71	--	22.1	146
S-3 Refusal	2	0.584	--	ND	31.7

(--) Analyte Not Tested

(ND) Analyte Not Detected

(*) Field Chloride Titration

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 Chlorides.

Remedial Actions

- The impacted area in the vicinity of sample location S-1 was excavated to a depth of 4-feet BGS.
- The impacted area in the vicinity of sample location S-2 was excavated to a depth of 2.75-feet BGS.
- The impacted area in the vicinity of sample location S-3 was excavated to a depth of 1-foot BGS.
- All of the excavated material was hauled to an NMOCD approved solid waste disposal facility.
- The excavation was backfilled with caliche and contoured to match the surrounding location.

Closure

On behalf of Lime Rock Resources II-A, L.P 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
Project Manager


David J. Adkins
District Manager

Attachments


Appendix I Site Plan
Appendix II Groundwater Data
Appendix III Initial & Final C-141
Appendix IV Laboratory Results

APPENDIX I


SITE PLAN

Falcon 3 G Fed #7

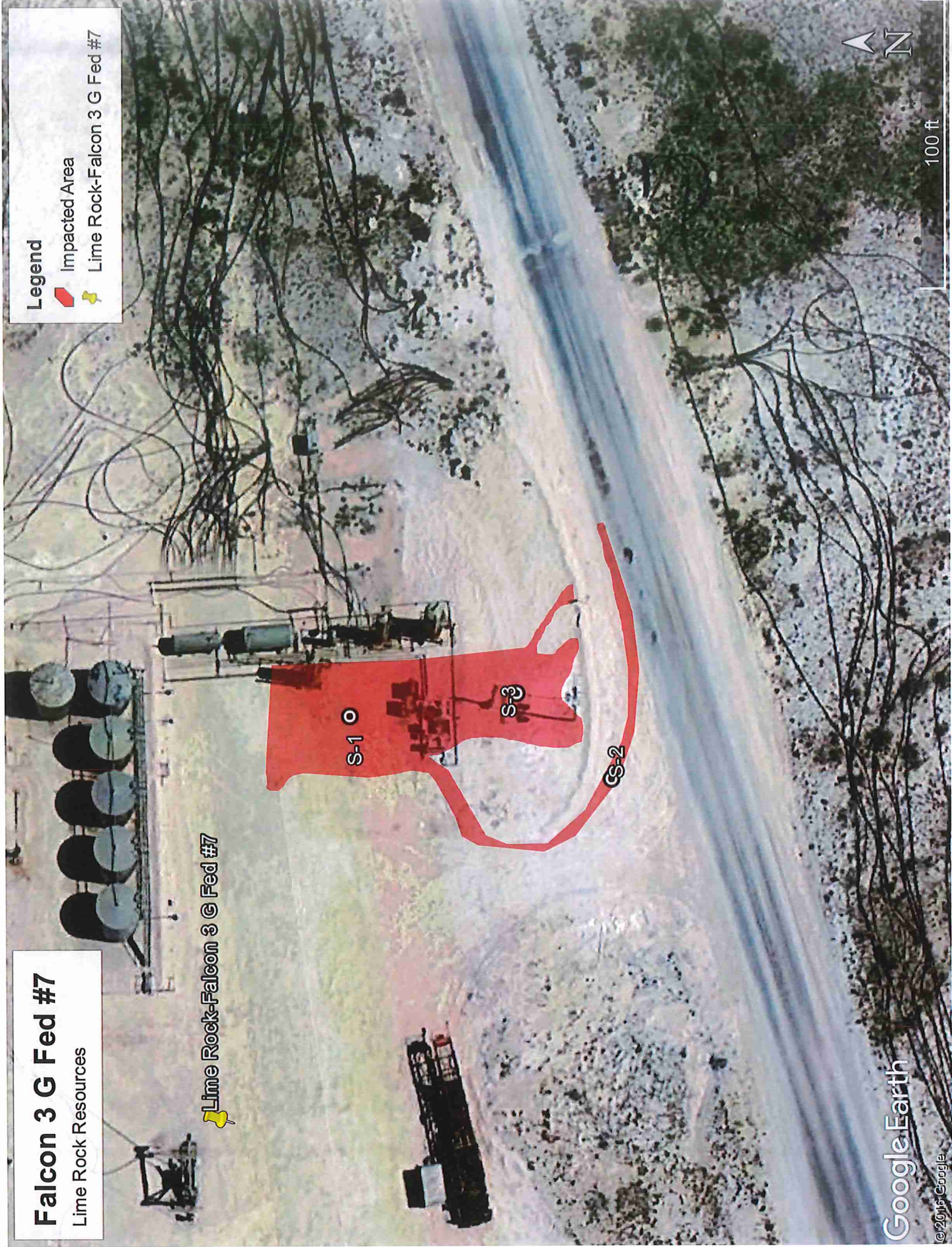
Lime Rock Resources

 Lime Rock-Falcon 3 G Fed #7

Legend

 Impacted Area

 Lime Rock-Falcon 3 G Fed #7



APPENDIX II

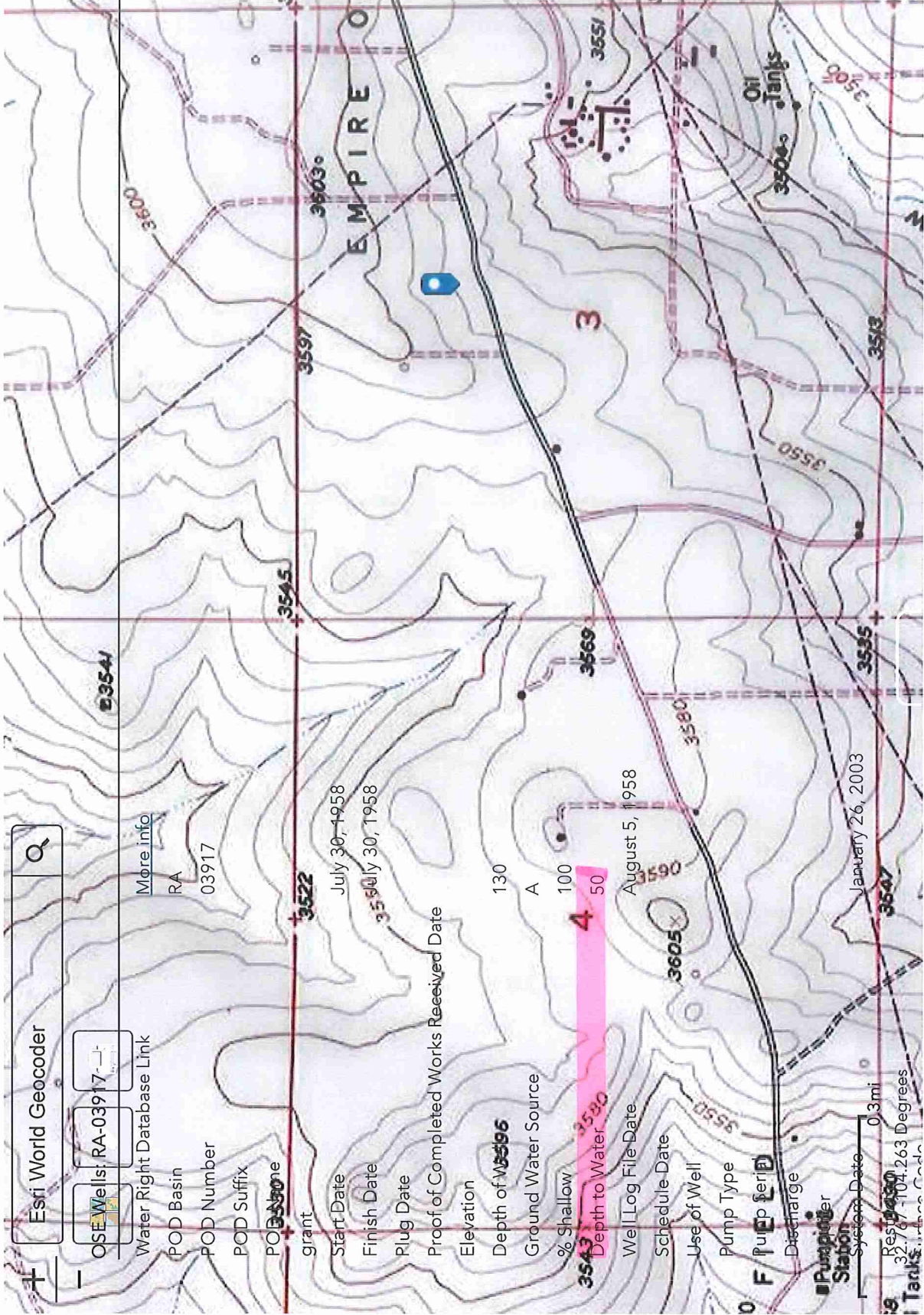
GROUNDWATER DATA



OSE Well Locations

Wells visible at 1:18,000 with 1,000 features per view

NM Water Rights Look Up



All Rights Reserved

APPENDIX III
INITIAL C-141
&
FINAL C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., 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 August 8, 2011

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Lime Rock Resources II-A, L.P.	Contact: Mike Barrett
Address: 1111 Bagby St. Ste. 4600 Houston, TX 77002	Telephone No. 505-353-2644
Facility Name: Falcon 3 G Fed #7	Facility Type: Tank Battery

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-29126
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LOCATION OF RELEASE

Unit Letter G	Section 3	Township 18S	Range 27E	Feet from the 1450	North/South Line N	Feet from the 2310	East/West Line E	County Eddy
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Latitude 32.779365 Longitude -104.265335

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: 30bbls	Volume Recovered: 15bbls
Source of Release: Heater Treater	Date and Hour of Occurrence: 12/18/2016	Date and Hour of Discovery: 12/18/2016 9:00am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher-NMOCD Shelly Tucker-BLM	
By Whom? Sheldon Hitchcock-Talon/LPE	Date and Hour: 12/18/2016 at 1:20pm	
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 midstream operator's line went down over night causing a backup in Lime Rock's system which resulted in a failure at the heater treater. The failure resulted in the loss of approximately 30bbls of crude oil. Upon discovery, crews were immediately dispatched to the site to begin recovering standing fluid utilizing a vacuum truck, scraping up saturated soil utilizing a backhoe, and collecting soil samples in preparation for a remediation work plan.

Describe Area Affected and Cleanup Action Taken.*

The fluid from the release impacted the northeast corner of the location and ran south off location and into the county road's ROW. The heavily impacted soil was scraped up and hauled to an NMOCD approved solid waste disposal facility. Signage was put in place to notify traffic of work on the shoulder and a permit to work inside of the county's ROW will be obtained. Upon receipt of analytical data the impacted soil will be remediated per NMOCD and BLM recommended remedial actions.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

OIL CONSERVATION DIVISION

Signature: 	Approved by Environmental Specialist:		
Printed Name: Mike Barrett			
Title: Production Supervisor	Approval Date:	Expiration Date:	
E-mail Address: mbarrett@limerockresources.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 12/19/2016	Phone: 505-353-2644		

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., 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 August 8, 2011

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: Lime Rock Resources II-A, L.P.	Contact: Mike Barrett
Address: 1111 Bagby St. Ste. 4600 Houston, TX 77002	Telephone No. 505-353-2644
Facility Name: Falcon 3 G Fed #7	Facility Type: Tank Battery

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-29126
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LOCATION OF RELEASE

Unit Letter G	Section 3	Township 18S	Range 27E	Feet from the 1450	North/South Line N	Feet from the 2310	East/West Line E	County Eddy
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Latitude 32.779365 Longitude -104.265335

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: 30bbls	Volume Recovered: 15bbls
Source of Release: Heater Treater	Date and Hour of Occurrence: 12/18/2016	Date and Hour of Discovery: 12/18/2016 9:00am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher-NMOCD Shelly Tucker-BLM	
By Whom? Sheldon Hitchcock-Talon/LPE	Date and Hour: 12/18/2016 at 1:20pm	
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.*

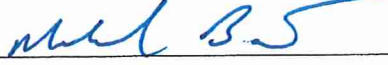
A midstream operator's line went down over night causing a backup in Lime Rock's system which resulted in a failure at the heater treater. The failure resulted in the loss of approximately 30bbls of crude oil. Upon discovery, crews were immediately dispatched to the site to begin recovering standing fluid utilizing a vacuum truck, scraping up saturated soil utilizing a backhoe, and collecting soil samples in preparation for a remediation work plan.

Describe Area Affected and Cleanup Action Taken.*

The fluid from the release impacted the northeast corner of the location and ran south off location and into the county road's ROW. The heavily impacted soil was scraped up and hauled to an NMOCD approved solid waste disposal facility. Signage was put in place to notify traffic of work on the shoulder and a permit to work inside of the county's ROW was obtained. Upon receipt of analytical data a remediation work plan was drafted and subsequently approved by NMOCD and BLM. The remediation proceeded in accordance with the approved work plan. The impacted soil was excavated and disposed of at a NMOCD approved solid waste disposal facility. The excavation was backfilled with caliche and contoured to match the surrounding location.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

OIL CONSERVATION DIVISION

Signature: 	Approved by Environmental Specialist:		
Printed Name: Mike Barrett			
Title: Production Supervisor	Approval Date:	Expiration Date:	
E-mail Address: mbarrett@limerockresources.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 1/13/2017 Phone: 505-353-2644			

* Attach Additional Sheets If Necessary

APPENDIX IV

LABORATORY RESULTS



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

December 20, 2016

SHELDON HITCHCOCK

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: FALCON 3G FED #7

Enclosed are the results of analyses for samples received by the laboratory on 12/19/16 9:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. 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: 12/19/2016
 Reported: 12/20/2016
 Project Name: FALCON 3G FED #7
 Project Number: 701307.045.01
 Project Location: EDDY COUNTY, NM

 Sampling Date: 12/18/2016
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: S-1 0' (H602825-01)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	63.7	5.00	12/19/2016	ND	2.13	107	2.00	0.0690	
Toluene*	306	5.00	12/19/2016	ND	2.19	110	2.00	2.25	
Ethylbenzene*	179	5.00	12/19/2016	ND	2.16	108	2.00	2.36	
Total Xylenes*	478	15.0	12/19/2016	ND	6.47	108	6.00	2.22	
Total BTEX	1030	30.0	12/19/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 126 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4560	16.0	12/19/2016	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	7860	100	12/19/2016	ND	199	99.5	200	7.12	
DRO >C10-C28	15800	100	12/19/2016	ND	206	103	200	9.14	

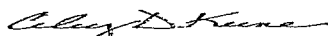
Surrogate: 1-Chlorooctane 234 % 35-147

Surrogate: 1-Chlorooctadecane 403 % 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: 12/19/2016
 Reported: 12/20/2016
 Project Name: FALCON 3G FED #7
 Project Number: 701307.045.01
 Project Location: EDDY COUNTY, NM

 Sampling Date: 12/18/2016
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: S-1 1' (H602825-02)

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	12/19/2016	ND	2.13	107	2.00	0.0690	
Toluene*	0.077	0.050	12/19/2016	ND	2.19	110	2.00	2.25	
Ethylbenzene*	<0.050	0.050	12/19/2016	ND	2.16	108	2.00	2.36	
Total Xylenes*	<0.150	0.150	12/19/2016	ND	6.47	108	6.00	2.22	
Total BTEX	<0.300	0.300	12/19/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 118 % 73.6-140

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1800	16.0	12/19/2016	ND	416	104	400	3.77	

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	12/19/2016	ND	199	99.5	200	7.12	
DRO >C10-C28	<10.0	10.0	12/19/2016	ND	206	103	200	9.14	

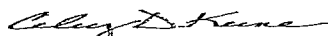
Surrogate: 1-Chlorooctane 60.3 % 35-147

Surrogate: 1-Chlorooctadecane 80.2 % 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:	12/19/2016	Sampling Date:	12/18/2016
Reported:	12/20/2016	Sampling Type:	Soil
Project Name:	FALCON 3G FED #7	Sampling Condition:	Cool & Intact
Project Number:	701307.045.01	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: S-1 2' (H602825-03)

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	12/19/2016	ND	2.13	107	2.00	0.0690	
Toluene*	<0.050	0.050	12/19/2016	ND	2.19	110	2.00	2.25	
Ethylbenzene*	<0.050	0.050	12/19/2016	ND	2.16	108	2.00	2.36	
Total Xylenes*	<0.150	0.150	12/19/2016	ND	6.47	108	6.00	2.22	
Total BTEX	<0.300	0.300	12/19/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 119 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1520	16.0	12/19/2016	ND	400	100	400	3.92	QM-07	

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	12/19/2016	ND	199	99.5	200	7.12		
DRO >C10-C28	<10.0	10.0	12/19/2016	ND	206	103	200	9.14		

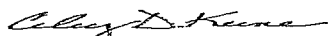
Surrogate: 1-Chlorooctane 67.0 % 35-147

Surrogate: 1-Chlorooctadecane 86.9 % 28-171

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	12/19/2016	Sampling Date:	12/18/2016
Reported:	12/20/2016	Sampling Type:	Soil
Project Name:	FALCON 3G FED #7	Sampling Condition:	Cool & Intact
Project Number:	701307.045.01	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: S-1 3' (H602825-04)

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	12/19/2016	ND	2.13	107	2.00	0.0690	
Toluene*	<0.050	0.050	12/19/2016	ND	2.19	110	2.00	2.25	
Ethylbenzene*	<0.050	0.050	12/19/2016	ND	2.16	108	2.00	2.36	
Total Xylenes*	<0.150	0.150	12/19/2016	ND	6.47	108	6.00	2.22	
Total BTEX	<0.300	0.300	12/19/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 122 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1520	16.0	12/19/2016	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	12/19/2016	ND	199	99.5	200	7.12		
DRO >C10-C28	<10.0	10.0	12/19/2016	ND	206	103	200	9.14		

Surrogate: 1-Chlorooctane 57.3 % 35-147

Surrogate: 1-Chlorooctadecane 73.0 % 28-171

Cardinal Laboratories

*=Accredited Analyte

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Coley D. Keene

Coley 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:	12/19/2016	Sampling Date:	12/18/2016
Reported:	12/20/2016	Sampling Type:	Soil
Project Name:	FALCON 3G FED #7	Sampling Condition:	Cool & Intact
Project Number:	701307.045.01	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: S-1 4' (H602825-05)

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	12/19/2016	ND	2.13	107	2.00	0.0690		
Toluene*	<0.050	0.050	12/19/2016	ND	2.19	110	2.00	2.25		
Ethylbenzene*	<0.050	0.050	12/19/2016	ND	2.16	108	2.00	2.36		
Total Xylenes*	<0.150	0.150	12/19/2016	ND	6.47	108	6.00	2.22		
Total BTEX	<0.300	0.300	12/19/2016	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 120 % 73.6-140

Chloride, SM4500Cl-B			mg/kg								Analyzed By: AC
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	416	16.0	12/19/2016	ND	400	100	400	3.92			

TPH 8015M			mg/kg								Analyzed By: MS
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
GRO C6-C10	<10.0	10.0	12/19/2016	ND	199	99.5	200	7.12			
DRO >C10-C28	10.6	10.0	12/19/2016	ND	206	103	200	9.14			

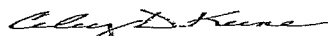
Surrogate: 1-Chlorooctane 64.4 % 35-147

Surrogate: 1-Chlorooctadecane 86.0 % 28-171

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* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 12/19/2016
Reported: 12/20/2016
Project Name: FALCON 3G FED #7
Project Number: 701307.045.01
Project Location: EDDY COUNTY, NM

Sampling Date: 12/18/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S-2 0' (H602825-06)

BTEX 8021B		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	92.9	5.00	12/19/2016	ND	2.13	107	2.00	0.0690	
Toluene*	351	5.00	12/19/2016	ND	2.19	110	2.00	2.25	
Ethylbenzene*	203	5.00	12/19/2016	ND	2.16	108	2.00	2.36	
Total Xylenes*	551	15.0	12/19/2016	ND	6.47	108	6.00	2.22	
Total BTEX	1200	30.0	12/19/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIB) 129 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6530	16.0	12/19/2016	ND	400	100	400	3.92	
TPH 8015M		mg/kg		Analyzed By: MS					
S-06									

Surrogate: 1-Chlorooctane		326 %	35-147						
Surrogate: 1-Chlorooctadecane		665 %	28-171						

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Celestine Keene

Celestine 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:	12/19/2016	Sampling Date:	12/18/2016
Reported:	12/20/2016	Sampling Type:	Soil
Project Name:	FALCON 3G FED #7	Sampling Condition:	Cool & Intact
Project Number:	701307.045.01	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: S-2 1' (H602825-07)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.130	0.050	12/19/2016	ND	2.13	107	2.00	0.0690	
Toluene*	0.174	0.050	12/19/2016	ND	2.19	110	2.00	2.25	
Ethylbenzene*	0.057	0.050	12/19/2016	ND	2.16	108	2.00	2.36	
Total Xylenes*	<0.150	0.150	12/19/2016	ND	6.47	108	6.00	2.22	
Total BTEX	0.361	0.300	12/19/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 121 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2200	16.0	12/19/2016	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/19/2016	ND	199	99.5	200	7.12	
DRO >C10-C28	<10.0	10.0	12/19/2016	ND	206	103	200	9.14	

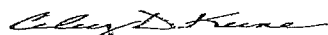
Surrogate: 1-Chlorooctane 65.4 % 35-147

Surrogate: 1-Chlorooctadecane 86.5 % 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:	12/19/2016	Sampling Date:	12/18/2016
Reported:	12/20/2016	Sampling Type:	Soil
Project Name:	FALCON 3G FED #7	Sampling Condition:	Cool & Intact
Project Number:	701307.045.01	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: S-2 2.5' (H602825-08)

BTX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.655	0.050	12/19/2016	ND	2.13	107	2.00	0.0690	
Toluene*	6.48	0.050	12/19/2016	ND	2.19	110	2.00	2.25	
Ethylbenzene*	6.23	0.050	12/19/2016	ND	2.16	108	2.00	2.36	
Total Xylenes*	19.2	0.150	12/19/2016	ND	6.47	108	6.00	2.22	
Total BTX	32.6	0.300	12/19/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 159 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1560	16.0	12/19/2016	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	90.7	10.0	12/19/2016	ND	199	99.5	200	7.12	
DRO >C10-C28	295	10.0	12/19/2016	ND	206	103	200	9.14	

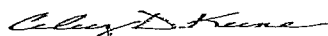
Surrogate: 1-Chlorooctane 65.5 % 35-147

Surrogate: 1-Chlorooctadecane 79.4 % 28-171

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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:	12/19/2016	Sampling Date:	12/18/2016
Reported:	12/20/2016	Sampling Type:	Soil
Project Name:	FALCON 3G FED #7	Sampling Condition:	Cool & Intact
Project Number:	701307.045.01	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: S-3 0' (H602825-09)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	184	10.0	12/19/2016	ND	2.13	107	2.00	0.0690	
Toluene*	756	10.0	12/19/2016	ND	2.19	110	2.00	2.25	
Ethylbenzene*	397	10.0	12/19/2016	ND	2.16	108	2.00	2.36	
Total Xylenes*	1020	30.0	12/19/2016	ND	6.47	108	6.00	2.22	
Total BTEx	2360	60.0	12/19/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 127 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	12/19/2016	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	18500	100	12/19/2016	ND	199	99.5	200	7.12	
DRO >C10-C28	30700	100	12/19/2016	ND	206	103	200	9.14	

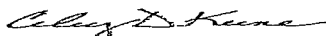
Surrogate: 1-Chlorooctane 457 % 35-147

Surrogate: 1-Chlorooctadecane 772 % 28-171

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

Received:	12/19/2016	Sampling Date:	12/18/2016
Reported:	12/20/2016	Sampling Type:	Soil
Project Name:	FALCON 3G FED #7	Sampling Condition:	Cool & Intact
Project Number:	701307.045.01	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: S-3 1' (H602825-10)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.417	0.050	12/19/2016	ND	2.13	107	2.00	0.0690	
Toluene*	0.776	0.050	12/19/2016	ND	2.19	110	2.00	2.25	
Ethylbenzene*	0.374	0.050	12/19/2016	ND	2.16	108	2.00	2.36	
Total Xylenes*	1.14	0.150	12/19/2016	ND	6.47	108	6.00	2.22	
Total BTEX	2.71	0.300	12/19/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 122 % 73.6-140

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	22.1	10.0	12/19/2016	ND	199	99.5	200	7.12		
DRO >C10-C28	146	10.0	12/19/2016	ND	206	103	200	9.14		

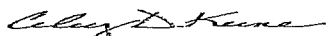
Surrogate: 1-Chlorooctane 85.6 % 35-147

Surrogate: 1-Chlorooctadecane 98.7 % 28-171

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

 Received: 12/19/2016
 Reported: 12/20/2016
 Project Name: FALCON 3G FED #7
 Project Number: 701307.045.01
 Project Location: EDDY COUNTY, NM

 Sampling Date: 12/18/2016
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: S-3 2' (H602825-11)

BTEX 8021B		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.060	0.050	12/19/2016	ND	2.13	107	2.00	0.0690	
Toluene*	0.117	0.050	12/19/2016	ND	2.19	110	2.00	2.25	
Ethylbenzene*	0.098	0.050	12/19/2016	ND	2.16	108	2.00	2.36	
Total Xylenes*	0.309	0.150	12/19/2016	ND	6.47	108	6.00	2.22	
Total BTEX	0.584	0.300	12/19/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIB) 121 % 73.6-140

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	12/19/2016	ND	199	99.5	200	7.12	
DRO >C10-C28	31.7	10.0	12/19/2016	ND	206	103	200	9.14	

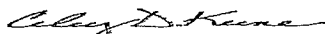
Surrogate: 1-Chlorooctane 80.2 % 35-147

Surrogate: 1-Chlorooctadecane 81.5 % 28-171

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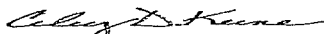
Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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

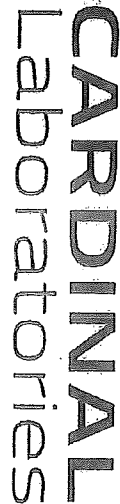
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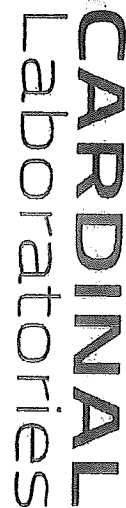
CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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ANALYSIS REQUEST

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-8226.

pg 2 of