



MCollier@H-R_Enterprises.com 575-909-0326

Site Assessment and Closure Report

C K 7 Federal #001
Incident# 2RP-1291/nJMW1225739545
Eddy County, New Mexico

Prepared For:

Cimarex Energy Co. of Colorado
600 Marienfeld St.
Midland, TX 79701

Prepared By:

H&R Enterprises, LLC
5120 W. Kansas St.
Hobbs, New Mexico 88242

April 17, 2023

Mrs. Jennifer Nobui
NMOCD
1220 S. St. Francis Dr.
Santa Fe, NM 87505

Subject: **Site Assessment and Closure Report**
C K 7 Federal #001
Eddy County, NM

Dear Mrs. Nobui,

Cimarex Energy Co. of Colorado has contracted H&R Enterprises (H&R) to perform site assessment services at the above-referenced location. The results of our site assessment activities are contained herein.

Site Information

The C K 7 Federal #001 is located approximately 17.4 miles Northeast of Whites City, New Mexico. The legal location for this release is Unit Letter G, Section 07, Township 24 South and Range 26 East in Eddy County, New Mexico. More specifically the latitude and longitude for the release are 32.231535 North and -103.328983 West. Site plans are 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 Ector extremely rocky loam, 9 to 25 percent slopes. The referenced soil data is attached in [Appendix II](#). Drainage courses in this area are typically dry. The project site is located in a high Karst potential area (Karst Map, [Appendix I](#)).

Groundwater and Site Characterization

The New Mexico Office of the State Engineer web site indicates that the nearest reported depth to groundwater is 250-feet below ground surface (BGS). See [Appendix II](#) for the referenced groundwater data.

If a release occurs within the following areas, the responsible party must treat the release as if it occurred less than 50 feet to the groundwater in Table I, New Mexico Oil Conservation Division (NMOCD) Rule 19.15.29, NMAC.

Approximate Depth to Groundwater	250 Feet/BGS
---	---------------------

<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within 300 feet of any continuously flowing watercourse or any other significant watercourse
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within 200 feet of any lakebed, sinkhole, or a playa lake
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within 300 feet from an occupied permanent residence, school, hospital, institution, or church
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within 1000 feet of any freshwater well or spring
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within incorporated municipal boundaries or within a defined municipal freshwater well field covered under a municipal ordinance adopted pursuant to Section 3-2703 NMSA 1978
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within 300 feet of a wetland
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within the area overlying a subsurface mine
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Within an unstable area
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within a 100-year floodplain

As this release occurred in a high karst area, the closure criteria for this site is as follows:

Table I			
Closure Criteria for Soils Impacted by a Release			
Minimum depth below any point within the horizontal boundary of the release to ground water less than 10,000 mg/l TDS	Constituent	Method*	Limit**
≤ 50 feet	Chloride **	EPA 300.0 or SM4500 CIB	600 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	100 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

Incident Description

On September 02, 2012, during the process of blowing the separator to the fiberglass, tank the bottom of the tank came apart allowing approximately 35 barrels of produced water to be released into the unlined containment as well as under the berms into the pasture to the South.

Site Assessment and Reclamation Activities

H&R mobilized personnel to begin site assessment activities of the location. Grab samples were obtained by way of hand auger. Hard rock refusal was encountered. Initial site assessment sampling locations are illustrated on Site Assessment Map, [Appendix I](#). Samples collected were transported to Cardinal Laboratory for analysis. The results of that analysis are presented in Table 1 below. Photographs of the sampling locations as well as of the historical spill path are attached in [Appendix IV](#). Complete laboratory reports can be found in [Appendix V](#).

Table 1: Initial Soil Samples Analysis

Sample ID	Sample Date	Depth (BGS)	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Cl mg/kg
NMOCD Table 1 Closure Criteria 19.15.29 NMAC			50 mg/kg	10 mg/kg	100 mg/kg			100 mg/kg	600 mg/kg
S-1	4/4/2023	0-0.5' R	ND	ND	ND	ND	ND	0	16
S-2	4/4/2023	0-0.5' R	ND	ND	ND	ND	ND	0	16
S-3	4/4/2023	0-0.5' R	ND	ND	ND	ND	ND	0	16
S-4	4/4/2023	0-0.5' R	ND	ND	ND	ND	ND	0	16
S-5	4/4/2023	0' R	ND	ND	ND	ND	ND	0	16
S-6	4/4/2023	0' R	ND	ND	ND	ND	ND	0	32
H-1	4/4/2023	0-0.5' R	ND	ND	ND	ND	ND	0	16
H-2	4/4/2023	0-0.5' R	ND	ND	ND	ND	ND	0	16
H-3	4/4/2023	0-0.5' R	ND	ND	ND	ND	ND	0	16
H-4	4/4/2023	0' R	ND	ND	ND	ND	ND	0	16
H-5	4/4/2023	0-0.5' R	ND	ND	ND	ND	ND	0	32
H-6	4/4/2023	0' R	ND	ND	ND	ND	ND	0	32
H-7	4/4/2023	0' R	ND	ND	ND	ND	ND	0	32
ND = Analyte Not Detected H = Horizontal Sample S = Vertical Sample									

Based on the results of our site assessment it was determined that remediation was completed during deconstruction and relocation of the tank battery. A radio tower now sits where the old tank battery sat.

Closure

Based on the site assessment sampling results completed for this project, on behalf of Cimarex Energy Co. of Colorado we request that no further actions be required, and that closure of this incident be granted.

Should you have any questions or if further information is required, please do not hesitate to contact our office at 575-909-0326.

Respectfully submitted,

H&R Enterprises, LLC

Michael Collier

Michael Collier
Environmental Project Manager

Attachments:

Appendix I Site Maps
Appendix II Groundwater Data, Soil Survey, FEMA Flood Zone Map
Appendix III Initial and Final C-141
Appendix IV Photographic Documentation
Appendix V Laboratory Reports

APPENDIX I

SITE MAPS

KARST MAP




TOPOGRAPHIC MAP

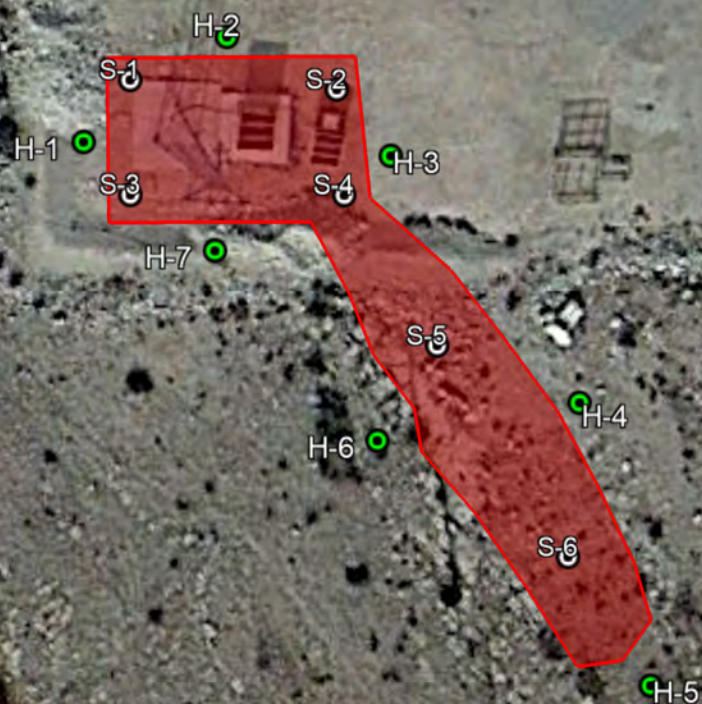
LOCATOR MAP

C K 7 Federal #001

Cimarex Energy Co. of Colorado
Incident# 2RP-1291
Eddy County, NM
Site Assessment Map

Legend





-  2RP-1291 Historical Spill Path
-  Horizontal Sample
-  Vertical Sample



C K 7 Federal #001

Cimarex Energy Co. of Colorado
Incident# 2RP-1291
Eddy County, NM
Karst Map

Legend

-  C K 7 Federal #001
-  High
-  Low
-  Medium

C K 7 Federal #001



National Parks Hwy

Black River Village Rd

Black River Village




1 mi

Google Earth

C K 7 Federal #001

Cimarex Energy Co. of Colorado
Incident# 2RP-1291
Eddy County, NM
Topographic Map

Legend


 C K 7 Federal #001

C K 7 Federal #001

C K 7 Federal #001

Cimarex Energy Co. of Colorado
Incident# 2RP-1291
Eddy County, Nm
Locator Map

Legend

 C K 7 Federal #001

C K 7 Federal #001

National Parks Hwy

763

772

62

Whites City

7

Google Earth

Released to Imaging: 6/28/2023 11:39:21 AM



4 mi

APPENDIX II

GROUNDWATER DATA

SOIL SURVEY

FEMA FLOOD ZONE



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	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
C_00669		C	ED	2	4	3	07	24S	26E	562799	3565796*	<input type="text"/>	722	330	250 80
C_00957		C	ED		1	4	18	24S	26E	563106	3564511*	<input type="text"/>	1846	753	650 103
C_02027		C	ED		4	2	13	24S	25E	561910	3564888*	<input type="text"/>	1991	350	163 187

Average Depth to Water: **354 feet**

Minimum Depth: **163 feet**

Maximum Depth: **650 feet**

Record Count: 3

Basin/County Search:

County: Eddy

UTMNAD83 Radius Search (in meters):

Easting (X): 563260.79

Northing (Y): 3566351.25

Radius: 3000

*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.

4/14/23 10:21 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

Map Unit Description: Ector extremely rocky loam, 9 to 25 percent slopes---Eddy Area, New Mexico

Eddy Area, New Mexico

EE—Ector extremely rocky loam, 9 to 25 percent slopes

Map Unit Setting

National map unit symbol: 1w4c

Elevation: 1,600 to 4,800 feet

Mean annual precipitation: 10 to 18 inches

Mean annual air temperature: 58 to 66 degrees F

Frost-free period: 195 to 240 days

Farmland classification: Not prime farmland

Map Unit Composition

Ector and similar soils: 98 percent

Minor components: 2 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ector

Setting

Landform: Ridges, hills

Landform position (two-dimensional): Shoulder, backslope, footslope, toeslope

Landform position (three-dimensional): Side slope, head slope, nose slope, crest

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Residuum weathered from limestone

Typical profile

H1 - 0 to 6 inches: very cobbly loam

H2 - 6 to 60 inches: bedrock

Properties and qualities

Slope: 9 to 25 percent

Depth to restrictive feature: 4 to 20 inches to lithic bedrock

Drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water

(Ksat): Moderately low to high (0.06 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 60 percent

Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)

Sodium adsorption ratio, maximum: 1.0

Available water supply, 0 to 60 inches: Very low (about 0.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Map Unit Description: Ector extremely rocky loam, 9 to 25 percent slopes---Eddy Area, New Mexico

Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R042CY151NM - Limestone Hills
Hydric soil rating: No

Minor Components

Ector

Percent of map unit: 1 percent
Ecological site: R042CY158NM - Very Shallow
Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent
Hydric soil rating: No

Data Source Information

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 18, Sep 8, 2022

National Flood Hazard Layer FIRMMette



104°20'1"W 32°14'9"N



0 250 500 1,000 1,500 2,000 Feet 1:6,000 104°19'23"W 32°13'39"N

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/14/2023 at 1:08 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

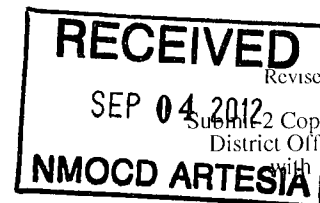
APPENDIX III

INITIAL C-141

FINAL C-141

District I
1625 N French Dr, Hobbs, NM 88240
District II
1301 W Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S St Francis Dr, Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505



Release Notification and Corrective Action

nJMW1225739545 OPERATOR ☒ Initial Report ☐ Final Report

Name of Company	Cimarex Energy <u>162683</u>	Contact	Terry D. Ainsworth
Address	600 Marienfeld Midland, TX 79701	Telephone No.	(575) 390-1388
Facility Name	CK 7 Federal I	Facility Type	Gas Well

Surface Owner	Mineral Owner	Lease No.	NM 15295
---------------	---------------	-----------	----------

LOCATION OF RELEASE

API 30-015-33420

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	7	24S	26E	2495	North	1415	East	Eddy

Latitude 32 13' 54" N Longitude 104 19' 41" W

NATURE OF RELEASE

Type of Release	Produced Water	Volume of Release	75 bbls	Volume Recovered	40 bbls
Source of Release	fiberglass tank failure	Date and Hour of Occurrence	9/2/2012 8AM	Date and Hour of Discovery	9/2/2012 8AM
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?			
By Whom?	Date and Hour				
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.*

While blowing separator to fiberglass tank the bottom of the tank came apart
Called vacuum truck to pick up spill

Describe Area Affected and Cleanup Action Taken.*

The spill got out under the unlined containment berms - 35 bbls of PW got out and soaked in before vacuum truck could get there
We will put together a game plan to catch samples and see how deep it goes inside containment and in the pasture

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOC D 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 NMOC D 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, NMOC D 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: Terry D. Ainsworth	Approved by District Supervisor	Signed By <u>Mike Deman</u>
Title: Production Foreman	Approval Date: SEP 13 2012	Expiration Date:
E-mail Address: tainsworth@cimarex.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 9/2/2012 Phone: 575-390-1388		

* Attach Additional Sheets If Necessary

Remediation per OCD Rules & Guidelines. **SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:**

October 13, 2012

2RP-1291

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	_____ (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: *Each of the following items must be included in the report.*

- ☐ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☐ Field data
- ☐ Data table of soil contaminant concentration data
- ☐ Depth to water determination
- ☐ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☐ Photographs including date and GIS information
- ☐ Topographic/Aerial maps
- ☐ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: _____ Title: _____

Signature: *Jac. Harimon* Date: _____

email: _____ Telephone: _____

OCD OnlyReceived by: Jocelyn Harimon Date: 05/01/2023

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- ☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☐ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: _____ Title: _____

Signature:  Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Jocelyn Harimon Date: 05/01/2023

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by:  Date: 06/28/2023

Printed Name: Jocelyn Harimon Title: Environmental Specialist

APPENDIX IV

PHOTOGRAPHIC DOCUMENTATION

PHOTOGRAPHIC DOCUMENTATION

SAMPLE LOCATION PHOTOGRAPHS



OLD BATTERY LOCATION/RADIO TOWER LOCATION



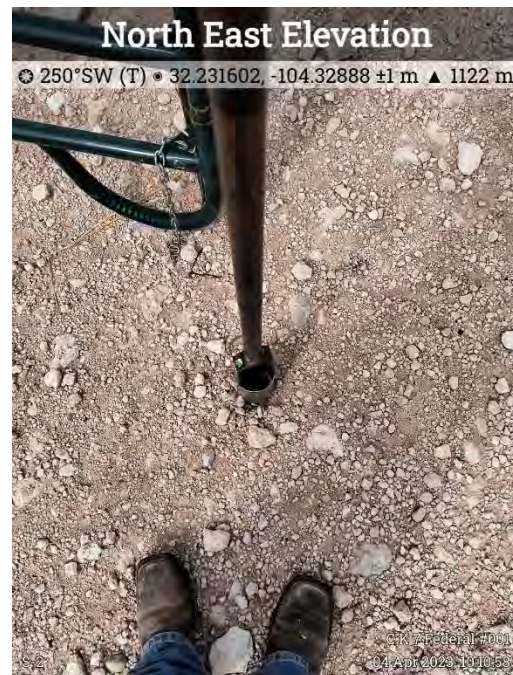
PASTURE SPILL AREA

PHOTOGRAPHIC DOCUMENTATION

SAMPLE LOCATION PHOTOGRAPHS



S-1



S-2

PHOTOGRAPHIC DOCUMENTATION

SAMPLE LOCATION PHOTOGRAPHS



S-3



S-4

PHOTOGRAPHIC DOCUMENTATION

SAMPLE LOCATION PHOTOGRAPHS



S-5



S-6

PHOTOGRAPHIC DOCUMENTATION

SAMPLE LOCATION PHOTOGRAPHS



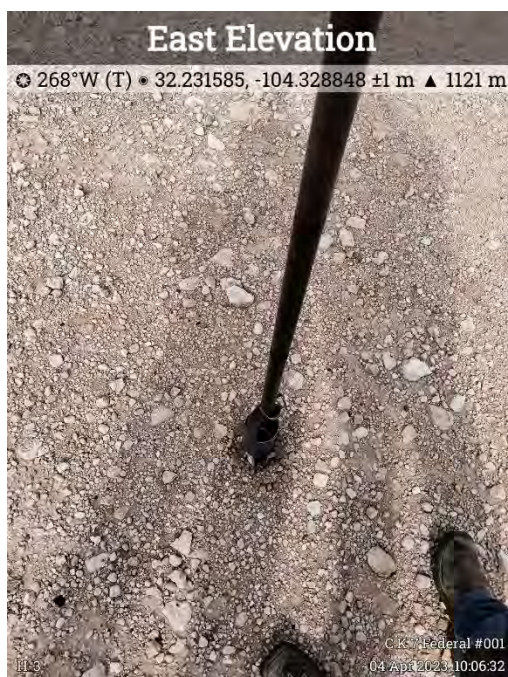
H-1



H-2

PHOTOGRAPHIC DOCUMENTATION

SAMPLE LOCATION PHOTOGRAPHS



H-3



H-4

PHOTOGRAPHIC DOCUMENTATION

SAMPLE LOCATION PHOTOGRAPHS



H-5



H-6

PHOTOGRAPHIC DOCUMENTATION

SAMPLE LOCATION PHOTOGRAPHS



H-7

APPENDIX V

LABORATORY REPORTS



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

April 12, 2023

MICHAEL COLLIER
H & R ENTERPRISES
1010 GAMBLIN ROAD
HOBBS, NM 88240

RE: C K 7 FEDERAL #001 (C K)

Enclosed are the results of analyses for samples received by the laboratory on 04/05/23 16:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. 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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene
Lab Director/Quality Manager



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

Analytical Results For:

H & R ENTERPRISES
 MICHAEL COLLIER
 1010 GAMBLIN ROAD
 HOBBS NM, 88240
 Fax To: NONE

Received: 04/05/2023
 Reported: 04/12/2023
 Project Name: C K 7 FEDERAL #001 (C K)
 Project Number: NOT GIVEN
 Project Location: CIMAREX - EDDY COUNTY, NM

Sampling Date: 04/04/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: S - 1 0-0.5' R (H231602-01)

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2023	ND	2.04	102	2.00	0.273	
Toluene*	<0.050	0.050	04/11/2023	ND	2.14	107	2.00	0.221	
Ethylbenzene*	<0.050	0.050	04/11/2023	ND	2.08	104	2.00	0.321	
Total Xylenes*	<0.150	0.150	04/11/2023	ND	6.50	108	6.00	1.49	
Total BTEX	<0.300	0.300	04/11/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	04/11/2023	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	04/11/2023	ND	168	84.1	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/11/2023	ND	174	86.9	200	4.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2023	ND					

Surrogate: 1-Chlorooctane 83.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.7 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

H & R ENTERPRISES
 MICHAEL COLLIER
 1010 GAMBLIN ROAD
 HOBBS NM, 88240
 Fax To: NONE

Received: 04/05/2023
 Reported: 04/12/2023
 Project Name: C K 7 FEDERAL #001 (C K)
 Project Number: NOT GIVEN
 Project Location: CIMAREX - EDDY COUNTY, NM

Sampling Date: 04/04/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: S - 2 0-0.5' R (H231602-02)

BTEx 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2023	ND	2.04	102	2.00	0.273	
Toluene*	<0.050	0.050	04/11/2023	ND	2.14	107	2.00	0.221	
Ethylbenzene*	<0.050	0.050	04/11/2023	ND	2.08	104	2.00	0.321	
Total Xylenes*	<0.150	0.150	04/11/2023	ND	6.50	108	6.00	1.49	
Total BTEx	<0.300	0.300	04/11/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	04/11/2023	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	04/11/2023	ND	168	84.1	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/11/2023	ND	174	86.9	200	4.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2023	ND					

Surrogate: 1-Chlorooctane 77.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.7 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

H & R ENTERPRISES
 MICHAEL COLLIER
 1010 GAMBLIN ROAD
 HOBBS NM, 88240
 Fax To: NONE

Received: 04/05/2023
 Reported: 04/12/2023
 Project Name: C K 7 FEDERAL #001 (C K)
 Project Number: NOT GIVEN
 Project Location: CIMAREX - EDDY COUNTY, NM

Sampling Date: 04/04/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: S - 3 0-0.5' R (H231602-03)

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2023	ND	2.04	102	2.00	0.273	
Toluene*	<0.050	0.050	04/11/2023	ND	2.14	107	2.00	0.221	
Ethylbenzene*	<0.050	0.050	04/11/2023	ND	2.08	104	2.00	0.321	
Total Xylenes*	<0.150	0.150	04/11/2023	ND	6.50	108	6.00	1.49	
Total BTEX	<0.300	0.300	04/11/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	04/11/2023	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	04/11/2023	ND	168	84.1	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/11/2023	ND	174	86.9	200	4.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2023	ND					

Surrogate: 1-Chlorooctane 85.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.3 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

H & R ENTERPRISES
 MICHAEL COLLIER
 1010 GAMBLIN ROAD
 HOBBS NM, 88240
 Fax To: NONE

Received: 04/05/2023
 Reported: 04/12/2023
 Project Name: C K 7 FEDERAL #001 (C K)
 Project Number: NOT GIVEN
 Project Location: CIMAREX - EDDY COUNTY, NM

Sampling Date: 04/04/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: S - 4 0-0.5' R (H231602-04)

BTEx 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2023	ND	2.04	102	2.00	0.273	
Toluene*	<0.050	0.050	04/11/2023	ND	2.14	107	2.00	0.221	
Ethylbenzene*	<0.050	0.050	04/11/2023	ND	2.08	104	2.00	0.321	
Total Xylenes*	<0.150	0.150	04/11/2023	ND	6.50	108	6.00	1.49	
Total BTEX	<0.300	0.300	04/11/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	04/11/2023	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	04/11/2023	ND	168	84.1	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/11/2023	ND	174	86.9	200	4.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2023	ND					

Surrogate: 1-Chlorooctane 86.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.6 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

H & R ENTERPRISES
 MICHAEL COLLIER
 1010 GAMBLIN ROAD
 HOBBS NM, 88240
 Fax To: NONE

Received: 04/05/2023
 Reported: 04/12/2023
 Project Name: C K 7 FEDERAL #001 (C K)
 Project Number: NOT GIVEN
 Project Location: CIMAREX - EDDY COUNTY, NM

Sampling Date: 04/04/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: S - 5 0' R (H231602-05)

BTEx 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2023	ND	2.04	102	2.00	0.273	
Toluene*	<0.050	0.050	04/11/2023	ND	2.14	107	2.00	0.221	
Ethylbenzene*	<0.050	0.050	04/11/2023	ND	2.08	104	2.00	0.321	
Total Xylenes*	<0.150	0.150	04/11/2023	ND	6.50	108	6.00	1.49	
Total BTEx	<0.300	0.300	04/11/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	04/11/2023	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	04/11/2023	ND	168	84.1	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/11/2023	ND	174	86.9	200	4.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2023	ND					

Surrogate: 1-Chlorooctane 100 % 48.2-134

Surrogate: 1-Chlorooctadecane 113 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

H & R ENTERPRISES
 MICHAEL COLLIER
 1010 GAMBLIN ROAD
 HOBBS NM, 88240
 Fax To: NONE

Received: 04/05/2023
 Reported: 04/12/2023
 Project Name: C K 7 FEDERAL #001 (C K)
 Project Number: NOT GIVEN
 Project Location: CIMAREX - EDDY COUNTY, NM

Sampling Date: 04/04/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: S - 6 0' R (H231602-06)

BTEx 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2023	ND	2.04	102	2.00	0.273	
Toluene*	<0.050	0.050	04/11/2023	ND	2.14	107	2.00	0.221	
Ethylbenzene*	<0.050	0.050	04/11/2023	ND	2.08	104	2.00	0.321	
Total Xylenes*	<0.150	0.150	04/11/2023	ND	6.50	108	6.00	1.49	
Total BTEX	<0.300	0.300	04/11/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	04/11/2023	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	04/11/2023	ND	168	84.1	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/11/2023	ND	174	86.9	200	4.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2023	ND					

Surrogate: 1-Chlorooctane 99.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 113 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

H & R ENTERPRISES
 MICHAEL COLLIER
 1010 GAMBLIN ROAD
 HOBBS NM, 88240
 Fax To: NONE

Received: 04/05/2023
 Reported: 04/12/2023
 Project Name: C K 7 FEDERAL #001 (C K)
 Project Number: NOT GIVEN
 Project Location: CIMAREX - EDDY COUNTY, NM

Sampling Date: 04/04/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: H - 1 0-0.5' R (H231602-07)

BTEx 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/11/2023	ND	2.04	102	2.00	0.273		
Toluene*	<0.050	0.050	04/11/2023	ND	2.14	107	2.00	0.221		
Ethylbenzene*	<0.050	0.050	04/11/2023	ND	2.08	104	2.00	0.321		
Total Xylenes*	<0.150	0.150	04/11/2023	ND	6.50	108	6.00	1.49		
Total BTEx	<0.300	0.300	04/11/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	04/11/2023	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	04/11/2023	ND	168	84.1	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/11/2023	ND	174	86.9	200	4.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2023	ND					

Surrogate: 1-Chlorooctane 72.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 78.4 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

H & R ENTERPRISES
 MICHAEL COLLIER
 1010 GAMBLIN ROAD
 HOBBS NM, 88240
 Fax To: NONE

Received: 04/05/2023
 Reported: 04/12/2023
 Project Name: C K 7 FEDERAL #001 (C K)
 Project Number: NOT GIVEN
 Project Location: CIMAREX - EDDY COUNTY, NM

Sampling Date: 04/04/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: H - 2 0-0.5' R (H231602-08)

BTEx 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/11/2023	ND	2.04	102	2.00	0.273		
Toluene*	<0.050	0.050	04/11/2023	ND	2.14	107	2.00	0.221		
Ethylbenzene*	<0.050	0.050	04/11/2023	ND	2.08	104	2.00	0.321		
Total Xylenes*	<0.150	0.150	04/11/2023	ND	6.50	108	6.00	1.49		
Total BTEX	<0.300	0.300	04/11/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	04/11/2023	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	04/11/2023	ND	168	84.1	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/11/2023	ND	174	86.9	200	4.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2023	ND					

Surrogate: 1-Chlorooctane 89.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.5 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

H & R ENTERPRISES
 MICHAEL COLLIER
 1010 GAMBLIN ROAD
 HOBBS NM, 88240
 Fax To: NONE

Received: 04/05/2023
 Reported: 04/12/2023
 Project Name: C K 7 FEDERAL #001 (C K)
 Project Number: NOT GIVEN
 Project Location: CIMAREX - EDDY COUNTY, NM

Sampling Date: 04/04/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: H - 3 0-0.5' R (H231602-09)

BTEx 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/11/2023	ND	2.04	102	2.00	0.273		
Toluene*	<0.050	0.050	04/11/2023	ND	2.14	107	2.00	0.221		
Ethylbenzene*	<0.050	0.050	04/11/2023	ND	2.08	104	2.00	0.321		
Total Xylenes*	<0.150	0.150	04/11/2023	ND	6.50	108	6.00	1.49		
Total BTEX	<0.300	0.300	04/11/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	04/11/2023	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	04/11/2023	ND	168	84.1	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/11/2023	ND	174	86.9	200	4.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2023	ND					

Surrogate: 1-Chlorooctane 82.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.6 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

H & R ENTERPRISES
 MICHAEL COLLIER
 1010 GAMBLIN ROAD
 HOBBS NM, 88240
 Fax To: NONE

Received: 04/05/2023
 Reported: 04/12/2023
 Project Name: C K 7 FEDERAL #001 (C K)
 Project Number: NOT GIVEN
 Project Location: CIMAREX - EDDY COUNTY, NM

Sampling Date: 04/04/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: H - 4 0' R (H231602-10)

BTEx 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/11/2023	ND	2.04	102	2.00	0.273		
Toluene*	<0.050	0.050	04/11/2023	ND	2.14	107	2.00	0.221		
Ethylbenzene*	<0.050	0.050	04/11/2023	ND	2.08	104	2.00	0.321		
Total Xylenes*	<0.150	0.150	04/11/2023	ND	6.50	108	6.00	1.49		
Total BTEX	<0.300	0.300	04/11/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	04/11/2023	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	04/11/2023	ND	168	84.1	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/11/2023	ND	174	86.9	200	4.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2023	ND					

Surrogate: 1-Chlorooctane 95.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

H & R ENTERPRISES
 MICHAEL COLLIER
 1010 GAMBLIN ROAD
 HOBBS NM, 88240
 Fax To: NONE

Received: 04/05/2023
 Reported: 04/12/2023
 Project Name: C K 7 FEDERAL #001 (C K)
 Project Number: NOT GIVEN
 Project Location: CIMAREX - EDDY COUNTY, NM

Sampling Date: 04/04/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: H - 5 0-0.5' (H231602-11)

BTEX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/11/2023	ND	2.04	102	2.00	0.273		
Toluene*	<0.050	0.050	04/11/2023	ND	2.14	107	2.00	0.221		
Ethylbenzene*	<0.050	0.050	04/11/2023	ND	2.08	104	2.00	0.321		
Total Xylenes*	<0.150	0.150	04/11/2023	ND	6.50	108	6.00	1.49		
Total BTEX	<0.300	0.300	04/11/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	04/11/2023	ND	432	108	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	04/11/2023	ND	168	84.1	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/11/2023	ND	174	86.9	200	4.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2023	ND					

Surrogate: 1-Chlorooctane 69.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 77.7 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

H & R ENTERPRISES
 MICHAEL COLLIER
 1010 GAMBLIN ROAD
 HOBBS NM, 88240
 Fax To: NONE

Received: 04/05/2023
 Reported: 04/12/2023
 Project Name: C K 7 FEDERAL #001 (C K)
 Project Number: NOT GIVEN
 Project Location: CIMAREX - EDDY COUNTY, NM

Sampling Date: 04/04/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: H - 6 0' R (H231602-12)

BTEx 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2023	ND	2.04	102	2.00	0.273	
Toluene*	<0.050	0.050	04/11/2023	ND	2.14	107	2.00	0.221	
Ethylbenzene*	<0.050	0.050	04/11/2023	ND	2.08	104	2.00	0.321	
Total Xylenes*	<0.150	0.150	04/11/2023	ND	6.50	108	6.00	1.49	
Total BTEX	<0.300	0.300	04/11/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/11/2023	ND	432	108	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	04/11/2023	ND	168	84.1	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/11/2023	ND	174	86.9	200	4.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2023	ND					

Surrogate: 1-Chlorooctane 88.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.6 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

H & R ENTERPRISES
 MICHAEL COLLIER
 1010 GAMBLIN ROAD
 HOBBS NM, 88240
 Fax To: NONE

Received: 04/05/2023
 Reported: 04/12/2023
 Project Name: C K 7 FEDERAL #001 (C K)
 Project Number: NOT GIVEN
 Project Location: CIMAREX - EDDY COUNTY, NM

Sampling Date: 04/04/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: H - 7 0' R (H231602-13)

BTEx 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/11/2023	ND	2.04	102	2.00	0.273		
Toluene*	<0.050	0.050	04/11/2023	ND	2.14	107	2.00	0.221		
Ethylbenzene*	<0.050	0.050	04/11/2023	ND	2.08	104	2.00	0.321		
Total Xylenes*	<0.150	0.150	04/11/2023	ND	6.50	108	6.00	1.49		
Total BTEx	<0.300	0.300	04/11/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	04/11/2023	ND	432	108	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	04/11/2023	ND	168	84.1	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/11/2023	ND	174	86.9	200	4.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2023	ND					

Surrogate: 1-Chlorooctane 92.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

A handwritten signature in black ink, appearing to read "Celey D. Keene", written over a horizontal line.

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: H&R Enterprises		BILL TO										ANALYSIS REQUEST									
Project Manager: Michael Collier		P.O. #:																			
Address:		Company: Cimarex Energy																			
City:		State:		Zip:																	
Phone #:		Fax #:		Attn: Laci Luig																	
Project #:		Project Owner: Cimarex Energy		Address:																	
Project Name: C K 7 Federal #001 (C K)		City:																			
Project Location: Eddy County, NM		State:		Zip:																	
Sampler Name: M. Collier		Phone #:																			
		Fax #:																			

[illegible][illegible][illegible]

† Cardinal cannot accept verbal changes. Please email changes to caley.keene@cardinallabsnm.com



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

[illegible]

Spadeigney
4/10/23

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 212291

CONDITIONS

Operator: CIMAREX ENERGY CO. OF COLORADO 6001 Deauville Blvd, Ste 300N Midland, TX 79706	OGRID: 162683
	Action Number: 212291
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	6/28/2023