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TALON LPE

Remediation and Closure Report

Tomb Raider 1 Central Tank Battery 3
Eddy County, New Mexico
2RP-5346
Talon Project #700794.322.01

Prepared For:

Devon Energy Production Company
6488 Seven Rivers Hwy
Artesia, NM 88210

Prepared By:

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

March 13, 2020

Mr. Jim Amos
Bureau of Land Management
620 East Green Street
Carlsbad, NM 88220

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

Subject: **Remediation and Closure Report**
Tomb Raider 1 CTB 3
Eddy County, New Mexico
2RP-5346

Dear Mr. Amos & Mr. Bratcher,

Devon Energy Production Company (Devon Energy) has contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the above-referenced location. The incident descriptions, soil sampling results, remedial actions, and closure requests are presented herein.

Site Information

The Tomb Raider 1 CTB 3 is located approximately thirty (30) miles southeast of Carlsbad, New Mexico. The legal location for this release is Unit Letter A, Section 1, Township 23 South and Range 31 East in Eddy County, New Mexico. More specifically the latitude and longitude for the release are 32.339989 North and -103.724689 West. A Site Map is presented in Appendix I.

According to the soil survey provided by the United States Department of Agriculture National Resources Conservation Services, the soil in this area is made up of Berino fine sands with 0 to 3 percent slopes. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology is Holocene to middle Pleistocene in age and is comprised of eolian sands and piedmont alluvial deposits. Drainage courses in this area are well drained.

Ground Water and Site Characterization

The New Mexico Office of the State Engineer Database indicates the nearest reported depth to groundwater is 639-feet below ground surface (BGS). See Appendix II for the referenced groundwater depth. This site is located within a low potential Karst area.

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	**639 Feet/BGS**
☐Yes ☒No	Within 300 feet of any continuously flowing watercourse or any other significant watercourse
☐Yes ☒No	Within 200 feet of any lakebed, sinkhole or a playa lake
☐Yes ☒No	Within 300 feet from an occupied permanent residence, school, hospital, institution or church
☐Yes ☒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
☐Yes ☒No	Within 1000 feet of any freshwater well or spring
☐Yes ☒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
☐Yes ☒No	Within 300 feet of a wetland
☐Yes ☒No	Within the area overlying a subsurface mine
☐Yes ☒No	Within an unstable area
☐Yes ☒No	Within a 100-year floodplain

Because the release did not occur in any of these areas and the depth to groundwater is greater than 100-feet deep, based on the site characterization data the clean up criteria for this site is as follows.

Table I
Closure Criteria for Soils Impacted by a Release

Depth below horizontal extents of release to ground water less than 10,000 mg/l TDS	Constituent	Method	Limit
>100 feet	Total Chlorides	EPA 300.0 or SM4500 Cl B	20,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	2,500 mg/kg
	GRO+DRO	EPA SW-846 Method 8015M	1,000 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 March 27, 2019, a seal failure on one of the pumps caused a release of 110 barrels (bbls) of produced water. All fluids stayed inside the engineered lined battery and 110 bbls of produced water were recovered. The site map is presented in Appendix I.

On February 17, 2020, an email was sent to the BLM, NMOCD and Devon Energy giving all parties notification that we would be onsite on the 19th to conduct a liner inspection and obtain background samples.

On February 19, 2020, Talon mobilized personnel to the site and conducted the liner inspection, taking photos for the record. Background samples around the battery were collected to ensure the integrity of the liner was not breached. Sample locations are shown on the attached site plan and the results of our sampling event are presented in the following data table.

Soil Sampling

2-19-20 Soil Sample Laboratory Results

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	DRO + GRO combined = 1000 mg/kg			2500 mg/kg	20,000 mg/kg
S-1	2/19/2020	0-1	ND	ND	ND	ND	ND	ND	432
		2	ND	ND	ND	ND	ND	ND	64
S-2		0-1	ND	ND	ND	ND	ND	ND	480
		2	ND	ND	ND	ND	ND	ND	16
S-3		0-1	ND	ND	ND	ND	ND	ND	32
		2	ND	ND	ND	ND	ND	ND	16
S-4		0-1	0.604	ND	15.1	280	35.2	330.3	112
		2	ND	ND	ND	20.7	ND	20.7	32

ND-Analyte Not Detected

See Appendix V for the complete report of laboratory results.

Closure

Based on this site characterization, liner inspection, and analytical results, we request that no further actions be required, and that closure with regard to the attached incident be granted.

Should you have any questions or if further information is required, please do not hesitate to contact our office at 575-746-8768.

Respectfully submitted,

TALON/LPE

Chris Jones
Project Manager

David J. Adkins
District Manager

Attachments:

Appendix I	Site Maps, Karst Map, TOPO Map & Locator Map
Appendix II	Groundwater Data, FEMA Flood Zone, Soil Survey
Appendix III	Initial and Final C-141's
Appendix IV	Photographic Documentation
Appendix V	Laboratory Results

APPENDIX I

SITE MAP

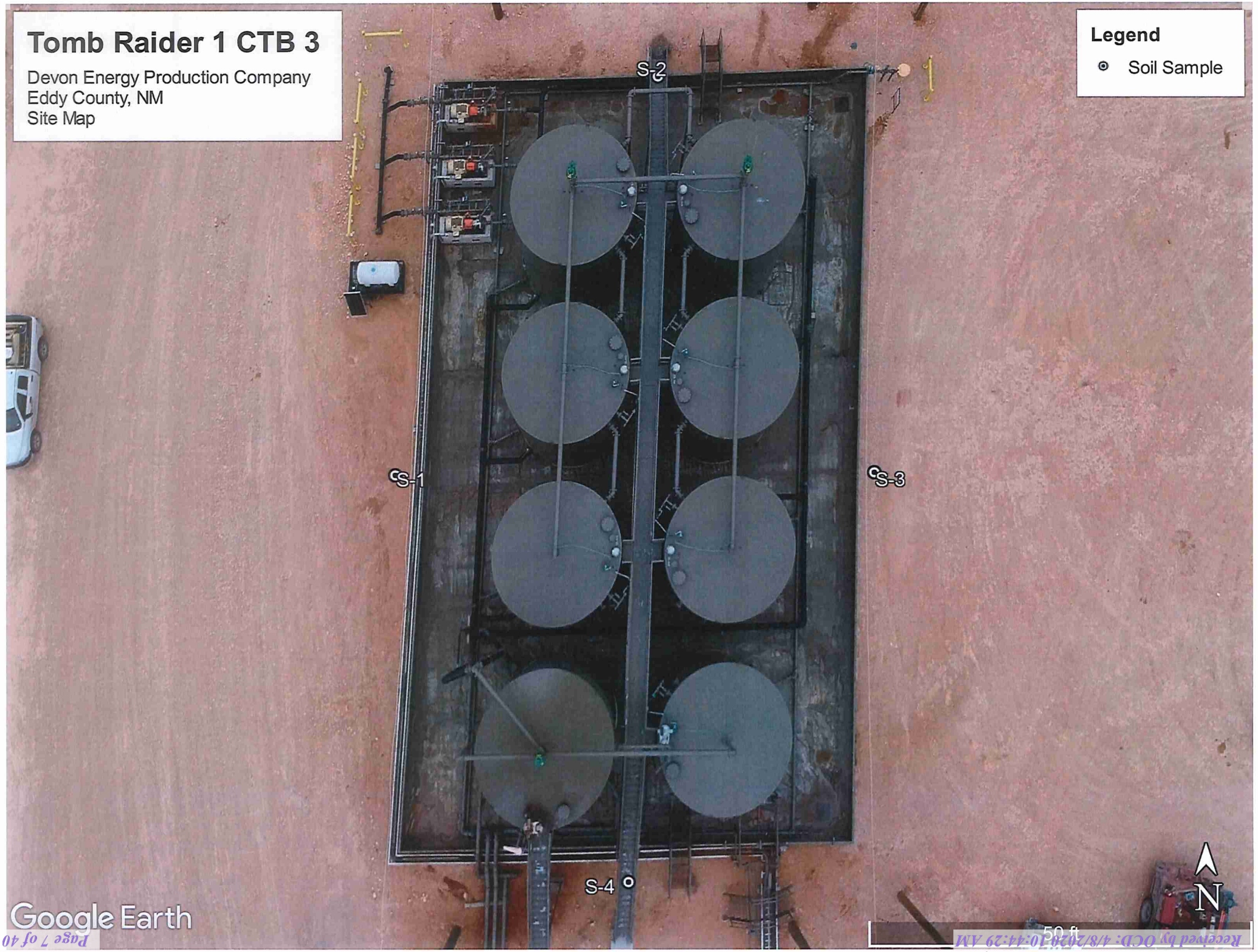
KARST MAP

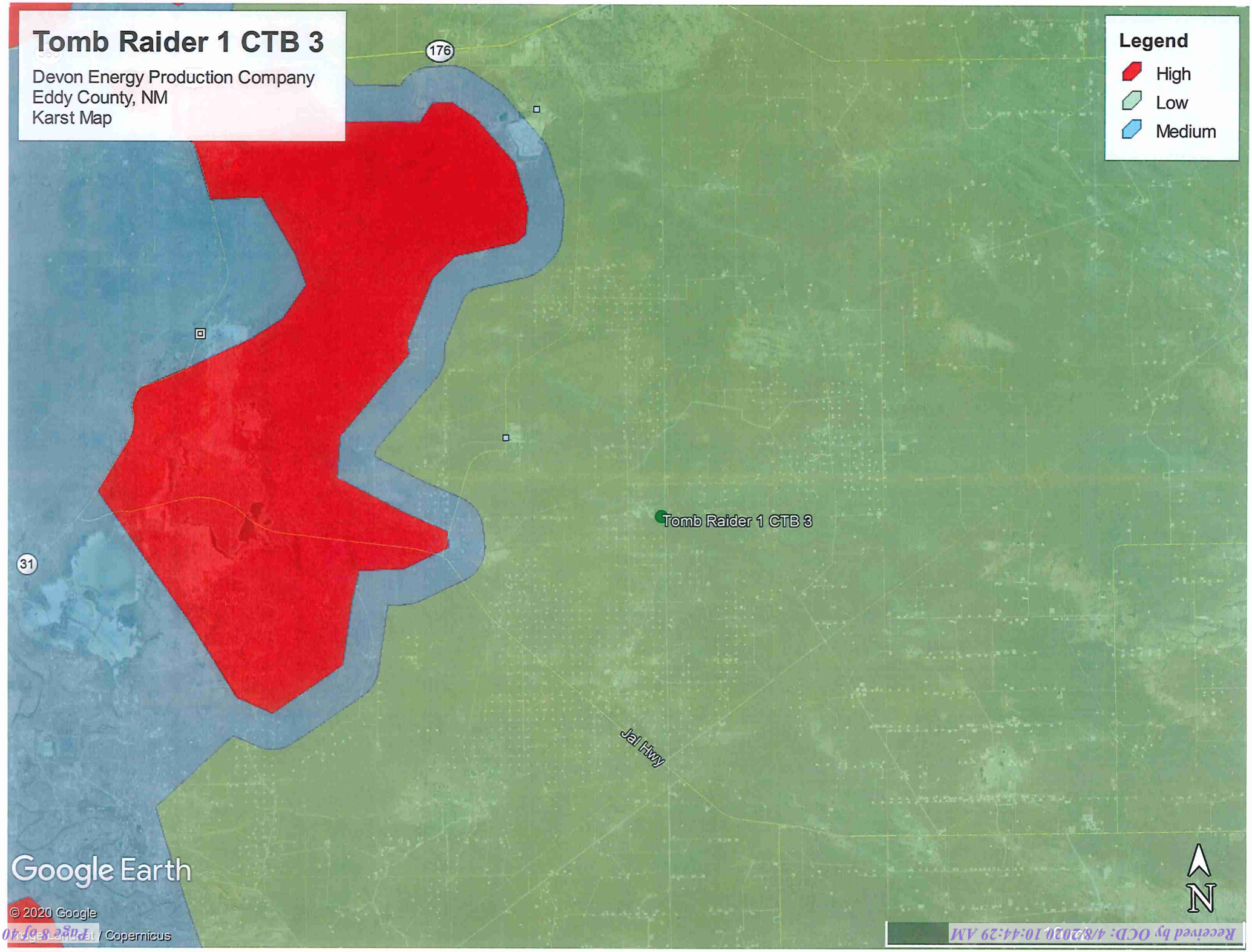
TOPO MAP

LOCATOR MAP

Tomb Raider 1 CTB 3

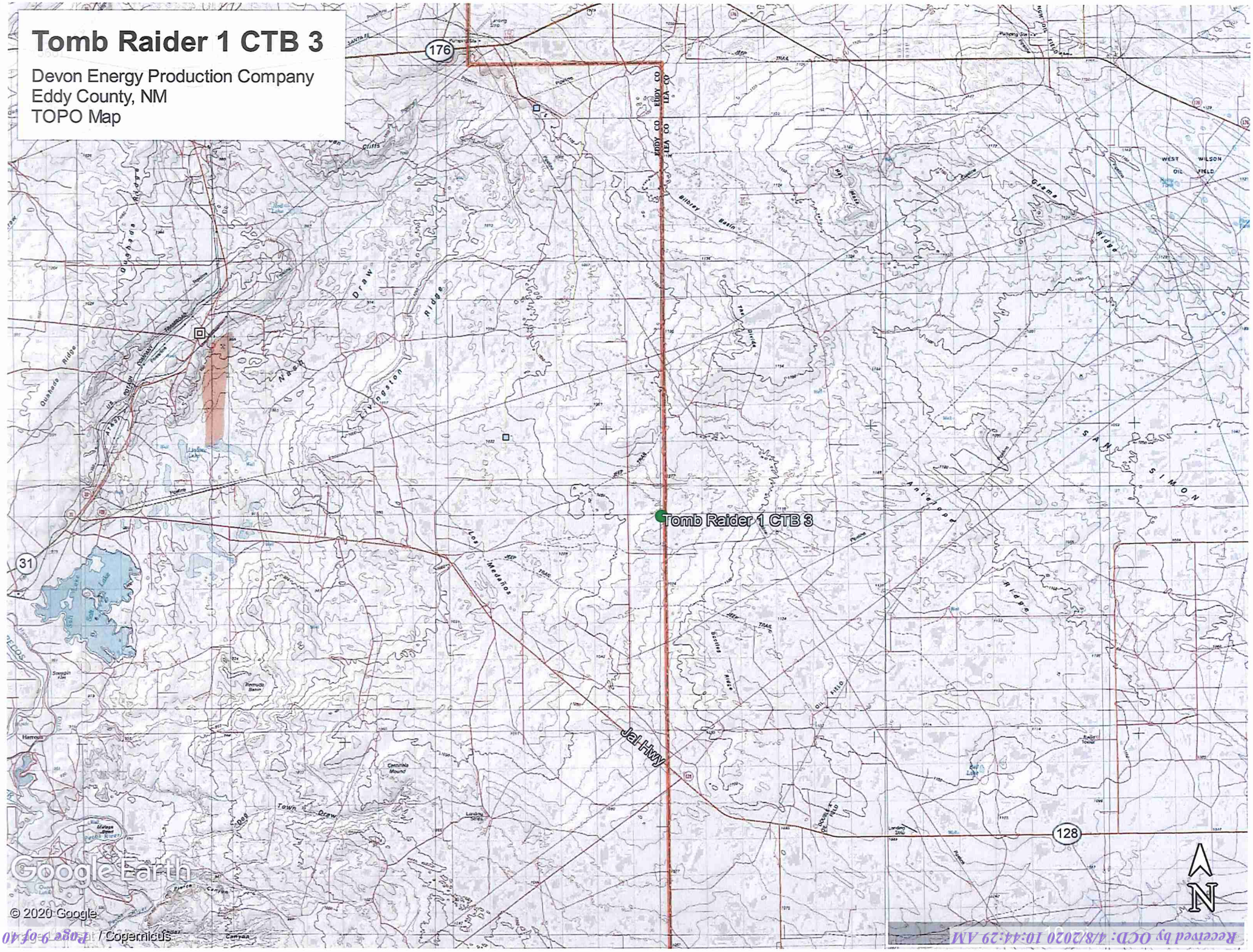
Devon Energy Production Company
Eddy County, NM
Site Map

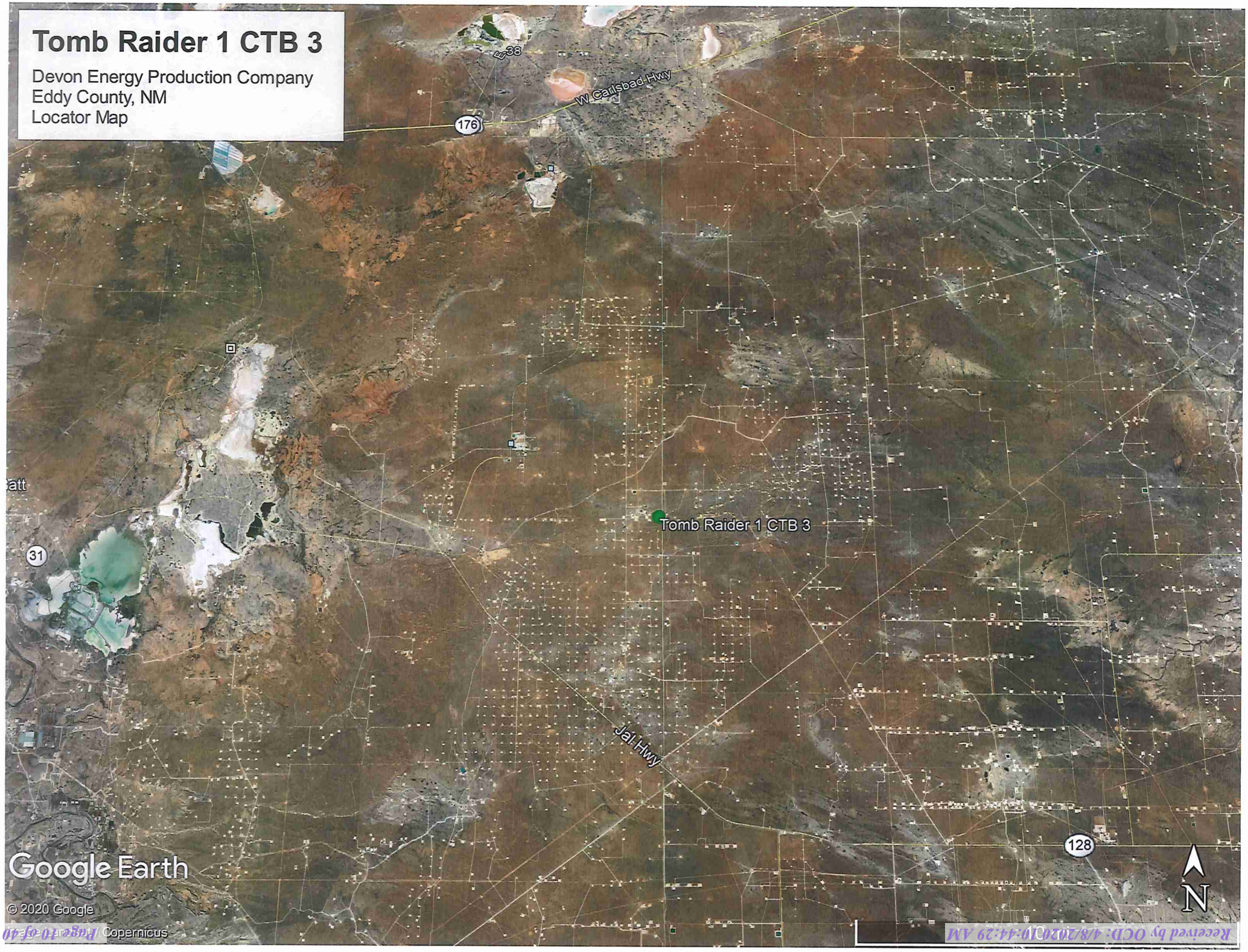




Tomb Raider 1 CTB 3

Devon Energy Production Company
Eddy County, NM
TOPO Map





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	Twns	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 02756		CUB	ED	3	4	4	26	22S	31E	618250	3580606*	2502	1998		
C 03152		CUB	ED	3	4	4	26	22S	31E	618250	3580606*	2502	938		
C 03138		CUB	ED	3	3	3	26	22S	31E	617043	3580591*	3454	750		
C 02939		C	LE	3	3	1	19	22S	32E	620234	3583042*	4211	280		
C 02777		CUB	ED	4	4	4	10	23S	31E	616974	3575662	4398	890		
C 03749 POD1		CUB	ED		2	2	15	23S	31E	616974	3575662	4398	865	639	226
C 02773		CUB	ED	4	1	3	03	23S	31E	615668	3577762*	4481	880		
C 02769 POD2		CUB	ED	4	2	4	33	22S	31E	615261	3579312	4781	753	428	325
C 02687		CUB	ED	4	2	4	33	22S	31E	615246	3579364*	4801	779		
C 02769		CUB	ED	2	2	4	33	22S	31E	615246	3579564*	4827	765		
C 03140		CUB	ED	4	2	4	04	23S	31E	615266	3577758*	4873	684		

Average Depth to Water: **533 feet**

Minimum Depth: **428 feet**

Maximum Depth: **639 feet**

Record Count: 11

UTMNAD83 Radius Search (in meters):

Easting (X): 620018.47 **Northing (Y):** 3578835.92 **Radius:** 5000

***UTM location was derived from PLSS - see Help**

3/2/20 12:50 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

Eddy Area, New Mexico

BB—Berino complex, 0 to 3 percent slopes, eroded

Map Unit Setting

National map unit symbol: 1w43
Elevation: 2,000 to 5,700 feet
Mean annual precipitation: 5 to 15 inches
Mean annual air temperature: 57 to 70 degrees F
Frost-free period: 180 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Berino and similar soils: 60 percent
Pajarito and similar soils: 25 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Berino

Setting

Landform: Fan piedmonts, plains
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Mixed alluvium and/or eolian sands

Typical profile

H1 - 0 to 17 inches: fine sand
H2 - 17 to 58 inches: sandy clay loam
H3 - 58 to 60 inches: loamy sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 40 percent
Salinity, maximum in profile: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 1.0
Available water storage in profile: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: B
Ecological site: Loamy Sand (R042XC003NM)
Hydric soil rating: No

Description of Pajarito

Setting

Landform: Interdunes, plains, dunes
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Parent material: Mixed alluvium and/or eolian sands

Typical profile

H1 - 0 to 9 inches: loamy fine sand
H2 - 9 to 72 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 40 percent
Salinity, maximum in profile: Nonsaline (0.0 to 1.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 1.0
Available water storage in profile: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: Loamy Sand (R042XC003NM)
Hydric soil rating: No

Minor Components

Cacique

Percent of map unit: 4 percent
Ecological site: Sandy (R042XC004NM)
Hydric soil rating: No

Wink

Percent of map unit: 4 percent
Ecological site: Loamy Sand (R042XC003NM)
Hydric soil rating: No

Pajarito

Percent of map unit: 4 percent
Ecological site: Loamy Sand (R042XC003NM)
Hydric soil rating: No

Kermit

Percent of map unit: 3 percent
Ecological site: Deep Sand (R042XC005NM)
Hydric soil rating: No

Data Source Information

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 15, Sep 15, 2019

National Flood Hazard Layer FIRMette

FEMA

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, Area of 1% annual chance flood with average depth less than one foot or with drainag 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
GENERAL STRUCTURES	Channel, Culvert, or Storm Sewer
	Levee, Dike, or Floodwall
OTHER FEATURES	20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
	Coastal Transect
	513 Base Flood Elevation Line (BFE)
	Limit of Study
	Jurisdiction Boundary
	Coastal Transect Baseline
	Profile Baseline
	Hydrographic Feature
MAP PANELS	Digital Data Available
	No Digital Data Available
	Unmapped

N

The pin displayed on the map is an approximat point selected by the user and does not represe 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 3/2/2020 at 2:38:27 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
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 Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Devon Energy Production Company	OGRID 6137
Contact Name Amanda T. Davis	Contact Telephone 575-748-0176
Contact email amanda.davis@dvn.com	Incident # *(assigned by OCD)*
Contact mailing address 6488 Seven Rivers Hwy	

Location of Release Source

Latitude 32.339989 Longitude -103.724689
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Tomb Raider 1 CTB 3	Site Type Oil
Date Release Discovered 3/27/2019	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
A	1	23S	31E	Eddy

Surface Owner: ☐ State ■ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
■ Produced Water	Volume Released (bbls) 110 BBLS	Volume Recovered (bbls) 110 BBLS
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: The seal went out on the pump causing fluid release. All fluid stayed in lined containment. Spill area 90'x55'x1/2"

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? This is considered to be a major release because it is over 25 BBLS.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

- ☒ The source of the release has been stopped.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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: Kendra DeHoyos Title: EHS Associate

Signature: Kendra DeHoyos Date: 4/1/2019

email: kendra.dehoyos@dvn.com Telephone: 575-748-3371

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

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?	639 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ 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)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ 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?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ 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

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: Chris Jones

Title: Project Manager

Signature: _____

Date: 3-5-20

email: cjones@talonlpe.com

Telephone: 575-748-8768

OCD Only

Received by: _____

Date: _____

State of New Mexico
Oil Conservation Division

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: Chris Jones Title: Project Manager

Signature: _____ Date: 3-5-20

email: cjones@talonlpe.com Telephone: 575-748-8768

OCD Only

Received by: _____ Date: _____

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.

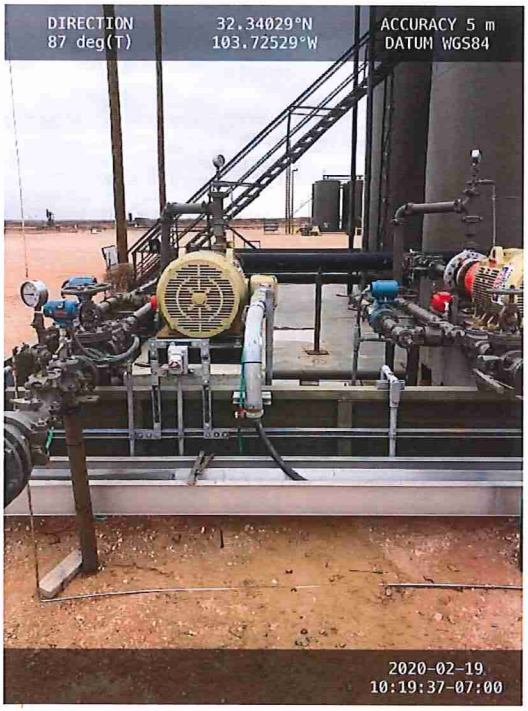
Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

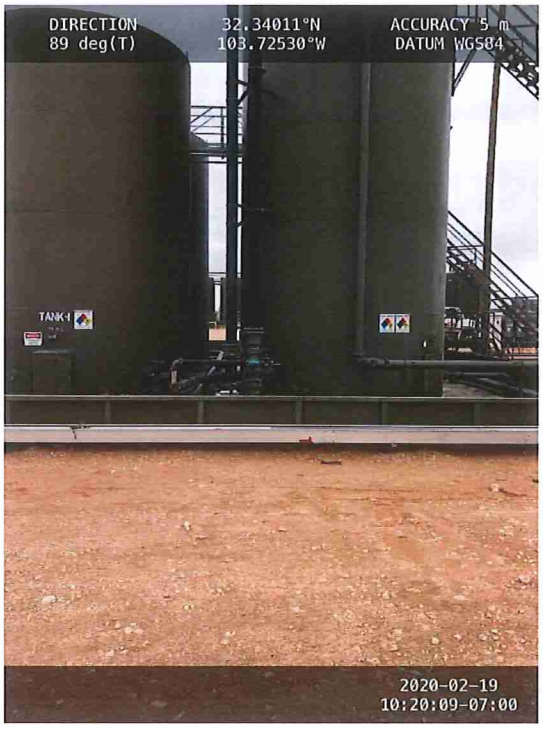
APPENDIX IV

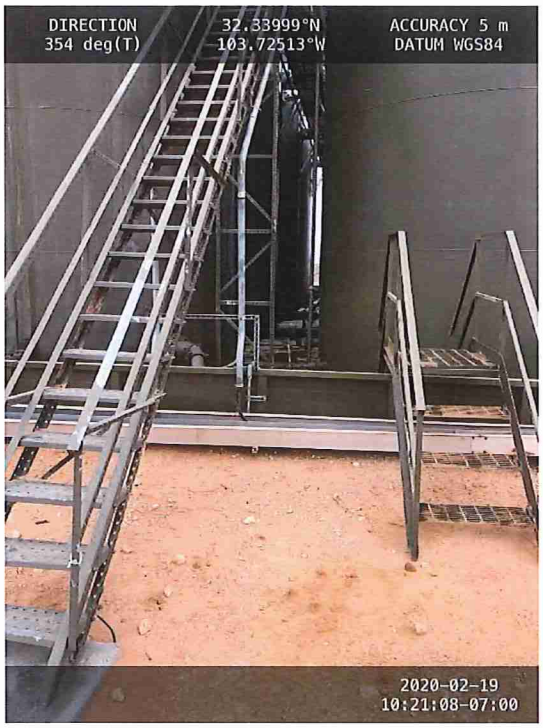
PHOTOGRAPHIC DOCUMENTATION

Geotagged Liner Inspection Photos



Geotagged Liner Inspection Photos





Airial Liner Inspection Photos

Airial Liner Inspection Photos

APPENDIX V

LABORATORY DATA

CARDINAL Laboratories

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

February 27, 2020

CHRIS JONES

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: TOMB RAIDER 1 CTB 3

Enclosed are the results of analyses for samples received by the laboratory on 02/20/20 13:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. 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 accreditated 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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/20/2020	Sampling Date:	02/19/2020
Reported:	02/27/2020	Sampling Type:	Soil
Project Name:	TOMB RAIDER 1 CTB 3	Sampling Condition:	Cool & Intact
Project Number:	700794.322.01	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY		

Sample ID: S-1 0-1' (H000540-01)

BTEX 8021B mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/25/2020	ND	1.94	96.9	2.00	2.22	
Toluene*	<0.050	0.050	02/25/2020	ND	1.95	97.5	2.00	3.30	
Ethylbenzene*	<0.050	0.050	02/25/2020	ND	1.97	98.5	2.00	2.70	
Total Xylenes*	<0.150	0.150	02/25/2020	ND	5.72	95.4	6.00	2.53	
Total BTEX	<0.300	0.300	02/25/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.5 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**432**	16.0	02/24/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/26/2020	ND	195	97.6	200	1.88	
DRO >C10-C28*	<10.0	10.0	02/26/2020	ND	214	107	200	3.72	
EXT DRO >C28-C36	<10.0	10.0	02/26/2020	ND					

Surrogate: 1-Chlorooctane *87.8 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *91.2 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

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

Received:	02/20/2020	Sampling Date:	02/19/2020
Reported:	02/27/2020	Sampling Type:	Soil
Project Name:	TOMB RAIDER 1 CTB 3	Sampling Condition:	Cool & Intact
Project Number:	700794.322.01	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY		

Sample ID: S-1 2' (H000540-02)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/25/2020	ND	1.94	96.9	2.00	2.22	
Toluene*	<0.050	0.050	02/25/2020	ND	1.95	97.5	2.00	3.30	
Ethylbenzene*	<0.050	0.050	02/25/2020	ND	1.97	98.5	2.00	2.70	
Total Xylenes*	<0.150	0.150	02/25/2020	ND	5.72	95.4	6.00	2.53	
Total BTEX	<0.300	0.300	02/25/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.4 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	02/24/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/26/2020	ND	195	97.6	200	1.88	
DRO >C10-C28*	<10.0	10.0	02/26/2020	ND	214	107	200	3.72	
EXT DRO >C28-C36	<10.0	10.0	02/26/2020	ND					

Surrogate: 1-Chlorooctane *92.6 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *95.7 %* *42.2-156*

Cardinal Laboratories

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Analytical Results For:

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

Received:	02/20/2020	Sampling Date:	02/19/2020
Reported:	02/27/2020	Sampling Type:	Soil
Project Name:	TOMB RAIDER 1 CTB 3	Sampling Condition:	Cool & Intact
Project Number:	700794.322.01	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY		

Sample ID: S-2 0-1' (H000540-03)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/25/2020	ND	1.94	96.9	2.00	2.22	
Toluene*	<0.050	0.050	02/25/2020	ND	1.95	97.5	2.00	3.30	
Ethylbenzene*	<0.050	0.050	02/25/2020	ND	1.97	98.5	2.00	2.70	
Total Xylenes*	<0.150	0.150	02/25/2020	ND	5.72	95.4	6.00	2.53	
Total BTEX	<0.300	0.300	02/25/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.7 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**480**	16.0	02/24/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/26/2020	ND	195	97.6	200	1.88	
DRO >C10-C28*	<10.0	10.0	02/26/2020	ND	214	107	200	3.72	
EXT DRO >C28-C36	<10.0	10.0	02/26/2020	ND					

Surrogate: 1-Chlorooctane *92.8 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *95.2 %* *42.2-156*

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Analytical Results For:

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

Received:	02/20/2020	Sampling Date:	02/19/2020
Reported:	02/27/2020	Sampling Type:	Soil
Project Name:	TOMB RAIDER 1 CTB 3	Sampling Condition:	Cool & Intact
Project Number:	700794.322.01	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY		

Sample ID: S-2 2' (H000540-04)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/25/2020	ND	1.94	96.9	2.00	2.22	
Toluene*	<0.050	0.050	02/25/2020	ND	1.95	97.5	2.00	3.30	
Ethylbenzene*	<0.050	0.050	02/25/2020	ND	1.97	98.5	2.00	2.70	
Total Xylenes*	<0.150	0.150	02/25/2020	ND	5.72	95.4	6.00	2.53	
Total BTEX	<0.300	0.300	02/25/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.8 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	02/24/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/26/2020	ND	195	97.6	200	1.88	
DRO >C10-C28*	<10.0	10.0	02/26/2020	ND	214	107	200	3.72	
EXT DRO >C28-C36	<10.0	10.0	02/26/2020	ND					

Surrogate: 1-Chlorooctane *92.8 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *95.0 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

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

Received:	02/20/2020	Sampling Date:	02/19/2020
Reported:	02/27/2020	Sampling Type:	Soil
Project Name:	TOMB RAIDER 1 CTB 3	Sampling Condition:	Cool & Intact
Project Number:	700794.322.01	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY		

Sample ID: S-3 0-1' (H000540-05)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/25/2020	ND	1.94	96.9	2.00	2.22	
Toluene*	<0.050	0.050	02/25/2020	ND	1.95	97.5	2.00	3.30	
Ethylbenzene*	<0.050	0.050	02/25/2020	ND	1.97	98.5	2.00	2.70	
Total Xylenes*	<0.150	0.150	02/25/2020	ND	5.72	95.4	6.00	2.53	
Total BTEX	<0.300	0.300	02/25/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.9 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	02/24/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/26/2020	ND	195	97.6	200	1.88	
DRO >C10-C28*	<10.0	10.0	02/26/2020	ND	214	107	200	3.72	
EXT DRO >C28-C36	<10.0	10.0	02/26/2020	ND					

Surrogate: 1-Chlorooctane *90.1 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *92.0 %* *42.2-156*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/20/2020	Sampling Date:	02/19/2020
Reported:	02/27/2020	Sampling Type:	Soil
Project Name:	TOMB RAIDER 1 CTB 3	Sampling Condition:	Cool & Intact
Project Number:	700794.322.01	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY		

Sample ID: S-3 2' (H000540-06)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/25/2020	ND	1.94	96.9	2.00	2.22	
Toluene*	<0.050	0.050	02/25/2020	ND	1.95	97.5	2.00	3.30	
Ethylbenzene*	<0.050	0.050	02/25/2020	ND	1.97	98.5	2.00	2.70	
Total Xylenes*	<0.150	0.150	02/25/2020	ND	5.72	95.4	6.00	2.53	
Total BTEX	<0.300	0.300	02/25/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.6 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	02/24/2020	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/26/2020	ND	195	97.6	200	1.88	
DRO >C10-C28*	<10.0	10.0	02/26/2020	ND	214	107	200	3.72	
EXT DRO >C28-C36	<10.0	10.0	02/26/2020	ND					

Surrogate: 1-Chlorooctane *90.3 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *94.9 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

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

Received:	02/20/2020	Sampling Date:	02/19/2020
Reported:	02/27/2020	Sampling Type:	Soil
Project Name:	TOMB RAIDER 1 CTB 3	Sampling Condition:	Cool & Intact
Project Number:	700794.322.01	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY		

Sample ID: S-4 0-1' (H000540-07)

BTEX 8021B mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/25/2020	ND	1.94	96.9	2.00	2.22	
Toluene*	<0.050	0.050	02/25/2020	ND	1.95	97.5	2.00	3.30	
Ethylbenzene*	<0.050	0.050	02/25/2020	ND	1.97	98.5	2.00	2.70	
Total Xylenes*	**0.604**	0.150	02/25/2020	ND	5.72	95.4	6.00	2.53	
Total BTEX	**0.604**	0.300	02/25/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	02/24/2020	ND	416	104	400	0.00	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**15.1**	10.0	02/26/2020	ND	195	97.6	200	1.88	
DRO >C10-C28*	**280**	10.0	02/26/2020	ND	214	107	200	3.72	
EXT DRO >C28-C36	**35.2**	10.0	02/26/2020	ND					

Surrogate: 1-Chlorooctane *97.4 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *104 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/20/2020	Sampling Date:	02/19/2020
Reported:	02/27/2020	Sampling Type:	Soil
Project Name:	TOMB RAIDER 1 CTB 3	Sampling Condition:	Cool & Intact
Project Number:	700794.322.01	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY		

Sample ID: S-4 2' (H000540-08)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/25/2020	ND	1.94	96.9	2.00	2.22	
Toluene*	<0.050	0.050	02/25/2020	ND	1.95	97.5	2.00	3.30	
Ethylbenzene*	<0.050	0.050	02/25/2020	ND	1.97	98.5	2.00	2.70	
Total Xylenes*	<0.150	0.150	02/25/2020	ND	5.72	95.4	6.00	2.53	
Total BTEX	<0.300	0.300	02/25/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID 98.7 % 73.3-129

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	02/24/2020	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/26/2020	ND	195	97.6	200	1.88	
DRO >C10-C28*	**20.7**	10.0	02/26/2020	ND	214	107	200	3.72	
EXT DRO >C28-C36	<10.0	10.0	02/26/2020	ND					

Surrogate: 1-Chlorooctane 97.7 % 44.3-144

Surrogate: 1-Chlorooctadecane 99.5 % 42.2-156

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Talon LPF	BILL TO
Project Manager: Chris Jones	P.O. #: 200794.322.01
Address: 408 W Texas Ave	Company: Talon LPE
City: Artesia State: NM Zip: 88210	Attn: Chris Jones
Phone #: 575-746-8768 Fax #:	Address:
Project #: 200794.322.01 Project Owner: Devon Energy	City:
Project Name: Tomb Raider 1 CTB 3	State: Zip:
Project Location: Lea County	Phone #:
Sampler Name: Brandon Sinclair	Fax #:

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	ANALYSIS REQUEST: Total Chlorides	BTEX	TPH EXT
H200540																	
1	S-1 0-1'	G				✓					✓		2-19-20	10:25	✓	✓	✓
2	S-1 2'													10:31			
3	S-2 0-1'													10:44			
4	S-2 2'													10:47			
5	S-3 0-1'													10:50			
6	S-3 2'													10:56			
7	S-4 0-1'													11:03			
8	S-4 2'													11:08			

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 the client for the 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 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 services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 2/20/20	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 13:40		Fax Result: ☑ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: #113 / 5.4°C

Sample Condition: Cool ☑ Yes ☐ No / Intact ☑ Yes ☐ No
CHECKED BY: (Initials)

pg 1 of 1

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

Eddy Area, New Mexico

BB—Berino complex, 0 to 3 percent slopes, eroded

Map Unit Setting

National map unit symbol: 1w43
Elevation: 2,000 to 5,700 feet
Mean annual precipitation: 5 to 15 inches
Mean annual air temperature: 57 to 70 degrees F
Frost-free period: 180 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Berino and similar soils: 60 percent
Pajarito and similar soils: 25 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Berino

Setting

Landform: Fan piedmonts, plains
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Mixed alluvium and/or eolian sands

Typical profile

H1 - 0 to 17 inches: fine sand
H2 - 17 to 58 inches: sandy clay loam
H3 - 58 to 60 inches: loamy sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 40 percent
Salinity, maximum in profile: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 1.0
Available water storage in profile: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e