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TALON LPE

Remediation and Closure Report

Cotton Draw Unit #122H
Eddy County, NM
API# 30-015-38453
2RP-4169

Prepared For:

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

Prepared By:

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

July 16, 2020

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

Subject: **Remediation and Closure Request**
Cotton Draw Unit #122H
API# 30-015-38453
2RP-4169

Dear Mr. Bratcher,

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

Site Information

The Cotton Draw 122 is located approximately forty-six (46) miles southeast of Carlsbad, New Mexico. The legal location for this release is Unit Letter C, Section 35, Township 24 South and Range 31 East in Eddy County, New Mexico. More specifically, the latitude and longitude for the release are 32.1805916 North and -103.7527771 West. A site plan is presented in Appendix I.

According to the soil survey provided by the United States Department of Agriculture Natural Resources Conservation Service, the soil in this area is made up of Berino Complex, 0 to 3 percent slopes. See Appendix II for the referenced soil survey. Per the New Mexico Bureau of Geology and Mineral Resources (USGS), the local surface and shallow geology are eolian and piedmont deposits, Holocene to middle Pleistocene in age. 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 868-feet below ground surface (BGS). According to the USGS, the closest recorded depth to groundwater is greater than 474-feet BGS. The Trend map references groundwater depth to be 400-feet BGS. See Appendix II for the referenced groundwater depth data. This site is not located in a 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	**868 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 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 freshwater 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 in-depth, based on the site characterization data, the cleanup criteria for this site are 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 groundwater 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
	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 April 5, 2017, the packing on the blender began leaking during the well completion operations. 16.1 barrels (bbls) of produced water were lost on location near the wellhead. A vac truck recovered 7 bbls of water. All lost fluids stayed on the location pad. Remediation order 2RP-4169 was assigned to this incident.

Site Assessment

On December 6, 2017, Talon mobilized personnel to begin the site assessment and soil sampling activities for the construction of a work plan. Grab soil samples were collected from around the impacted area utilizing a hand auger.

On March 22, 2018, Talon personnel returned to the location to perform further vertical delineation with assistance of a backhoe.

On April 26, 2018, based on site characterization, Talon submitted a work plan to the BLM (Bureau of Land Management), and the NMOCD respectively which was approved.

On May 05, 2020, Talon personnel and equipment mobilized to the Cotton Draw Unit #122H in order to commence remedation of the impacted site in accordance with the approved work plan. The site was excavated from 1'-6', confirmation soil samples were properly, packaged, preserved, and transported to Hall Laboratories for analyses of Chlorides (EPA 300.0), TPH (EPA 8015M), and BTEX (8021B). The results are recapped in the table below.

Confirmation 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	Field Titrations
NMOCD Table 1 Closure Criteria 19.15.29 NMAC			50 mg/kg	10 mg/kg	DRO + GRO + MRO combined = 100 mg/kg			100 mg/kg	600 mg/kg	Chlorides
S-1	5/5/2020	2'	ND	ND	ND	ND	ND	0	140	
S-1 N.SW		2'	ND	ND	ND	ND	ND	0	460	
S-1 E.SW		2'	ND	ND	ND	ND	ND	0	170	
S-2	5/5/2020	6'	ND	ND	ND	ND	ND	0	210	
S-2 S.SW		6'	ND	ND	ND	ND	ND	0	310	
S-3	5/5/2020	1'	ND	ND	ND	ND	ND	0	ND	
S-3 W.SW		1'	ND	ND	ND	17	ND	17	110	
S-7	5/5/2020	6'	ND	ND	ND	30	ND	30	100	
S-7 N.SW		6'	ND	ND	ND	ND	ND	0	370	
S-8	5/5/2020	1'	ND	ND	ND	ND	ND	0	68	
S-8 W.SW		1'	ND	ND	ND	33	ND	33	ND	
S-9	5/5/2020	2'	ND	ND	ND	ND	ND	0	ND	
S-9 S.SW		2'	ND	ND	ND	ND	ND	0	ND	
Stockpile1	4/29/2020	Composite	NT	NT	NT	NT	NT	0	ND	35.45
Stockpile2	5/12/2020	Composite	NT	NT	NT	NT	NT	0	NT	361.59

ND- Analyte Not Detected
NT- Analyte Not Tested

A complete laboratory report can be found in Appendix IV.

Remedial Actions

- The impacted soil in the vicinity of S-1 was excavated to a depth of 2-feet deep. Sidewall samples were collected and the results were below closure criteria

- The impacted soil in the vicinity of S-2 was managed as follows: The material from 0-2.5-feet BGS was excavated and stockpiled. The impacted material from 2.5-6-feet was excavated and transported to disposal. The stockpiled material and sidewalls were sampled, and results were below closure criteria. The stockpiled material was used as part of the backfill material.

- The impacted area in the vicinity of S-3 was excavated to a depth of 1-foot BGS. Sidewall sample results were below the closure criteria.

- The excavated soil was transported to Lea Land, LLC, a NMOCD approved soil waste disposal facility.

- The excavated area was backfilled with clean caliche, machine compacted, and contoured to match the surrounding location.

Closure

Based on this site characterization, remedial actions and confirmation 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

Rebecca Pons
Project Manager

Attachments:

Appendix I Site Map, Karst Map, TOPO Map & Locator Map
Appendix II Soil Survey, Groundwater Data & FEMA Flood Zone
Appendix III Initial, Final C-141 & Final C-141
Appendix IV Photographic Documentation
Appendix V Approved Work Plan
Appendix VI Laboratory Data

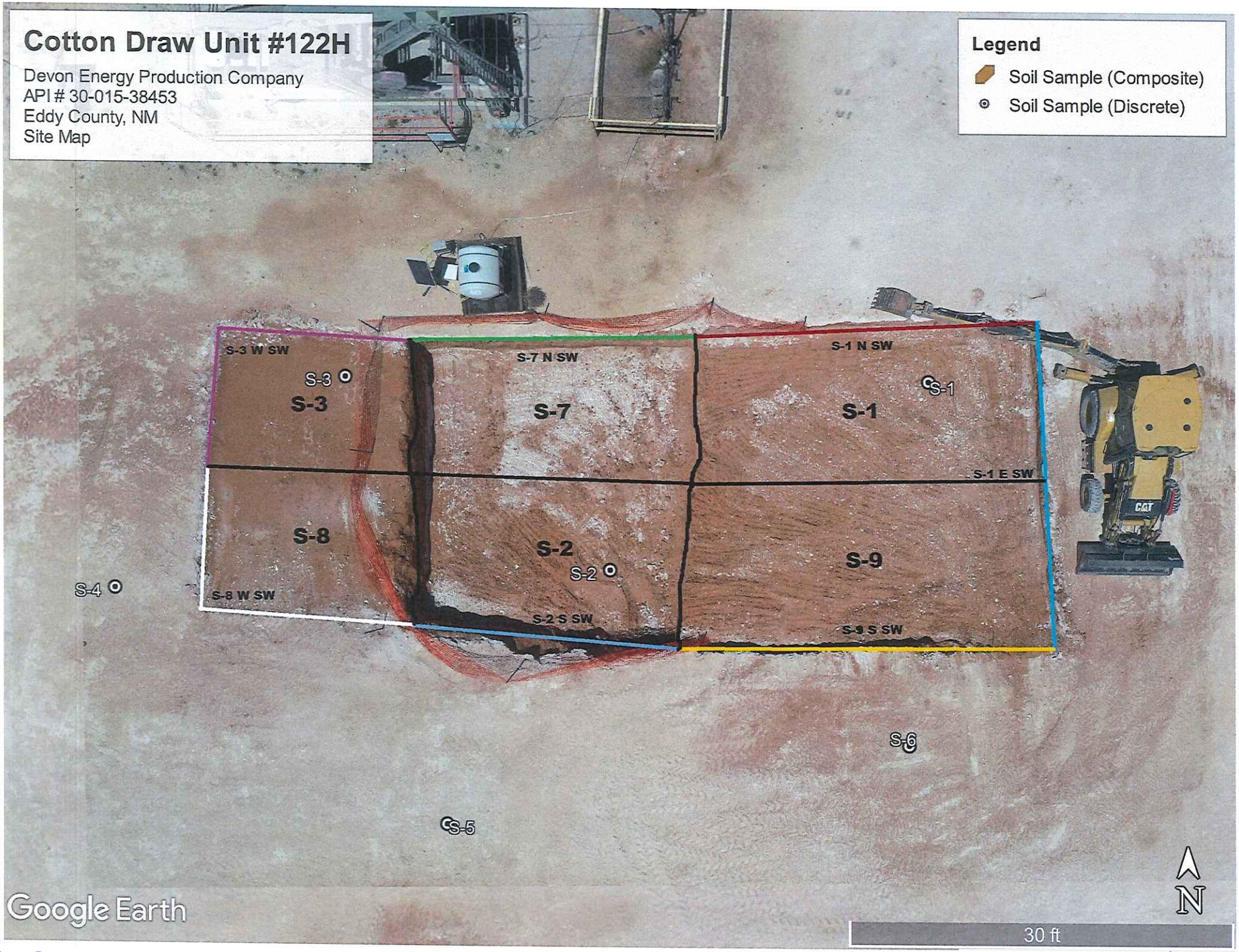
APPENDIX I

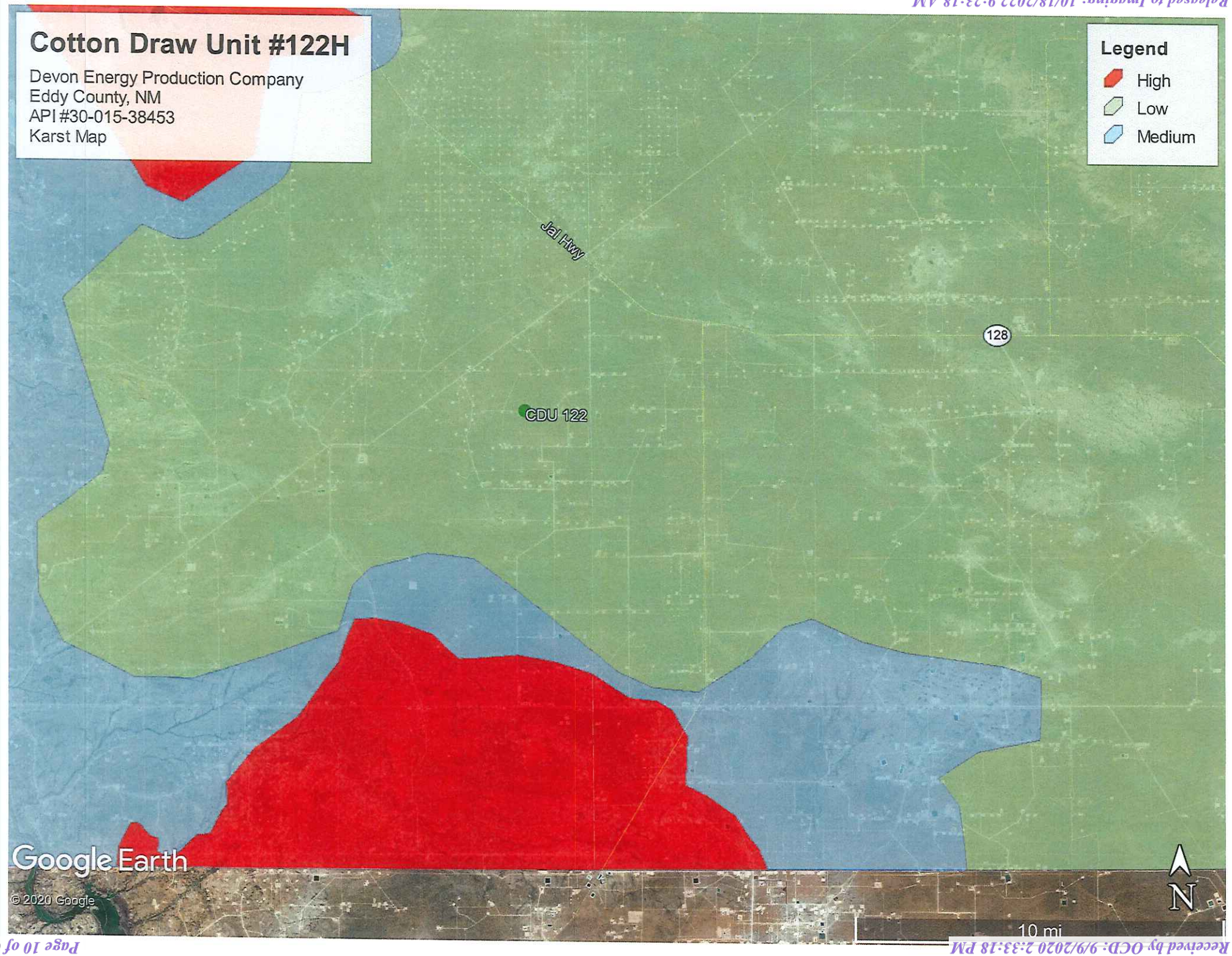
SITE MAP

KARST MAP

TOPO MAP

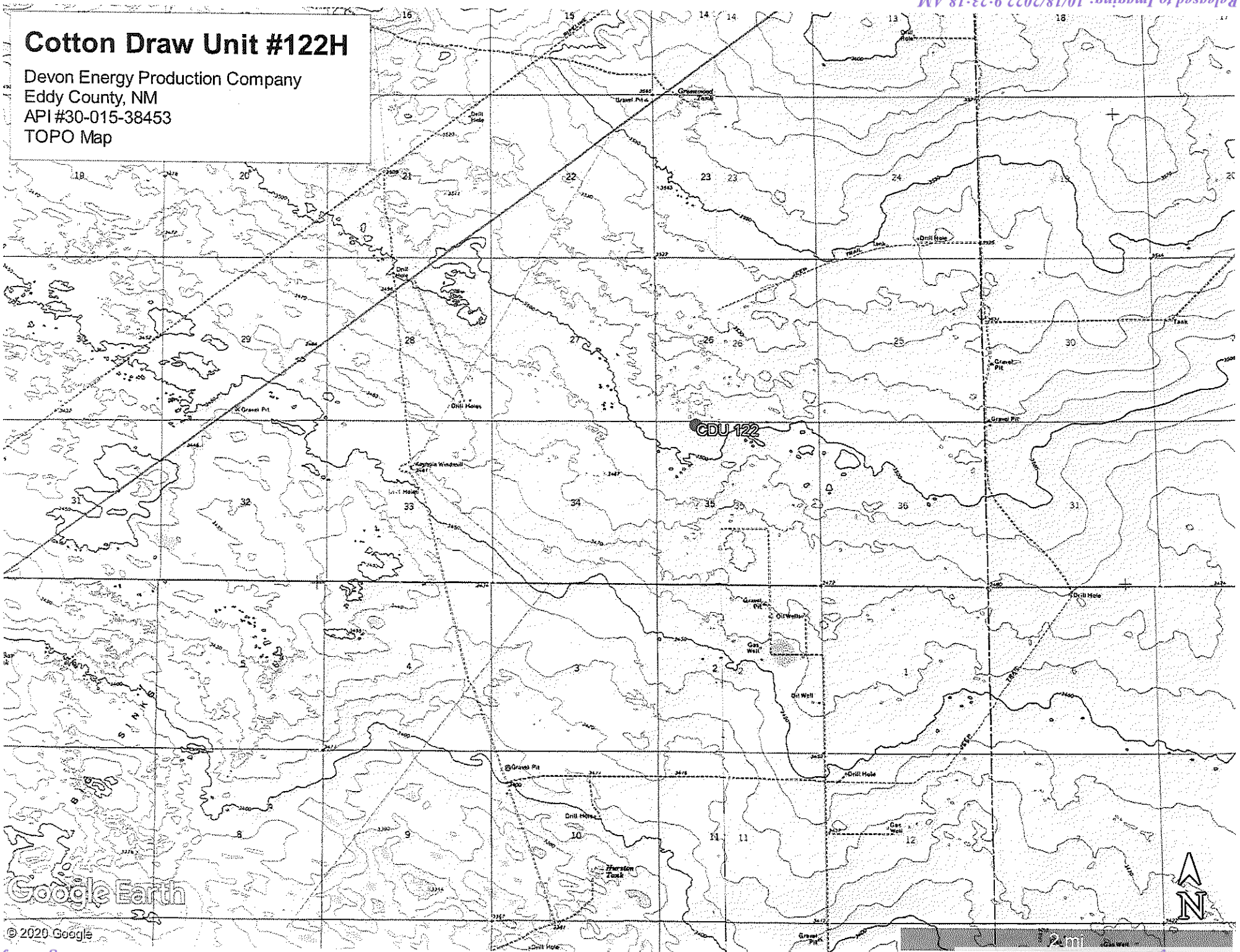
LOCATION MAP





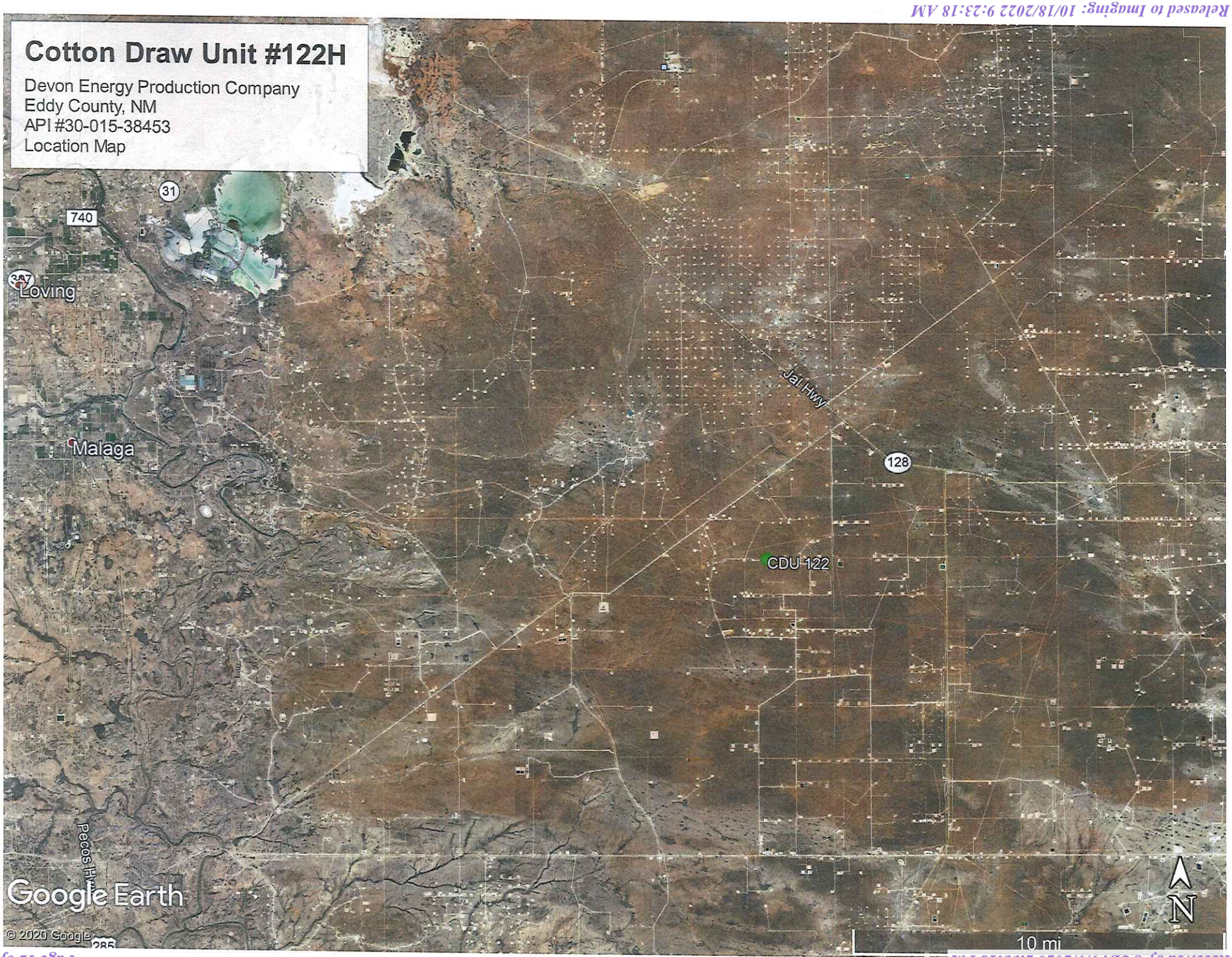
Cotton Draw Unit #122H

Devon Energy Production Company
Eddy County, NM
API #30-015-38453
TOPO Map



Cotton Draw Unit #122H

Devon Energy Production Company
Eddy County, NM
API #30-015-38453
Location 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	Twn	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 02574		CUB	ED	1	1	2	02	25S	31E	618092	3559494*	1718			
C 02571		CUB	ED	4	1	2	02	25S	31E	618292	3559294*	1973	860		
C 02572		CUB	ED	4	2	2	02	25S	31E	618695	3559294*	2151	852		
C 02573		CUB	ED	1	4	2	02	25S	31E	618499	3559091*	2240			
C 02569		CUB	ED	4	4	2	02	25S	31E	618699	3558891*	2506	1016		
C 02568		CUB	ED	4	3	1	01	25S	31E	619103	3558892*	2710	1025		
C 04388 POD1		C	ED	3	2	1	23	24S	31E	617546	3564006	2872	910	868	42
C 02570		CUB	ED	4	2	4	02	25S	31E	618704	3558489*	2874	895		
C 03830 POD1		CUB	ED	4	2	4	02	25S	31E	618632	3558432	2899	450		

Average Depth to Water: **868 feet**

Minimum Depth: **868 feet**

Maximum Depth: **868 feet**

Record Count: 9

UTMNAD83 Radius Search (in meters):

Easting (X): 617580.313 **Northing (Y):** 3561134.266 **Radius:** 3000

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

5/11/20 2:43 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

USGS science for a changing world

National Water Information System: Mapper

Sites | Map

Search

Search by Street Address:

Search by Place Name:

Enter Placename

Search by Site Number(s):

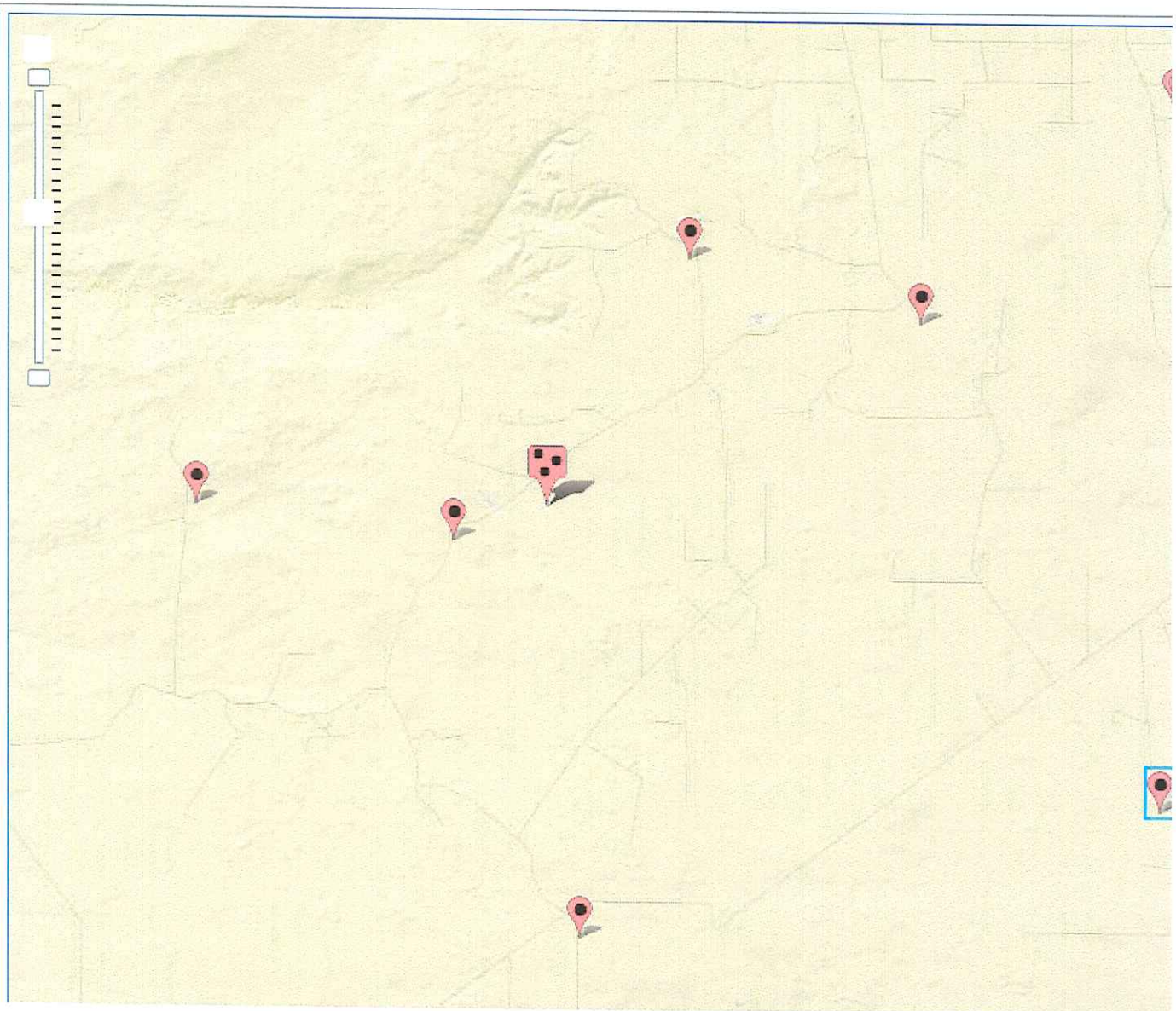
Enter Site Number(s)

Search by State/Territory:

Select an Area

Search by Watershed Region:

Select a Region



USGS science for a changing world

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: United States | GO

Click to hideNews Bulletins

- **Notice** - The USGS Water Resources Mission Area's priority is to maintain the safety and well-being of our communities, including providing critical situational awareness in times of flooding in all 50 U.S. states and additional territories. Our hydrologic monitoring stations continue to send data in near real-time to NWISWeb, and we are continuing critical water monitoring activities to protect life and property on a case-by-case basis. The health and safety of the public and our employees are our highest priorities, and we continue to follow guidance from the White House, the CDC, and state and local authorities.

- Introducing The Next Generation of USGS Water Data for the Nation
- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 321034103465501

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

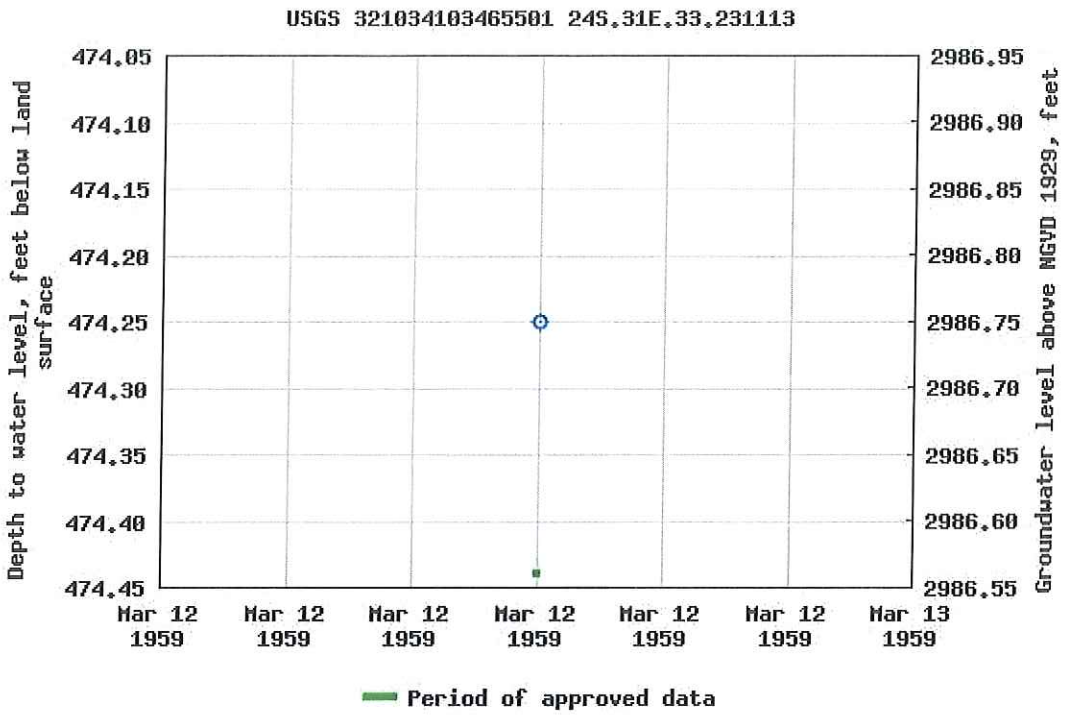
USGS 321034103465501 24S.31E.33.231113

Available data for this site | Groundwater: Field measurements | GO

Eddy County, New Mexico
Hydrologic Unit Code 13070001
Latitude 32°10'38.2", Longitude 103°46'53.0" NAD83
Land-surface elevation 3,461.00 feet above NGVD29
The depth of the well is 740 feet below land surface.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

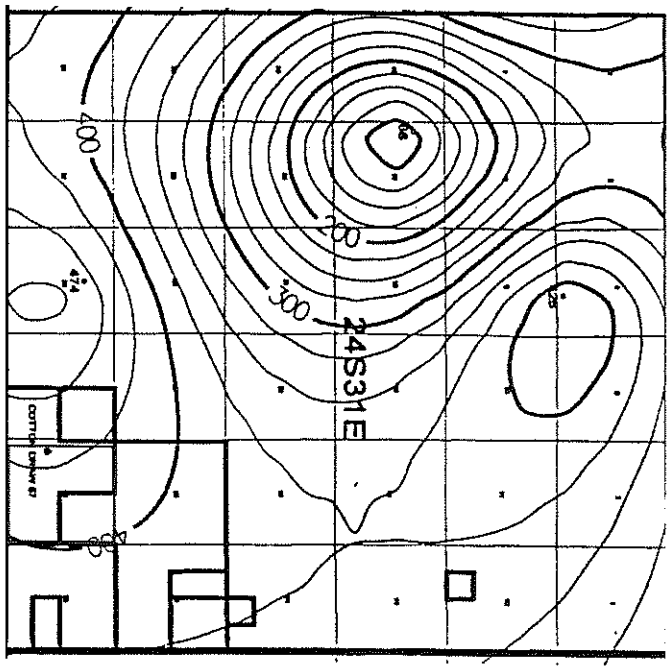


Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2020-05-19 13:00:25 EDT
1.07 0.54 nadww01


400
200
300
24S31E

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

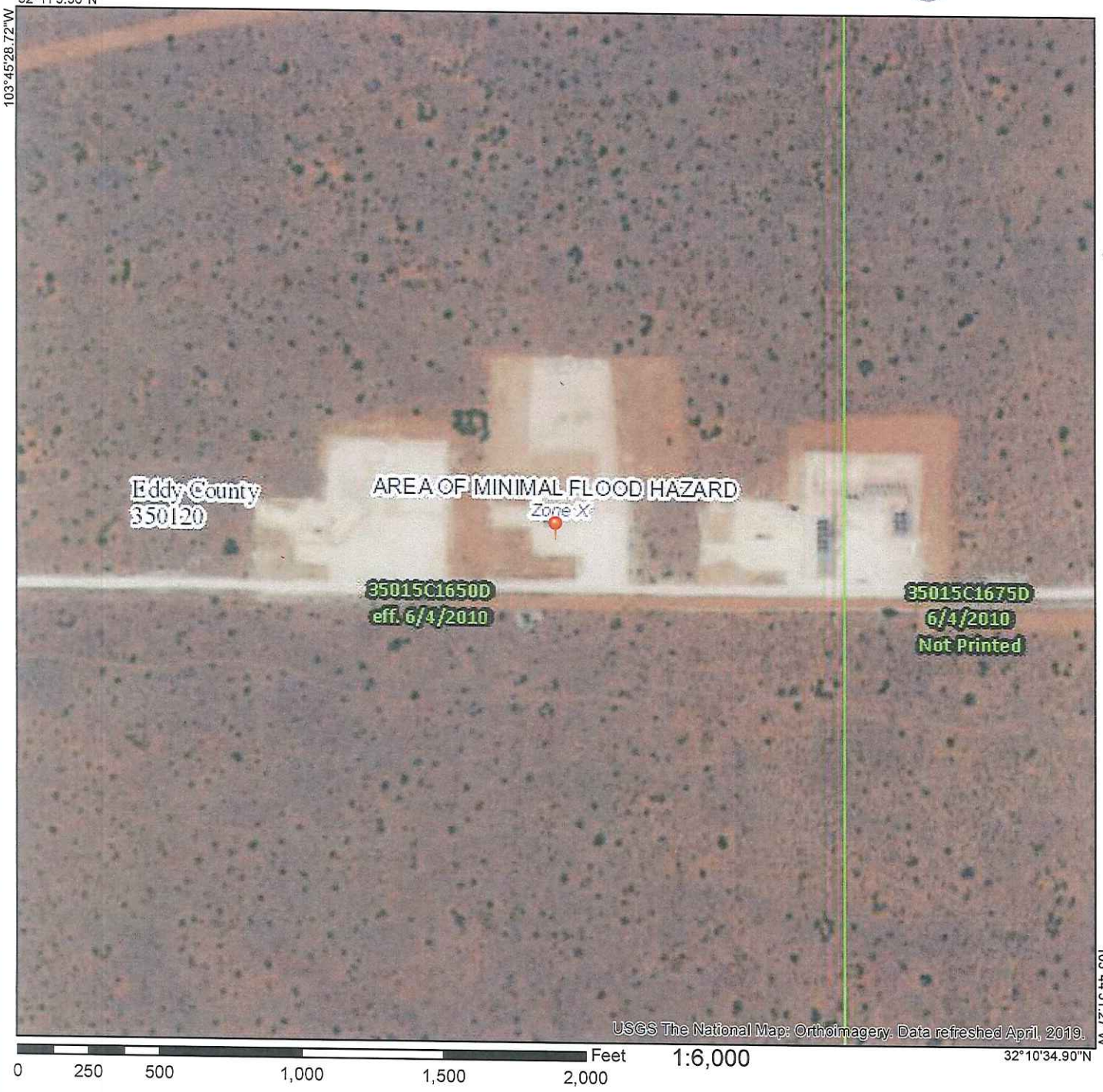
Percent of map unit: 3 percent
Ecological site: Deep Sand (R042XC005NM)
Hydric soil rating: No

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, 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
- 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 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 5/11/2020 at 4:50:53 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

NM OIL CONSERVATION ARTESIA DISTRICT APR 17 2017 RECEIVED

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

NM OIL CONSERVATION ARTESIA DISTRICT APR 17 2017 RECEIVED

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

nAB1710851677

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Devon Energy Production Co LP (6137) 6137		Contact:	Kelly Whitehead Completions Foreman / Devon
Address:	PO Box 250 Artesia, NM 88211	Telephone No.	575-748-3371
Facility Name:	Cotton Draw Unit 122H	Facility Type :	Oil Well

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-38453

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	35	24S	31E	160	NORTH	1345	WEST	EDDY

Latitude: 32.1805916 Longitude: -103.7527771

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 16.1 BBLS	Volume Recovered: 7.0 BBLS
Source of Release: Packing leak on blender	Date and Hour of Occurrence 4/5/2017; 1:58 PM	Date and Hour of Discovery 4/5/2017; 1:58 PM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Shelly Tucker / BLM	
By Whom? Mike Shoemaker, EHS Professional	Date and Hour: 4/11/2017; 12:40 PM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
During completions operations, the packing on the blender started leaking produced water. The blender was shut down and a berm was built to contain the release and prevent any further migration of the release. The packing was replaced.

Describe Area Affected and Cleanup Action Taken.*
16.1 barrels of produced water was spilled to the ground in an uncontained area near the wellhead. A vacuum truck was dispatched and 7.0 barrels of produced water was recovered. All water stayed on the pad location. A remediation contractor will be contacted to assist with delineation and remediation efforts.

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

Signature: Denise Menoud	OIL CONSERVATION DIVISION Approved by Environmental Specialist: Crystal Weaver	
Printed Name: Denise Menoud		
Title: Field Admin Support	Approval Date: 4/18/17	Expiration Date: N/A
E-mail Address: Denise.Menoud@dvn.com	Conditions of Approval: see attached	Attached ☒
Date: 4/11/2017 Phone: 575-746-5544		

* Attach Additional Sheets If Necessary

2RP-4169

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-4169
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?	868 (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.

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NAB1710851677
District RP	2RP-4169
Facility ID	
Application ID	pAB1710851592

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: Tom Bynum Title: EHS Contractor

Signature: Tom Bynum Date: 07/16/2020

email: Tom.Bynum@dvn.com Telephone: 580-748-1613

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.

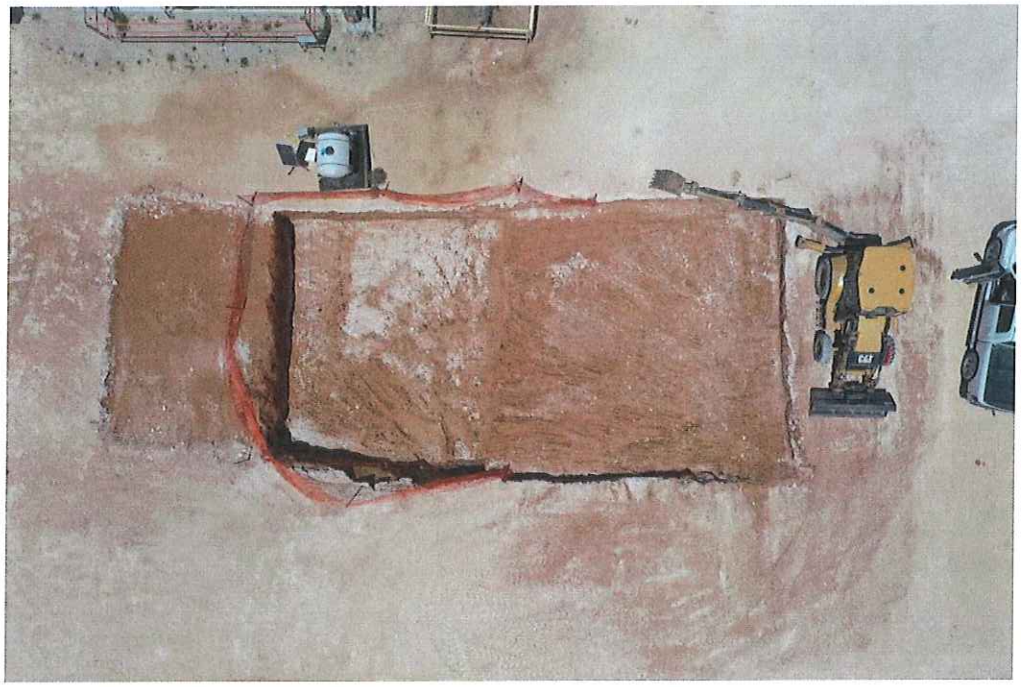
Closure Approved by: Brittany Hall Date: 10/18/2022

Printed Name: Brittany Hall Title: Environmental Specialist

APPENDIX IV

PHOTOGRAPHIC DOCUMENTATION

Photographic Documentation



Completed

APPENDIX V

APPROVED WORK PLAN

Bratcher, Mike, EMNRD

From: Bratcher, Mike, EMNRD
Sent: Thursday, April 26, 2018 9:33 AM
To: Kimberly M. Wilson; Tucker, Shelly
Cc: Weaver, Crystal, EMNRD; Shoemaker, Mike; David J. Adkins
Subject: RE: [EXTERNAL] Cotton Draw Unit #122 * API: #30-015-38453 * 2RP-4169

RE: Devon Energy * Cotton Draw Ut 122H * 2RP-4169 * DOR: 4/5/17

OCD concurs with BLM approval and conditions for remediation of the above referenced release.

Mike Bratcher
NMOCD District 2
811 South First Street
Artesia, NM 88210
575-748-1283 Ext 108

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

From: Tucker, Shelly <stucker@blm.gov>
Sent: Friday, April 20, 2018 9:10 AM
To: Kimberly M. Wilson <kwilson@talonlpe.com>
Cc: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>; Shoemaker, Mike <Mike.Shoemaker@dvn.com>; David J. Adkins <dadkins@talonlpe.com>
Subject: Re: [EXTERNAL] Cotton Draw Unit #122 * API: #30-015-38453 * 2RP-4169

BLM accepts your proposal. Sidewall samples from S1,S2 and S3 will need to be obtained to verify removal of impacted material.

NOTE: *LPC Timing Stipulations are in effect - from* ***March 1st through June 15th****. Please plan remedial activities accordingly. Check for African Rue...treat (before it gets out of control).*

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

Shelly J Tucker

Environmental Protection Specialist
O&G Spill/Release Coordinator

575.234.5905 - Direct
575.361.0084 - Cellular
575.234.6235 - Emergency Spill Number

stucker@blm.gov

Bureau of Land Management
620 E. Greene St

talonlpe.com • 866.742.0742

TALON LPE

Soil Assessment and Remediation Work Plan

Cotton Draw Unit 122H
API #30-015-38453 * **2RP-4169**
Talon Project No. :700794.242.01

Prepared For:

Devon Energy Production
6488 Seven Rivers Hwy
Artesia, New Mexico 88210

Prepared By:

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

April 3, 2018

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

Subject: **Soil Assessment and Remediation Work Plan**
Cotton Draw Unit 122H
API # 30-015-38453 * **2RP-4169**

Dear Mr. Bratcher,

Devon Corporation has contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the above referenced location. The results of our soil assessment and proposed remediation activities consist of the following.

Site Information

The Cotton Draw Unit 122H is located approximately forty-six (46) miles southeast of Carlsbad, New Mexico. The legal location for this release is Unit Letter C, Section 35, Township 24 South and Range 31 East in Eddy County, New Mexico. More specifically the latitude and longitude for the release are 32.1805916 North and -103.7527771 West. A site plan is presented in Appendix I.

According to the soil survey provided by the United States Department of Agriculture Natural Resources Conservation Service, the soil in this area is made up of of Berino complex 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 Pleistocene in age and is comprised of eolian sands and piedmont deposits which include silty soils under lain with hard caliche.

Ground Water and Site Ranking

The New Mexico State Engineer web site indicates that there are 4 wells in the vicinity and they all appear to be dry. The Chevron/Texaco Water Trend Map has the ground water in this area to be greater than 300-feet below ground surface. See Appendix III for the referenced groundwater data.

Therefore the ranking for this site is a **0** based on the following:

Depth to ground water	>100'
Wellhead Protection Area	>1000'
Distance to surface water body	>1000'

Based upon the site ranking of **0**, NMOCD Recommended Remedial Action Levels (RRAL) are 50 mg/kg for BTEX, 10 mg/kg for Benzene and 5,000 mg/kg for TPH. The recommended guidelines for total chlorides is 600 mg/kg.

Incident Description and Initial Remedial Actions

On April 5, 2017, the packing on the blender began leaking during well completion operations. 16.1 barrels of produced water were lost on location near the wellhead. A vac truck recovered 7 barrels of water. All lost fluids stayed on the location pad. A site plan is presented in Appendix I which illustrates the impacted area. See initial C-141 in Appendix II.

On December 5, 2017, Talon mobilized personnel to begin the site assessment and soil sampling activities for the construction of a work plan. Grab soil samples were collected from around the impacted area utilizing a hand auger.

On March 22, 2018, Talon personnel returned to the location to perform further vertical delineation with the assistance of a backhoe.

See Appendix IV for complete report of laboratory results.

Sample ID	Depth (feet)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH EXT (mg/kg)	BTEX (mg/kg)	Chlorides (mg/kg)
S-1	0'	-	-	-	-	3680
	1'	-	-	-	-	784
	2'	-	-	-	-	272
	3'	-	-	-	-	64
	4'	-	-	-	-	176
S-2	0'	-	-	-	-	64
	1'	-	-	-	-	64
	2'	-	-	-	-	320
	3'	-	-	-	-	720
	4'	-	-	-	-	848
	5'	-	-	-	-	912
	7'	-	-	-	-	32
S-3	0'	-	-	-	-	1480
	1	-	-	-	-	48
S-4	0'	-	-	-	-	48
	1'	-	-	-	-	16
	2'	-	-	-	-	48
	3'	-	-	-	-	16
	4'	-	-	-	-	<16.0
S-5	0'	-	-	-	-	80
S-6	0'	-	-	-	-	64
	0.5'	-	-	-	-	160

--Analyte Not Tested

Proposed Remedial Actions

- The impacted soil in the vicinity of S-1 will be excavated to a depth of 2-feet deep. A sidewall confirmation sample will be collected from the eastern portion of the excavation to verify all impacted material has been removed.

- The produced water impacts in the vicinity of S-2 will be managed as follows: The soil from 0 - 2.5 feet deep (below RRAL's) will be excavated and stockpiled on location. The impacted material from 2.5 - 6 feet deep will be excavated and transported for disposal. The stockpiled material will then be returned to the open excavation.

- The impacted soil in the vicinity of S-3 be excavated to depth of 1-foot deep.

- All contaminated soil will be transported to Lea Land, LLC, a NMOCD approved disposal facility.

- The excavated area will be backfilled with new caliche. Once the backfilling activities are complete the work area will be machine compacted and contoured to match the surrounding location.

- A final closure report documenting all remedial actions will be provided to the NMOCD Artesia Office along with a Final C-141 Form.

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

Jacob Laird
Environmental Scientist

Kimberly M. Wilson
Project Manager

Attachments:

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

APPENDIX I

SITE MAP

Cotton Draw #122
SS-1
S-2
S-3
S-4
SS-5
SS-6
Google Earth
100 ft
N

APPENDIX II

INITIAL 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

NM OIL CONSERVATION ARTESIA DISTRICT APR 17 2017 RECEIVED

State of New Mexico
Energy Minerals and Natural Resources

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

NM OIL CONSERVATION ARTESIA DISTRICT APR 17 2017 RECEIVED

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

nAB1710851677

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Devon Energy Production Co LP (6137) 6137		Contact:	Kelly Whitehead Completions Foreman / Devon
Address:	PO Box 250 Artesia, NM 88211	Telephone No.	575-748-3371
Facility Name:	Cotton Draw Unit 122H	Facility Type :	Oil Well

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-38453

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	35	24S	31E	160	NORTH	1345	WEST	EDDY

Latitude: 32.1805916 Longitude: -103.7527771

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 16.1 BBLS	Volume Recovered: 7.0 BBLS
Source of Release: Packing leak on blender	Date and Hour of Occurrence 4/5/2017; 1:58 PM	Date and Hour of Discovery 4/5/2017; 1:58 PM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Shelly Tucker / BLM	
By Whom? Mike Shoemaker, EHS Professional	Date and Hour: 4/11/2017; 12:40 PM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
During completions operations, the packing on the blender started leaking produced water. The blender was shut down and a berm was built to contain the release and prevent any further migration of the release. The packing was replaced.

Describe Area Affected and Cleanup Action Taken.*
16.1 barrels of produced water was spilled to the ground in an uncontained area near the wellhead. A vacuum truck was dispatched and 7.0 barrels of produced water was recovered. All water stayed on the pad location. A remediation contractor will be contacted to assist with delineation and remediation efforts.

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

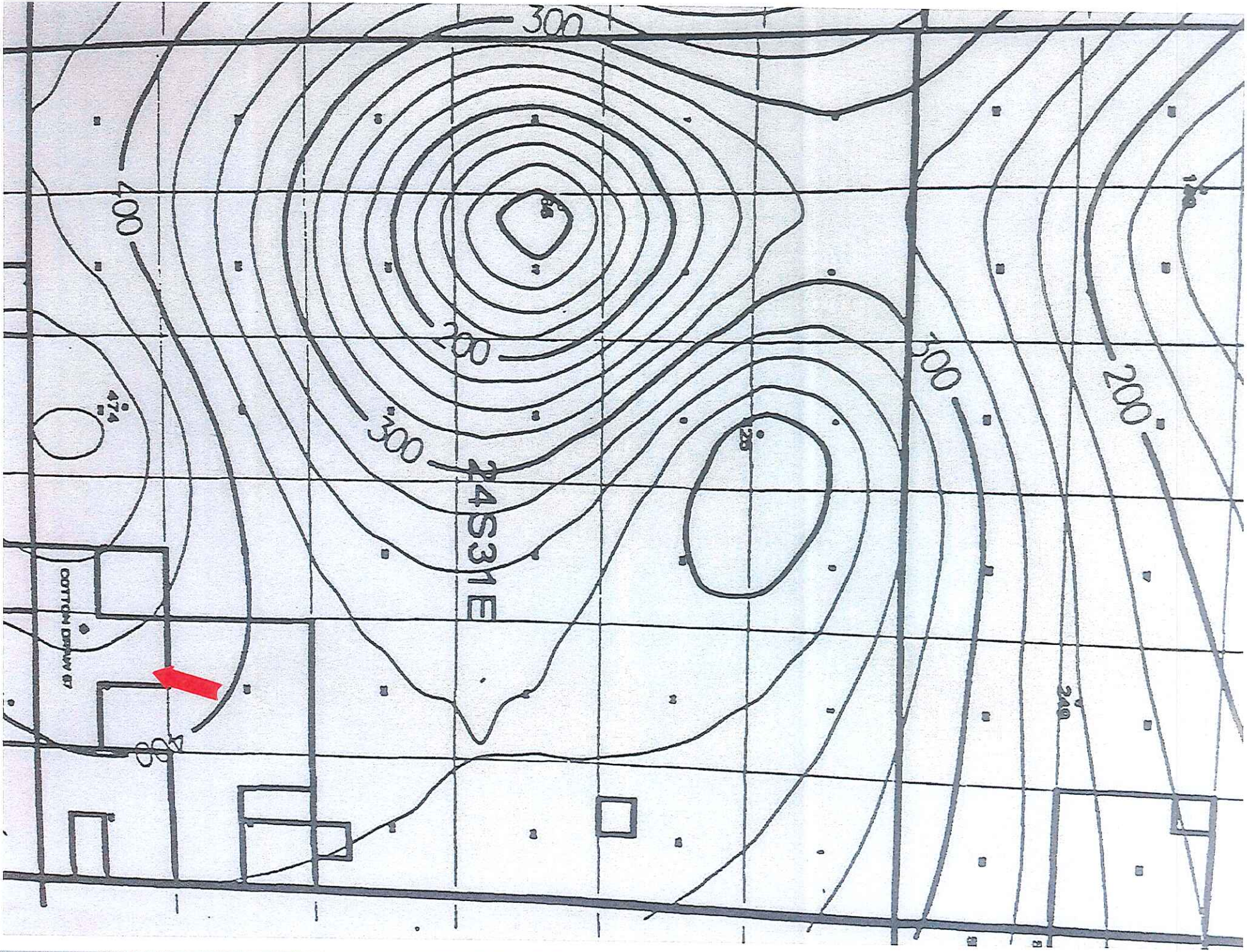
Signature: Denise Menoud	OIL CONSERVATION DIVISION
Printed Name: Denise Menoud	Approved by Environmental Specialist: Crystal Weaver
Title: Field Admin Support	Approval Date: 4/18/17 Expiration Date: N/A
E-mail Address: Denise.Menoud@dvn.com	Conditions of Approval: see attached Attached ☒
Date: 4/11/2017 Phone: 575-746-5544	

* Attach Additional Sheets If Necessary

2RP-4169

APPENDIX III

GROUNDWATER DATA


300
400
200
300
24S 31E
500
200
474
COTTON DRAW ST
240

APPENDIX IV

LABORATORY RESULTS

CARDINAL Laboratories

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

March 29, 2018

KIMBERLY WILSON

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: COTTON DRAW #122

Enclosed are the results of analyses for samples received by the laboratory on 03/26/18 13:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. 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
KIMBERLY WILSON
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received:	03/26/2018	Sampling Date:	03/22/2018
Reported:	03/29/2018	Sampling Type:	Soil
Project Name:	COTTON DRAW #122	Sampling Condition:	** (See Notes)
Project Number:	700794.242.01	Sample Received By:	Tamara Oldaker
Project Location:	DEVON- EDDY CO NM		

Sample ID: S-2 5.0 (H800857-01)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**912**	16.0	03/27/2018	ND	448	112	400	0.00	

Sample ID: S-2 7.0 (H800857-02)

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	03/27/2018	ND	448	112	400	0.00	

Sample ID: S-3 1.0 (H800857-05)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	03/27/2018	ND	448	112	400	0.00	

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

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

Page 1 of 2

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

Company Name: Talon/LPE	BILL TO
Project Manager: Kimberly Wilson	P.O. #:
Address: 408 W. Texas Ave.	Company: Talon/LPE
City: Artesia State: NM Zip: 88210	Attn:
Phone #: 575-746-8768 Fax #: 575-746-8905	Address:
Project #: 700794.2420 Project Owner: Devon	City:
Project Name: Cotton Draw 122	State: Zip:
Project Location: Eddy Cty	Phone #:
Sampler Name: Kim Wilson	Fax #:

ANALYSIS REQUEST

Chlorides

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
H8DD857		G												
1	S-2 5.0					/						/	3/22/16	
2	S-2 7.0													
3	S-2 9.0													
4	S-2 R 11.0													
5	S-3 1.0													
6	S-3 2.0													
7	S-3 3.0													
8	S-3 4.0													
9	S-3 5.0													
10	S-3 7.0													

Relinquished By: Kim Wilson	Date: 3/26/16	Received By: Tamara Oldaker	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 1:25		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: Stop test @ 250 total cl
	Time:		

Delivered By: (Circle One) Sampler - UPS - Bus - Other: 7.9°c / 7.8°c

Sample Condition: Cool ☐ Yes ☐ No; Intact ☑ Yes ☐ No

CHECKED BY: (Initials) JA

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

Corrected -.05°c

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 2 of 2

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

		BILL TO	
Company Name:	Talon/LPE	P.O. #:	
Project Manager:	Kimberly Wilson	Company:	Talon/LPE
Address:	408 W. Texas Ave.	Attn:	
City:	Artesia State: NM Zip: 88210	Address:	
Phone #:	575-746-8768 Fax #: 575-746-8905	City:	
Project #:	700794.242.01 Project Owner: Devon	State:	Zip:
Project Name:	Cotton Draw 122	Phone #:	
Project Location:	Eddy Cty	Fax #:	
Sampler Name:	Kim Wilson		

ANALYSIS REQUEST

Chlorides

FOR LAB USE ONLY				MATRIX							PRESERV.			SAMPLING	
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME
H800857														
11	S-3 9.0 R	G	1			X							3/22/18	

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: 3/26/18	Received By:	
Kim Wilson	Time: 1:25	Tamara Oldaker	
Relinquished By:	Date:	Received By:	
	Time:		

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS: stop test @ 250 total Chlorides

Delivered By: (Circle One)	Sample Condition	CHECKED BY:
Sampler - UPS - Bus - Other: 1.9°c / 1.85°c	Cool: ☐ Yes ☑ No	Intact: ☑ Yes ☐ No

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

corrected 1.05°c

CARDINAL Laboratories

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

December 09, 2017

KIMBERLY WILSON

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: COTTON DRAW #122

Enclosed are the results of analyses for samples received by the laboratory on 12/06/17 16:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is 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
KIMBERLY WILSON
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received:	12/06/2017	Sampling Date:	12/05/2017
Reported:	12/09/2017	Sampling Type:	Soil
Project Name:	COTTON DRAW #122	Sampling Condition:	Cool & Intact
Project Number:	700794.242.01	Sample Received By:	Tamara Oldaker
Project Location:	DEVON- EDDY CO NM		

Sample ID: S-1 0' (H703365-01)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3680**	16.0	12/08/2017	ND	448	112	400	0.00	

Sample ID: S-1 1' (H703365-02)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**784**	16.0	12/08/2017	ND	448	112	400	0.00	

Sample ID: S-1 2' (H703365-03)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**272**	16.0	12/08/2017	ND	448	112	400	0.00	

Sample ID: S-1 3' (H703365-04)

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	12/08/2017	ND	448	112	400	0.00	

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

Received:	12/06/2017	Sampling Date:	12/05/2017
Reported:	12/09/2017	Sampling Type:	Soil
Project Name:	COTTON DRAW #122	Sampling Condition:	Cool & Intact
Project Number:	700794.242.01	Sample Received By:	Tamara Oldaker
Project Location:	DEVON- EDDY CO NM		

Sample ID: S-1 4' (H703365-05)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**176**	16.0	12/08/2017	ND	448	112	400	0.00	

Sample ID: S-2 0' (H703365-06)

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	12/08/2017	ND	448	112	400	0.00	

Sample ID: S-2 1' (H703365-07)

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	12/08/2017	ND	448	112	400	0.00	

Sample ID: S-2 2' (H703365-08)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**320**	16.0	12/08/2017	ND	448	112	400	0.00	

Sample ID: S-2 3' (H703365-09)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**720**	16.0	12/08/2017	ND	448	112	400	0.00	

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

Received:	12/06/2017	Sampling Date:	12/05/2017
Reported:	12/09/2017	Sampling Type:	Soil
Project Name:	COTTON DRAW #122	Sampling Condition:	Cool & Intact
Project Number:	700794.242.01	Sample Received By:	Tamara Oldaker
Project Location:	DEVON- EDDY CO NM		

Sample ID: S-2 4' (H703365-10)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**848**	16.0	12/08/2017	ND	448	112	400	0.00	

Sample ID: S-3 0' R (H703365-11)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1480**	16.0	12/08/2017	ND	448	112	400	0.00	

Sample ID: S-4 0' (H703365-12)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	12/08/2017	ND	448	112	400	0.00	

Sample ID: S-4 1' (H703365-13)

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	12/08/2017	ND	448	112	400	0.00	

Sample ID: S-4 2' (H703365-14)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	12/08/2017	ND	448	112	400	0.00	

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

Received:	12/06/2017	Sampling Date:	12/05/2017
Reported:	12/09/2017	Sampling Type:	Soil
Project Name:	COTTON DRAW #122	Sampling Condition:	Cool & Intact
Project Number:	700794.242.01	Sample Received By:	Tamara Oldaker
Project Location:	DEVON- EDDY CO NM		

Sample ID: S-4 3' (H703365-15)

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	12/08/2017	ND	448	112	400	0.00	

Sample ID: S-4 4' (H703365-16)

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	12/08/2017	ND	448	112	400	0.00	

Sample ID: S-5 0' R (H703365-17)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	12/08/2017	ND	448	112	400	3.64	

Sample ID: S-6 0' (H703365-18)

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	12/08/2017	ND	448	112	400	3.64	

Sample ID: S-6 0.25' R (H703365-19)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	12/08/2017	ND	448	112	400	3.64	

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

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

Page 1 of 2

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

Company Name: Talon/LPE		BILL TO	
Project Manager: Kimberly M. Wilson		P.O. #:	
Address: 408 W. Texas Ave.		Company: Talon/LPE	
City: Artesia	State: NM Zip: 88210	Attn:	
Phone #: 575-746-8768	Fax #: 575-746-8905	Address:	
Project #: 700794.242.01	Project Owner: Devon	City:	
Project Name: Cotton Draw #122		State: Zip:	
Project Location: Eddy Cty		Phone #:	
Sampler Name: Kim Wilson		Fax #:	

FOR LAB USE ONLY				MATRIX							PRESERV.			SAMPLING		ANALYSIS REQUEST
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chlorides
H703365															
1	S-1 0'	G	1			✓						✓	12/5/17		✓
2	S-1 1'	G	1			✓						✓			✓
3	S-1 2'	G	1			✓						✓			✓
4	S-1 3'	G	1			✓						✓			✓
5	S-1 4'	G	1			✓						✓			✓
6	S-2 0'	G	1			✓						✓			✓
7	S-2 1'	G	1			✓						✓			✓
8	S-2 2'	G	1			✓						✓			✓
9	S-2 3'	G	1			✓						✓			✓
10	S-2 4'	G	1			✓						✓			✓

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: Kimberly M. Wilson	Date: 12/6/17 Time: 11:30	Received By: Tamara Oldaker	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: 12/11/17 Time: 4:00	Received By: Brandi Oldaker	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	1.3°C 1.5°C correct	Sample Condition Cool: ☐ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) PO #15

REMARKS:

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

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 2 of 2

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

Company Name: Talon/LPE		BILL TO	
Project Manager: Kimberly M. Wilson		P.O. #:	
Address: 408 W. Texas Ave.		Company: Talon/LPE	
City: Artesia	State: NM Zip: 88210	Attn:	
Phone #: 575-746-8768	Fax #: 575-746-8905	Address:	
Project #: 700794.242.01	Project Owner: Devon	City:	
Project Name: Cotton Draw #122		State: Zip:	
Project Location: Eddy Cty		Phone #:	
Sampler Name: Kim Wilson		Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST: Chlorides
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	
11	S-3 0' R	G				/						/	12/5/17		/
12	S-4 0'	G				/						/			/
13	S-4 1'	G				/						/			/
14	S-4 2'	G				/						/			/
15	S-4 3'	G				/						/			/
16	S-4 4'	G				/						/			/
17	S-5 0' R	G				/						/			/
18	S-6 0'	G				/						/			/
19	S-6 0.25 R	G				/						/			/

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: Kimberly M. Wilson	Date: 12/6/17 Time: 11:30	Received By: Tamara Adcock	
Relinquished By:	Date: 12/6/17 Time: 4:00	Received By: Brandi Adcock	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	1.3°c 1.55°c Correct	Sample Condition Cool: Yes / No Intact: Yes / No	CHECKED BY: (Initials) BO #75

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS:

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

APPENDIX VI

LABORATORY DATA

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 06, 2020

David Adkins
Talon Artesia
408 West Texas Ave
Artesia, NM 88210
TEL:
FAX:

RE: Cotton Draw Unit 122 OrderNo.: 2005014

Dear David Adkins:

Hall Environmental Analysis Laboratory received 1 sample(s) on 5/1/2020 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2005014**
Date Reported: **5/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Project: Cotton Draw Unit 122
Lab ID: 2005014-001 **Matrix:** SOIL

Client Sample ID: Stock Pile
Collection Date: 4/29/2020 10:00:00 AM
Received Date: 5/1/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	5/5/2020 6:19:12 PM	52279

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2005014**

06-May-20

Client: Talon Artesia

Project: Cotton Draw Unit 122

Sample ID: **MB-52279**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **52279**	RunNo: **68664**
Prep Date: **5/5/2020**	Analysis Date: **5/5/2020**	SeqNo: **2375899** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-52279**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **52279**	RunNo: **68664**
Prep Date: **5/5/2020**	Analysis Date: **5/5/2020**	SeqNo: **2375900** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: TALON ARTESIA Work Order Number: 2005014 RcptNo: 1

Received By: Juan Rojas 5/1/2020 9:20:00 AM

Completed By: Desiree Dominguez 5/1/2020 9:15:29 AM

Reviewed By: 5/1/20

Chain of Custody

1. Is Chain of Custody sufficiently complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: JR 5/1/20

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.5	Good	Not Present			

Chain-of-Custody Record

Client: Talon LPE

408 W Texas St

Mailing Address: Artesia, NM 88210

Phone #:

email or Fax#: (575) 746-8905

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 4 DAY

☐ Standard ☐ Rush

Project Name: COTTON DRAW UNIT 122

Project #: 700794.242.02

Project Manager: D. ADKINS

Sampler: MICHAEL COLLIER

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): 1.7-0.2=1.5

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2005014	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
4-29-20	10:00	SOIL	STOCK PILE	GLASS 1	ICE/COOL	-001							✓			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
4/30/20	1300				4/30/20	1300
4/20/20	1900			Courier	5/1/20	9:10

Remarks: Please cc the following via email:
Dadkins@talonlpe.com
Rpons@talonlpe.com
MCollier@talonlpe.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 12, 2020

Chris Jones
Talon Artesia
408 West Texas Ave
Artesia, NM 88210
TEL:
FAX:

RE: Cotton Draw Unit 122H OrderNo.: 2005392

Dear Chris Jones:

Hall Environmental Analysis Laboratory received 13 sample(s) on 5/9/2020 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2005392**
Date Reported: **5/12/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Project: Cotton Draw Unit 122H
Lab ID: 2005392-001 **Matrix:** MEOH (SOIL)

Client Sample ID: S-7 6'
Collection Date: 5/5/2020 1:37:00 PM
Received Date: 5/9/2020 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	100	60		mg/Kg	20	5/9/2020 11:19:02 AM	52364
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	30	9.7		mg/Kg	1	5/11/2020 9:39:08 AM	52380
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/11/2020 9:39:08 AM	52380
Surr: DNOP	109	55.1-146		%Rec	1	5/11/2020 9:39:08 AM	52380
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	5/9/2020 2:28:21 PM	G68773
Surr: BFB	101	66.6-105		%Rec	1	5/9/2020 2:28:21 PM	G68773
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.022		mg/Kg	1	5/9/2020 2:28:21 PM	R68773
Toluene	ND	0.045		mg/Kg	1	5/9/2020 2:28:21 PM	R68773
Ethylbenzene	ND	0.045		mg/Kg	1	5/9/2020 2:28:21 PM	R68773
Xylenes, Total	ND	0.090		mg/Kg	1	5/9/2020 2:28:21 PM	R68773
Surr: 4-Bromofluorobenzene	97.9	80-120		%Rec	1	5/9/2020 2:28:21 PM	R68773

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Project: Cotton Draw Unit 122H
Lab ID: 2005392-002 **Matrix:** MEOH (SOIL)

Client Sample ID: S-7 N SW 6'
Collection Date: 5/5/2020 1:40:00 PM
Received Date: 5/9/2020 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	370	60		mg/Kg	20	5/9/2020 11:56:05 AM	52364
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	5/11/2020 10:03:11 AM	52380
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/11/2020 10:03:11 AM	52380
Surr: DNOP	74.3	55.1-146		%Rec	1	5/11/2020 10:03:11 AM	52380
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	5/9/2020 2:52:16 PM	G68773
Surr: BFB	99.8	66.6-105		%Rec	1	5/9/2020 2:52:16 PM	G68773
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.017		mg/Kg	1	5/9/2020 2:52:16 PM	R68773
Toluene	ND	0.033		mg/Kg	1	5/9/2020 2:52:16 PM	R68773
Ethylbenzene	ND	0.033		mg/Kg	1	5/9/2020 2:52:16 PM	R68773
Xylenes, Total	ND	0.066		mg/Kg	1	5/9/2020 2:52:16 PM	R68773
Surr: 4-Bromofluorobenzene	97.9	80-120		%Rec	1	5/9/2020 2:52:16 PM	R68773

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: S-2 6'
Project: Cotton Draw Unit 122H
Collection Date: 5/5/2020 1:45:00 PM
Lab ID: 2005392-003 **Matrix:** MEOH (SOIL) **Received Date:** 5/9/2020 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	210	60		mg/Kg	20	5/9/2020 12:08:24 PM	52364
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	5/11/2020 10:27:04 AM	52380
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/11/2020 10:27:04 AM	52380
Surr: DNOP	75.3	55.1-146		%Rec	1	5/11/2020 10:27:04 AM	52380
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	5/9/2020 3:15:53 PM	G68773
Surr: BFB	99.5	66.6-105		%Rec	1	5/9/2020 3:15:53 PM	G68773
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.017		mg/Kg	1	5/9/2020 3:15:53 PM	R68773
Toluene	ND	0.035		mg/Kg	1	5/9/2020 3:15:53 PM	R68773
Ethylbenzene	ND	0.035		mg/Kg	1	5/9/2020 3:15:53 PM	R68773
Xylenes, Total	ND	0.070		mg/Kg	1	5/9/2020 3:15:53 PM	R68773
Surr: 4-Bromofluorobenzene	96.7	80-120		%Rec	1	5/9/2020 3:15:53 PM	R68773

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: S-2 S SW 6'
Project: Cotton Draw Unit 122H
Collection Date: 5/5/2020 1:48:00 PM
Lab ID: 2005392-004 **Matrix:** MEOH (SOIL) **Received Date:** 5/9/2020 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	310	60		mg/Kg	20	5/9/2020 12:20:45 PM	52364
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	5/11/2020 10:51:26 AM	52380
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/11/2020 10:51:26 AM	52380
Surr: DNOP	78.9	55.1-146		%Rec	1	5/11/2020 10:51:26 AM	52380
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	5/9/2020 3:39:22 PM	G68773
Surr: BFB	97.0	66.6-105		%Rec	1	5/9/2020 3:39:22 PM	G68773
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.019		mg/Kg	1	5/9/2020 3:39:22 PM	R68773
Toluene	ND	0.039		mg/Kg	1	5/9/2020 3:39:22 PM	R68773
Ethylbenzene	ND	0.039		mg/Kg	1	5/9/2020 3:39:22 PM	R68773
Xylenes, Total	ND	0.077		mg/Kg	1	5/9/2020 3:39:22 PM	R68773
Surr: 4-Bromofluorobenzene	96.2	80-120		%Rec	1	5/9/2020 3:39:22 PM	R68773

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

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

CONDITIONS

Action 10096

CONDITIONS

Operator: Talon LPE 408 W Texas Artesia, NM 88210	OGRID: 329944
	Action Number: 10096
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bhall	None	10/18/2022