Pima Environmental Services, LLC
1601 N. Turner Ste 500
Hobbs, NM 88240
575-964-7740

March 11, 2021

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

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

Re: Site Remediation and Closure Report
Cowpens 28 Fed Com #1
API No. 30-015-36560
GPS: Latitude 32.628799 Longitude -103.871516
Unit J, Section 28, Township 19S, Range 31E
Eddy County, NM
NMOCD Ref. No. NKMW1105941469 (2RP-615)

Dear Mr. Bratcher and Mr. Amos,

Pima Environmental Services, LLC (Pima) has been contracted by Devon Energy Production Company (Devon) to perform a spill assessment and remediation activities for a produced water spill that occurred at the Cowpens 28 Fed Com #1 (Cowpens). The initial C-141 was submitted on February 11, 2011 (Appendix C). This incident was assigned 2RP-615, Incident ID NKMW1105941469 by the New Mexico Oil Conservation Division (NMOCD).

Site Characterization

The Cowpens is located approximately twenty-five (25) miles northeast of Carlsbad, NM. This site is located in Unit J, Section 28, Township 19S, Range 31E, Latitude 32.628799 and Longitude -103.871516, Eddy County, New Mexico as is shown in Figure 1, the Location Map.

Per the New Mexico Bureau of Geology and Mineral Resources, the geology is in the Quaternary Formation-Eolian and piedmont deposits (Holocene to lower Pleistocene)-Interlayered eolian sands and piedmont-slope deposits along the eastern flank of the Pecos River valley, primarily between Roswell and Carlsbad. Typically capped by thin eolian deposits. This area may locally include uppermost Pliocene deposits (QP). The soil in this area is made up of Kermit-Berino fine sands, 0 to 3 percent slopes according to the United States Department of Agriculture Natural Resources Conservation Service soil survey (Appendix B). The drainage courses in this area are well-drained. There is a low potential for karst geology to be present in the area of the Cowpens (Figure 3).

According to the New Mexico Office of the State Engineer, depth to the nearest groundwater in this area is 130 feet below grade surface (BGS). According to the United States Geological Survey (USGS), the nearest groundwater is greater than 100 feet BGS. The closest waterway and is a playa located approximately 4.0 miles to the southwest of this location. See Appendix A for referenced water surveys.

Table 1 NMAC and Closure Criteria 19.15.29					
Depth to Groundwater (Appendix A)	Constituent & Limits				
	Chlorides	Total TPH	GRO+DRO	BTEX	Benzene
130'	20,000 mg/kg	2,500 mg/kg	1,000 mg/kg	50 mg/kg	10 mg/kg
If the release occurred within any of the following areas, the responsible party would treat the release as if the groundwater were less than 50 feet per Rule 19.15.29					
Water Issues				Yes	No
Within **300** feet of any continuously flowing watercourse or any other significant watercourse					x
Within **200** feet of any lakebed, sinkhole, or playa lake (measures from the ordinary high-water mark					x
Within **300** feet from an occupied permanent residence, school, hospital, institution, or church					x
Within **500** feet of a spring or a private, domestic freshwater well used by less than five households for domestic or stock water purposes					x
Within **1000** feet of any freshwater well or spring					x
Within incorporated municipal boundaries or within a defined municipal freshwater well field					x
Within **300** feet of a wetlands					x
Within the area overlying a subsurface mine					x
Within an unstable area (Karst)					x
Within a 100-year floodplain					x

Reference Figure 2 for a TOPO Map.

Release Information

A release of 140 bbls of produced water was discovered on February 9, 2011 at approximately 8:00 a.m., with the apparent source being a drain line connection at the Site. The drain line connection on the fiberglass water tank had frozen overnight and parted (pulled) away from the tank causing the spill.

Site Assessment and Soil Sampling Results

On August 21, 2020, Pima Environmental conducted a site assessment and obtained soil samples to get a more in-depth picture of the horizontal extent of the contamination. Laboratory results of this sampling event can be found in the following data table.

August 21, 2020 Assessment Sampling Event

NMOCD Table 1 Closure Criteria 19.15.29 NMAC (Depth to Groundwater is 50')								
Devon Energy - Cowpens 28 Fed Com 1								
Sample Date 8/21/20		NM Approved Laboratory Results						
Sample ID	Depth (BGS)	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Cl mg/kg
Comp-S-N1	6"	ND	ND	ND	ND	ND	ND	ND
Comp-S-E2	6"	ND	ND	ND	ND	ND	ND	82
Comp-S-S3	6"	ND	ND	ND	ND	ND	ND	ND
Comp-S-W4	6"	ND	ND	ND	ND	ND	ND	ND
BG-N1	6"	ND	ND	ND	ND	ND	ND	ND
BG-E2	6"	ND	ND	**6.7**	**1300**	ND	**1306.7**	**3300**
BG-S3	6"	ND	ND	ND	9.1	ND	9.1	ND
BG-W4	6"	ND	ND	ND	ND	ND	ND	ND

ND- Analyte Not Detected

Remediation Activities

On October 7th, 2020, Pima mobilized personnel and equipment to conduct remedial activities. In the vicinity of BG-E2, we treated the area with a MicroBlaze solution. After 60 days, we returned to the site to assess and collect a confirmation sample of the treated area. The laboratory results of this sampling event can be found in the following data table.

BG-E2 Confirmation Soil Sample Results 12-31-20

NMOCD Table 1 Closure Criteria 19.15.29 NMAC (Depth to Groundwater is 50')								
Devon Energy - Cowpens 28 Fed Com 1								
Sample Date 12/31/20		NM Approved Laboratory Results						
Sample ID	Depth (BGS)	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Cl mg/kg
BG-E2	6"	ND	ND	ND	ND	ND	ND	32

ND- Analyte Not Detected

Complete Laboratory Reports are attached in Appendix C.

Based on the Confirmation sample results, the area was below NMOCD Closure Criteria 19.15.29 NMAC.

See Appendix D for photographic documentation.

Closure Request

After careful review, Pima requests that this Incident ID NKMW 1105941469 (2RP-615), be closed. Devon has complied with the applicable closure requirements set forth in rule 19.15.19.12 NMAC.

Should you have any questions or need additional information, please feel free to contact Tom Bynum at 580-748-1613 or tom@pimaoil.com.

Respectfully,

Tom Bynum

Tom Bynum
Environmental Project Manager
Pima Environmental Services, LLC

Attachments

Figures:
1- Location Map
2- TOPO Map
3- Karst Map
4- Site Map

Appendices:
Appendix A - Referenced Water Surveys
Appendix B - Soil Survey and Geological Data
Appendix C - C-141's
Appendix D - Photographic Documentation
Appendix E - Laboratory Reports

Pima Environmental Services

Figures:

1-Location Map

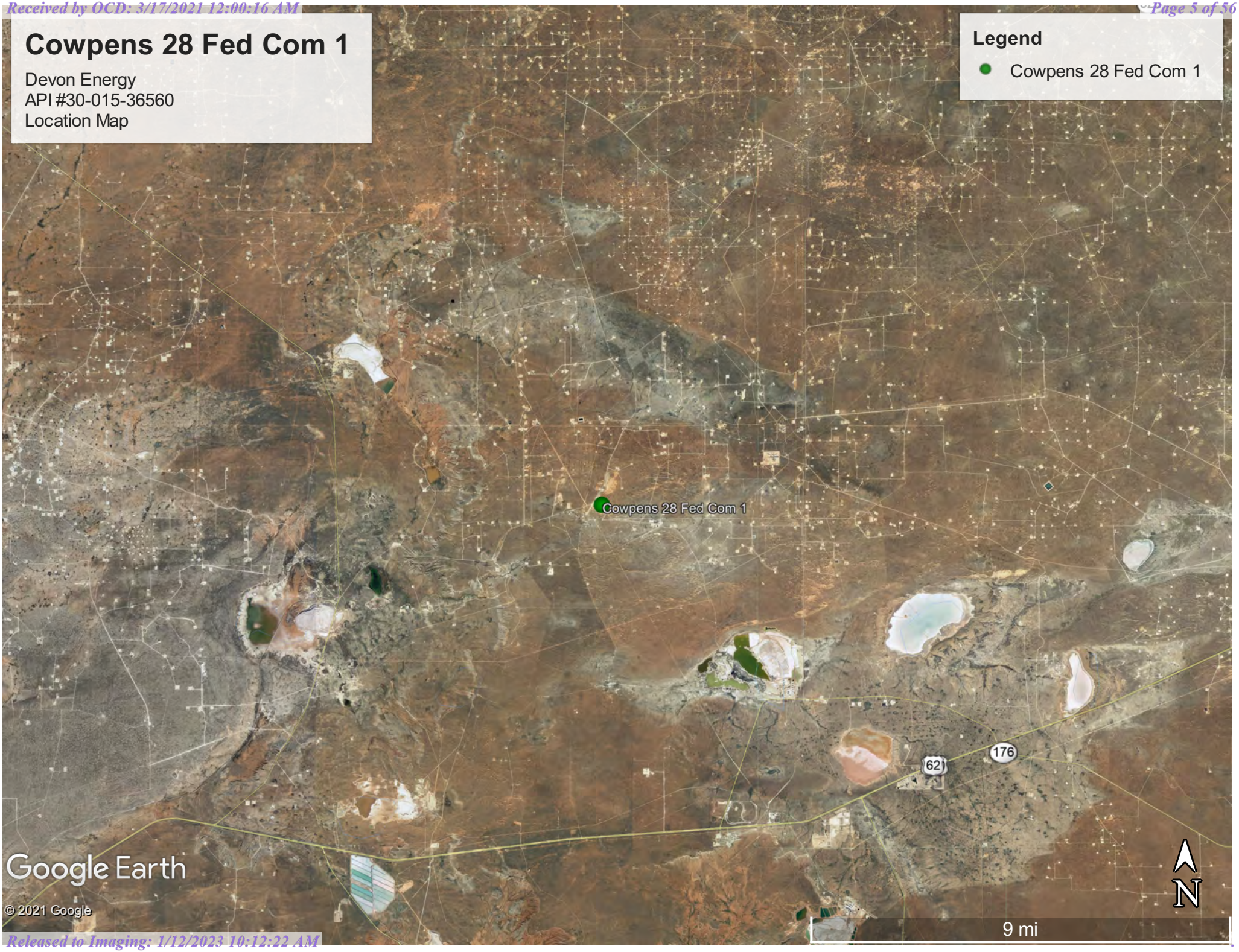
2-TOPO Map

3-Karst Map

4-Site Map

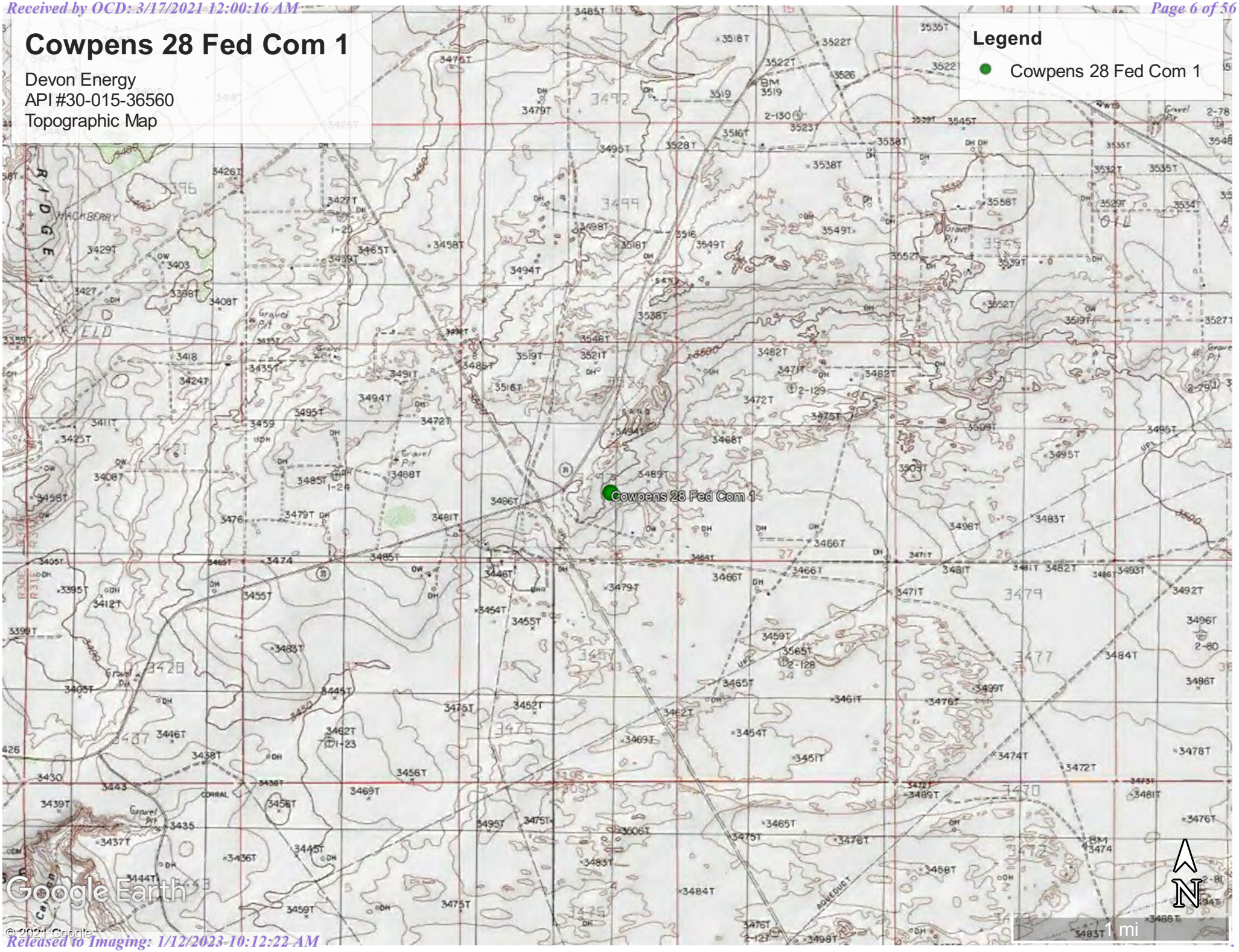
Cowpens 28 Fed Com 1

Devon Energy
API #30-015-36560
Location Map



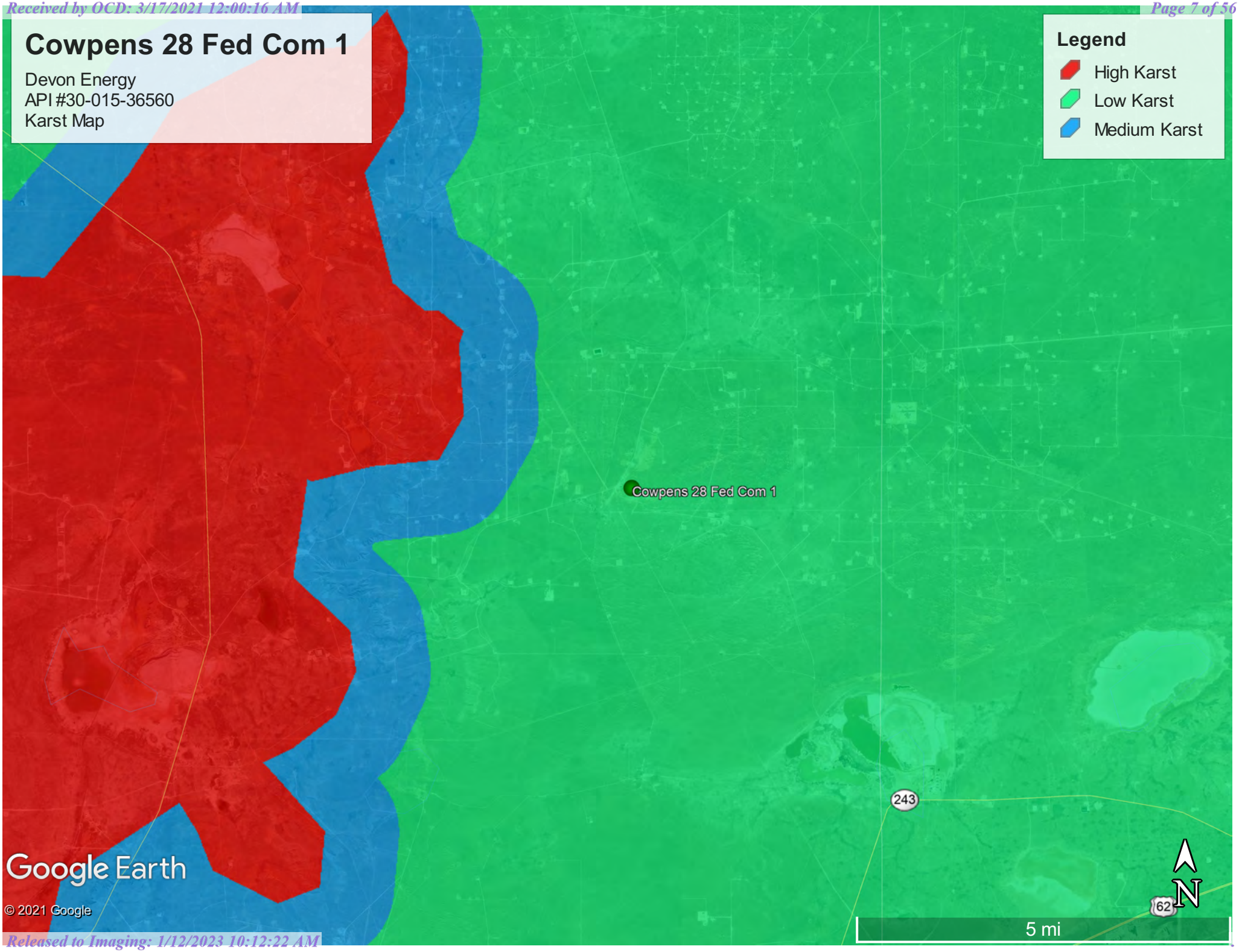
Cowpens 28 Fed Com 1

Devon Energy
API #30-015-36560
Topographic Map



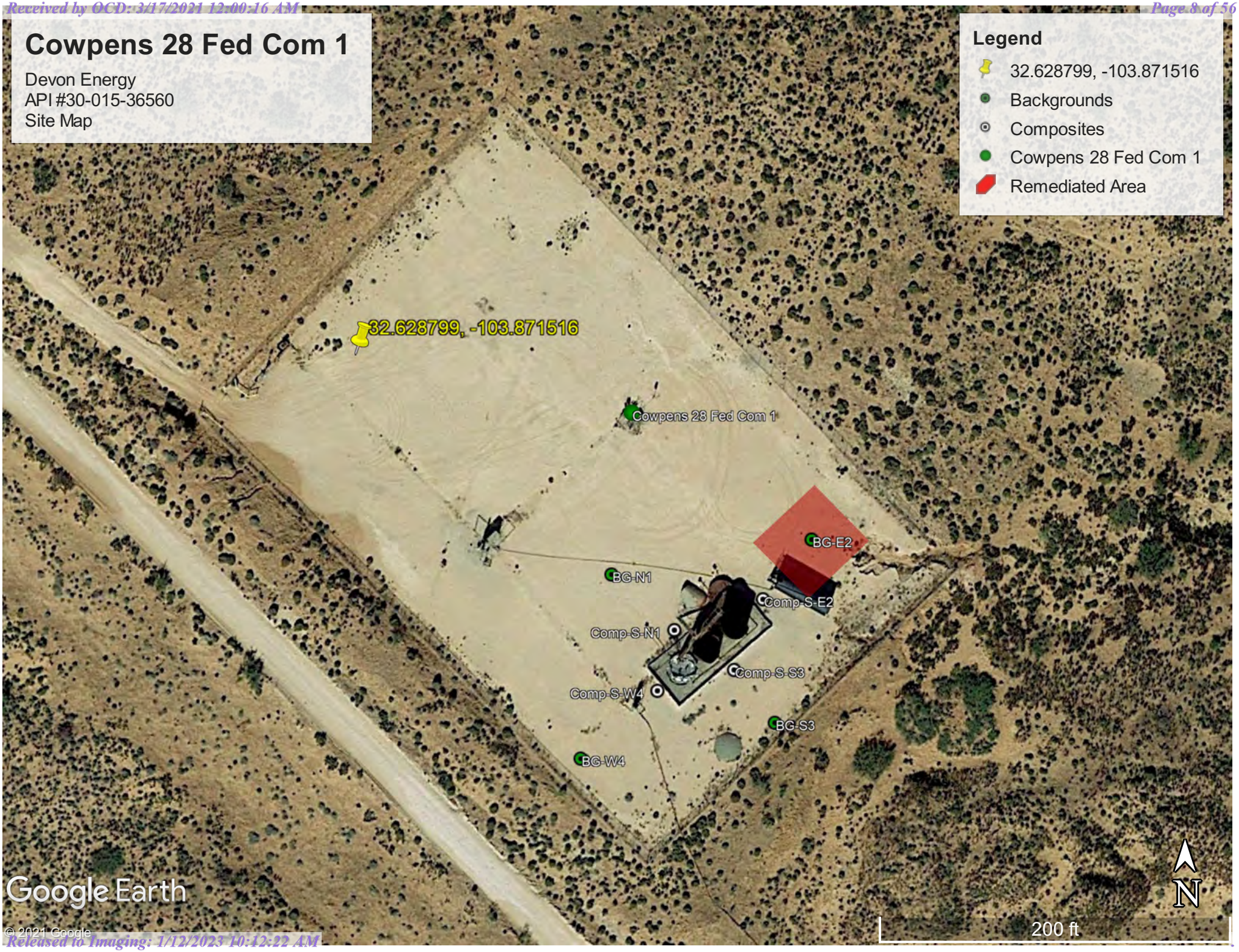
Cowpens 28 Fed Com 1

Devon Energy
API #30-015-36560
Karst Map



Cowpens 28 Fed Com 1

Devon Energy
API #30-015-36560
Site Map



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Appendix A

Water Surveys:

OSE

USGS

Surface Water Map

Active Water Well Map

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
CP 00722 POD1		CP	LE	4	3	3	28	19S	31E	605106	3610273*	902	200		
CP 00722 POD1	R	CP	LE	4	3	3	28	19S	31E	605106	3610273*	902	200		
CP 00723 POD1		CP	ED	2	1	1	33	19S	31E	605111	3610071*	1007	139		
CP 00725 POD1		CP	ED	1	3	3	28	19S	31E	604906	3610473*	1024	231		
CP 00722 POD3		CP	LE	2	4	1	33	19S	31E	605519	3609673*	1086	220	140	80
CP 01554 POD2		CP	LE	2	2	1	22	19S	31E	607165	3613322	2919	400		
CP 01554 POD1		CP	LE	2	2	1	22	19S	31E	607166	3613354	2948	400		
CP 00829 POD1		CP	LE		2	4	16	19S	31E	606165	3614009*	3331	120		
CP 00641 POD1		CP	ED		4	1	36	19S	31E	610247	3609634*	4464	300	130	170
CP 00520		CP	ED	4	4	1	10	20S	31E	607163	3606278*	4584	280	130	150
CP 00873 POD1		CP	LE		1	1	19	19S	31E	601772	3613147*	4812	340	180	160

Average Depth to Water: **145 feet**
Minimum Depth: **130 feet**
Maximum Depth: **180 feet**

Record Count: 11

UTMNAD83 Radius Search (in meters):

Easting (X): 605908.13 **Northing (Y):** 3610687.47 **Radius:** 5000

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

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

3/9/21 11:43 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

National Water Information System: Web Interface

USGS Water Resources

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

Click to hideNews Bulletins

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

Groundwater levels for the Nation

* IMPORTANT: Next Generation Station Page

Search Results -- 1 sites found

site_no list =

- 323734103523901

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

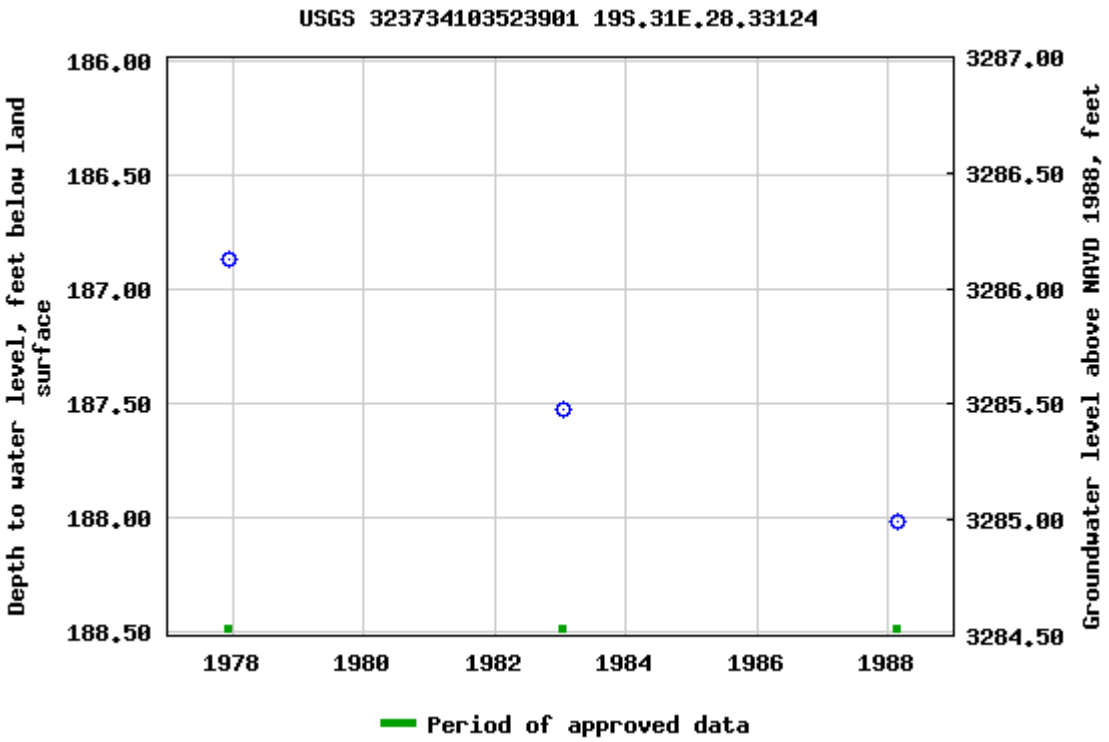
USGS 323734103523901 19S.31E.28.33124

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

Eddy County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°37'34", Longitude 103°52'39" NAD27
Land-surface elevation 3,473 feet above NAVD88
The depth of the well is 230 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
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
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Explanation of terms
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U.S. Department of the Interior | U.S. Geological Survey

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: 2021-03-09 13:44:54 EST
0.76 0.57 nadww01

National Water Information System: Web Interface

USGS Water Resources

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- 323725103523702

Minimum number of levels = 1

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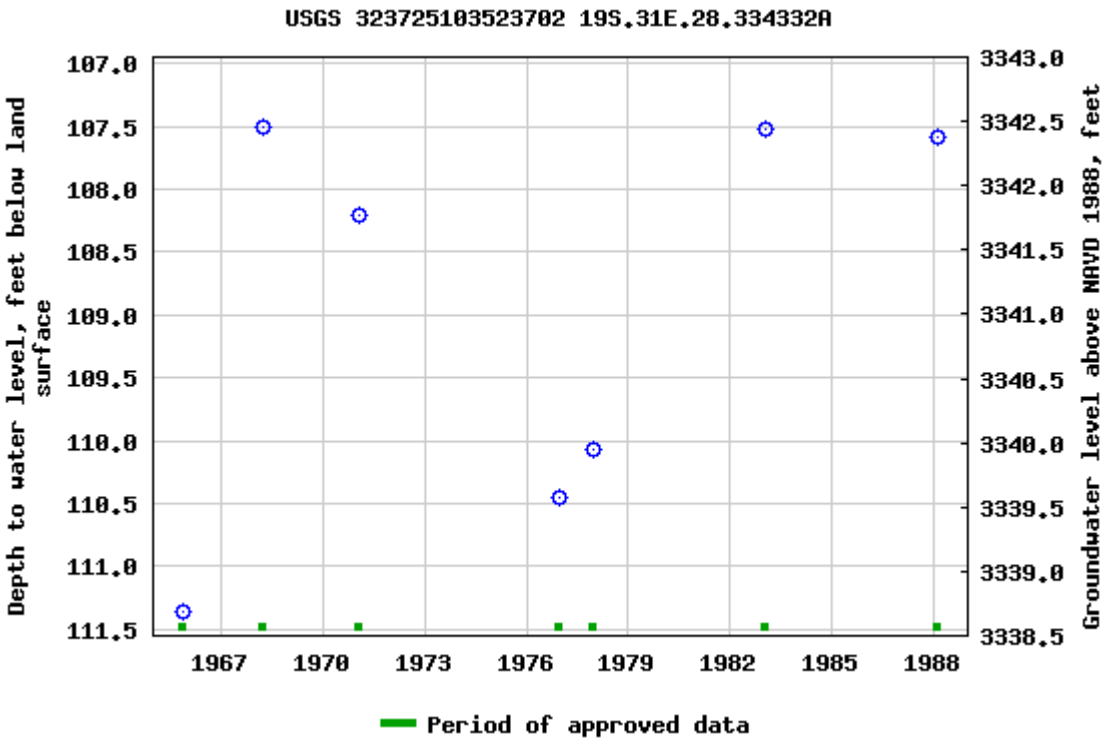
USGS 323725103523702 19S.31E.28.334332A

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

Eddy County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°37'25", Longitude 103°52'37" NAD27
Land-surface elevation 3,450 feet above NAVD88
The depth of the well is 190 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

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



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Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2021-03-09 13:45:27 EST
0.64 0.59 nadww01

National Water Information System: Web Interface

USGS Water Resources

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

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- Full News

Groundwater levels for the Nation

* IMPORTANT: Next Generation Station Page

Search Results -- 1 sites found

site_no list =

- 323725103523701

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

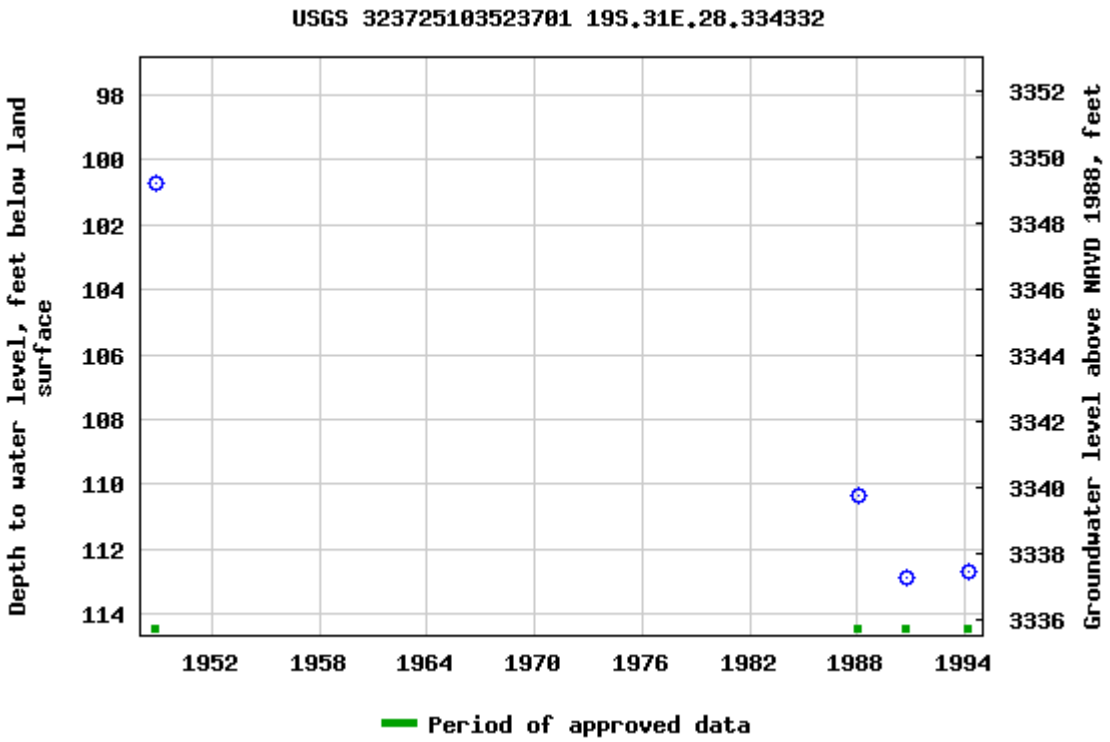
USGS 323725103523701 19S.31E.28.334332

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

Eddy County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°37'25", Longitude 103°52'37" NAD27
Land-surface elevation 3,450 feet above NAVD88
The depth of the well is 160 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

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



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Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2021-03-09 13:45:57 EST
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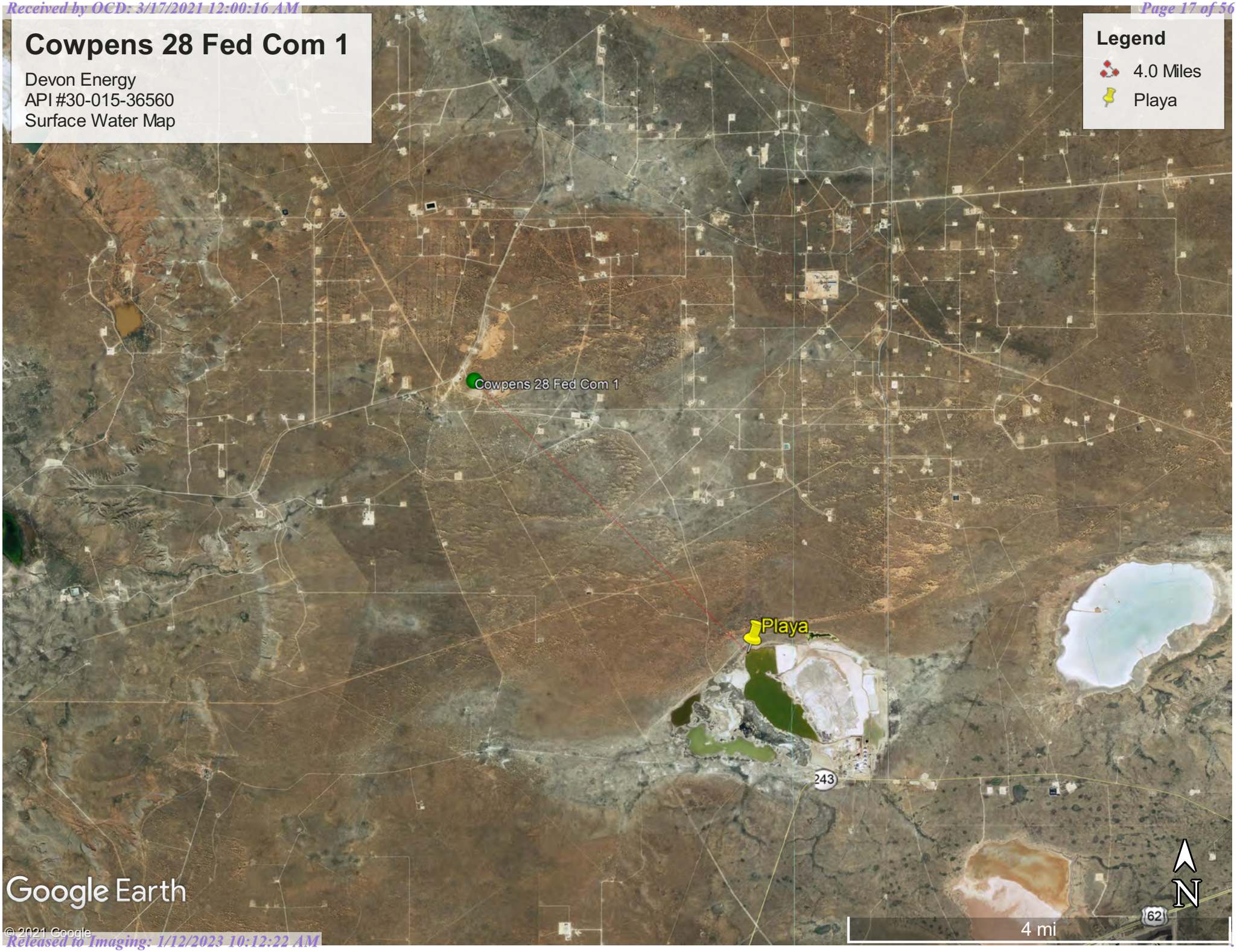
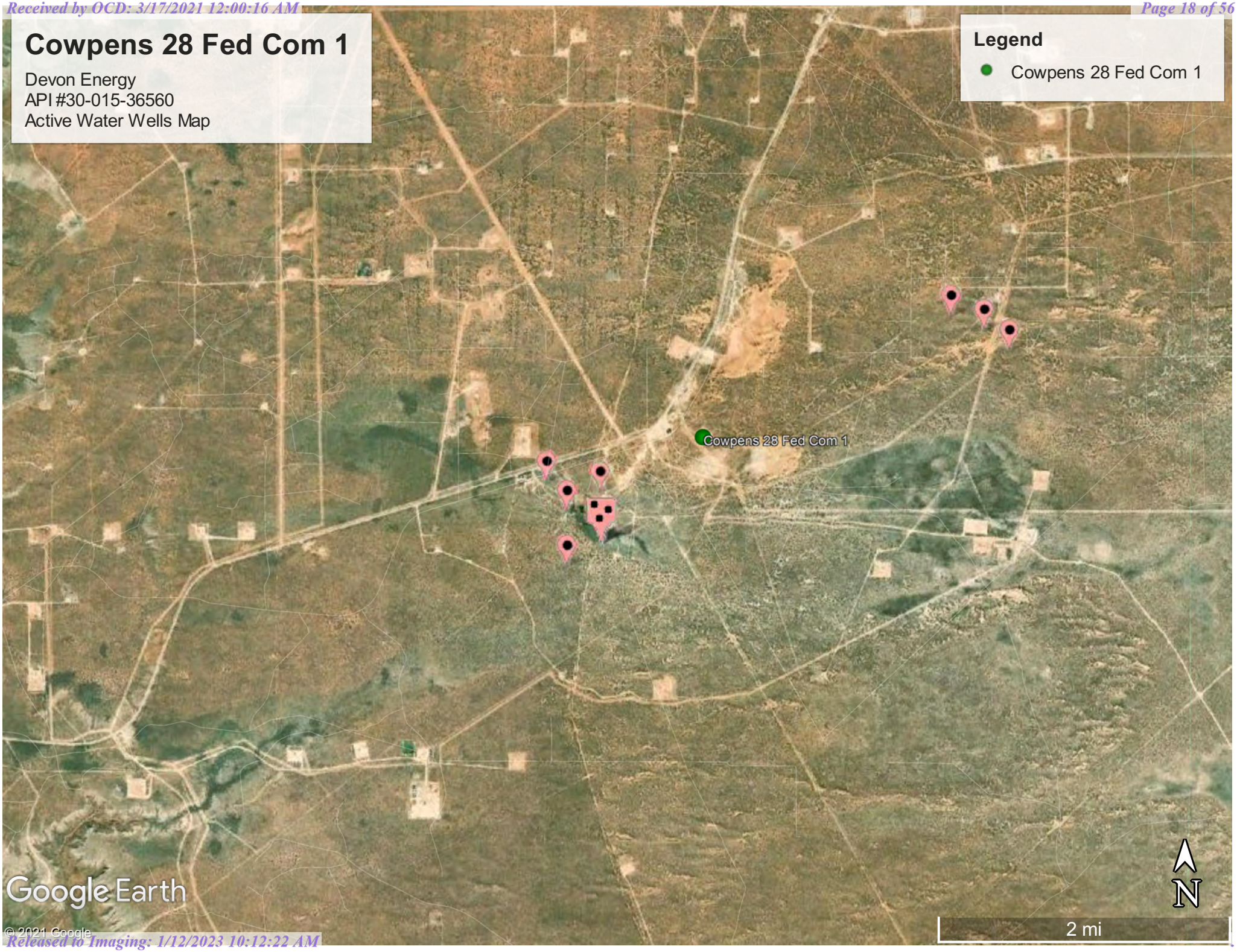
Cowpens 28 Fed Com 1

Devon Energy
API #30-015-36560
Surface Water Map



Cowpens 28 Fed Com 1

Devon Energy
API #30-015-36560
Active Water Wells Map



Pima Environmental Services

Appendix B

Soil Survey & Geological Data

FEMA Flood Map

Eddy Area, New Mexico

KM—Kermit-Berino fine sands, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 1w4q
Elevation: 3,100 to 4,200 feet
Mean annual precipitation: 10 to 14 inches
Mean annual air temperature: 60 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Kermit and similar soils: 50 percent
Berino and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kermit

Setting

Landform: Plains, alluvial fans
Landform position (three-dimensional): Talf, rise
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Mixed alluvium and/or eolian sands

Typical profile

H1 - 0 to 7 inches: fine sand
H2 - 7 to 60 inches: fine sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very high (20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
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: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: Deep Sand (R042XC005NM)
Hydric soil rating: No

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 50 inches: fine sandy loam
H3 - 50 to 58 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 7.2 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: Loamy Sand (R042XC003NM)
Hydric soil rating: No

Minor Components

Active dune land

Percent of map unit: 15 percent
Hydric soil rating: No

Data Source Information

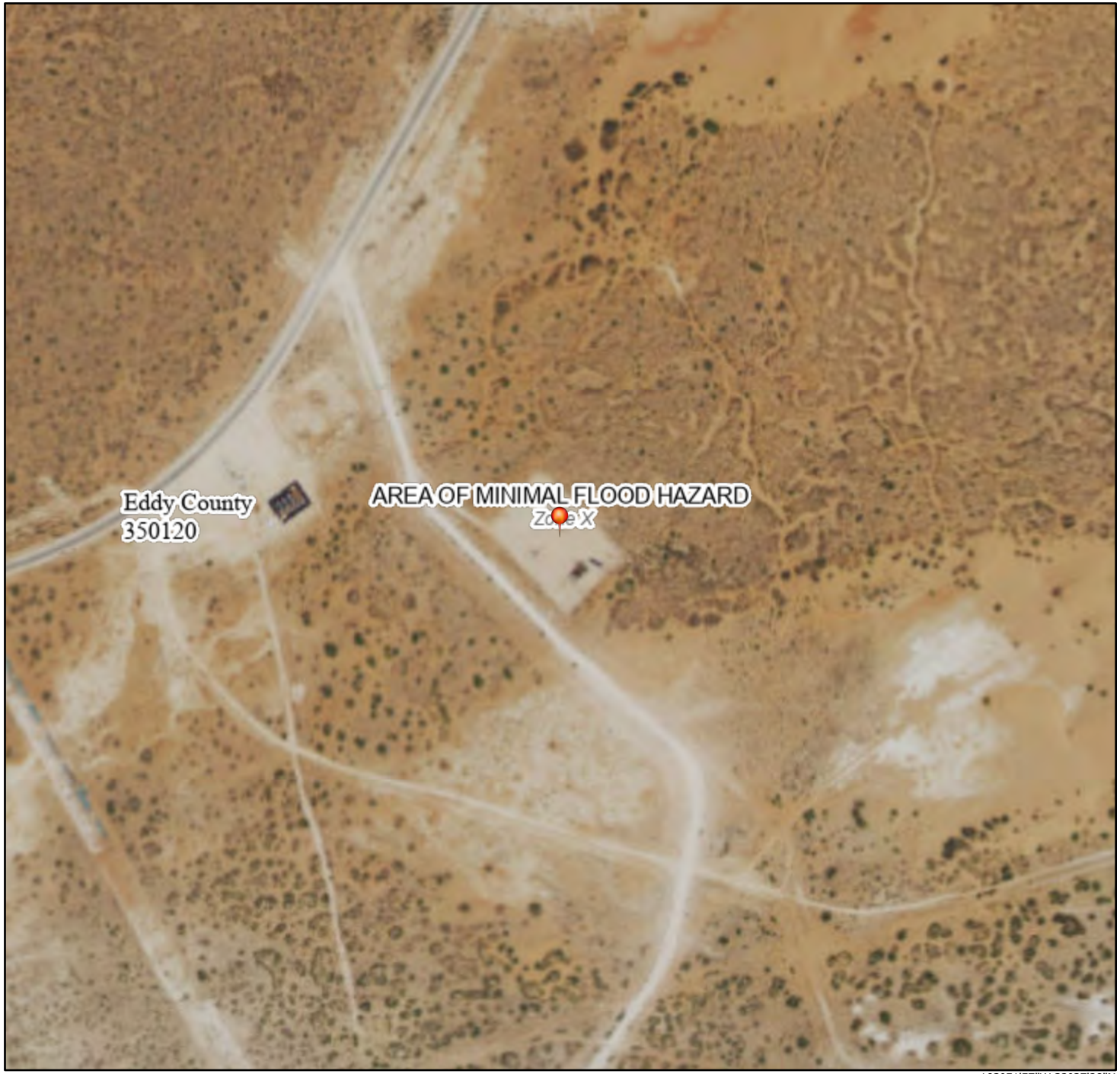
Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 15, Sep 15, 2019

Received by OCD: 3/17/2021 12:00:16 AM

National Flood Hazard Layer FIRMette

FEMA

103°52'34"W 32°37'58"N



103°51'57"W 32°37'28"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

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 Cross Sections with 1% Annual Chance
  - 17.5 Water Surface Elevation
  - Coastal Transect
  - 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 3/9/2021 at 1:59 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.

Released to Imaging: 1/12/2023 10:12:22 AM

Pima Environmental Services

Appendix C

C-141's:

Initial

Final

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised March 17, 1999

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

30-015-36560
nKMO 1105941469

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Devon Energy 6137	Contact☐ Ernie Duran
Address P. O. Box 250 Artesia, NM 88211	Telephone No.☐ 575-513-1768
Facility Name Cowpens 28 Fed #1	Facility Type☐Gas Well

Surface Owner	Mineral Owner	Lease No.☐

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	28	19S	31E	1650	South	1650	East	Eddy County, NM

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 140 BPW	Volume Recovered☐140 BPW
Source of Release Drain Line Connection	Date and Hour of Occurrence 2-9-11 8:00 AM	Date and Hour of Discovery 2-9-11 8:00 AM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Left msg BLM Jim Amos	
By Whom? ☐Ernie Duran	Date and Hour☐ 2-10-11 10:30 AM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

N/A

RECEIVED
FEB 23 2011
NMOCD ARTESIA

Describe Cause of Problem and Remedial Action Taken.*
Drain line connection on the fiberglass water tank had frozen overnight and parted (pulled) away from the tank causing a 140 bbls spill.

Describe Area Affected and Cleanup Action Taken.*
The entire 140 bbl produced water spill was contained within the lined containment. All 140 bbls of produced water was recovered causing to environmental impact outside of the lined containment. Called vacuum truck to pick up water.

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

Signature: Ernie Duran	OIL CONSERVATION DIVISION
Printed Name: Ernie Duran	Approved by☐District Supervisor: Signed By Mike Bratcher
Title: Asst. Production Foreman	Approval Date: 3/3/11 Expiration Date:
Date: 2-11-11 Phone: (575) 513-1768	Conditions of Approval: Attached ☐

* Attach Additional Sheets If Necessary

Remediation per OCD Rules & Guidelines. **SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:** 4/3/11

2RP-615

Incident ID	NKMW1105941469
District RP	2RP-615
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?	>100' (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 4

State of New Mexico
Oil Conservation Division

Incident ID	NKMW1105941469
District RP	2RP-615
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: Lupe Carrasco Title: EHS Professional

Signature: Lupe Carrasco Date: 3/11/2021

email: lupe.carrasco@dvn.com Telephone: 575-725-0787

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NKMW1105941469
District RP	2RP-615
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: Lupe Carrasco Title: EHS Professional

Signature: Lupe Carrasco Date: 3/11/2021

email: lupe.carrasco@dvn.com Telephone: 575-725-0787

OCD Only

Received by: OCD Date: 06/16/2021

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: Ashley Maxwell Date: 01/12/2023

Printed Name: Ashley Maxwell Title: Environmental Specialist

Pima Environmental Services

Appendix D

Photographic Documentation

Pima Environmental Services

Appendix E

Laboratory Reports

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

September 09, 2020

Chris Jones

Pima Environmental Services LLC
1601 N. Turner Ste 500
Hobbs, NM 88240
TEL: (575) 631-6977
FAX:

RE: Cowpens 28 Fed Com 1 OrderNo.: 2008E85

Dear Chris Jones:

Hall Environmental Analysis Laboratory received 8 sample(s) on 8/27/2020 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 **2008E85**
Date Reported: **9/9/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Pima Environmental Services LLC
Client Sample ID: Comp- S-N1
Project: Cowpens 28 Fed Com 1
Collection Date: 8/21/2020 9:00:00 AM
Lab ID: 2008E85-001 **Matrix:** SOIL
Received Date: 8/27/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/1/2020 7:40:33 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/1/2020 7:40:33 AM
Surr: DNOP	97.8	30.4-154		%Rec	1	9/1/2020 7:40:33 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/30/2020 1:15:35 AM
Surr: BFB	98.7	75.3-105		%Rec	1	8/30/2020 1:15:35 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	8/30/2020 1:15:35 AM
Toluene	ND	0.049		mg/Kg	1	8/30/2020 1:15:35 AM
Ethylbenzene	ND	0.049		mg/Kg	1	8/30/2020 1:15:35 AM
Xylenes, Total	ND	0.098		mg/Kg	1	8/30/2020 1:15:35 AM
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	8/30/2020 1:15:35 AM
EPA METHOD 300.0: ANIONS						Analyst: **CJS**
Chloride	ND	60		mg/Kg	20	9/2/2020 6:03:11 AM

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

Analytical Report
Lab Order **2008E85**
Date Reported: **9/9/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Pima Environmental Services LLC
Client Sample ID: Comp- S-E2
Project: Cowpens 28 Fed Com 1
Collection Date: 8/21/2020 9:04:00 AM
Lab ID: 2008E85-002 **Matrix:** SOIL
Received Date: 8/27/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/31/2020 11:38:16 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/31/2020 11:38:16 AM
Surr: DNOP	101	30.4-154		%Rec	1	8/31/2020 11:38:16 AM
EPA METHOD 300.0: ANIONS						Analyst: **CJS**
Chloride	82	60		mg/Kg	20	9/2/2020 6:40:24 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**
Benzene	ND	0.025		mg/Kg	1	8/28/2020 5:47:54 PM
Toluene	ND	0.049		mg/Kg	1	8/28/2020 5:47:54 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/28/2020 5:47:54 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/28/2020 5:47:54 PM
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	8/28/2020 5:47:54 PM
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	8/28/2020 5:47:54 PM
Surr: Dibromofluoromethane	114	70-130		%Rec	1	8/28/2020 5:47:54 PM
Surr: Toluene-d8	102	70-130		%Rec	1	8/28/2020 5:47:54 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/28/2020 5:47:54 PM
Surr: BFB	105	70-130		%Rec	1	8/28/2020 5:47:54 PM

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

Analytical Report
Lab Order **2008E85**
Date Reported: **9/9/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Pima Environmental Services LLC
Client Sample ID: Comp- S-S3
Project: Cowpens 28 Fed Com 1
Collection Date: 8/21/2020 9:08:00 AM
Lab ID: 2008E85-003 **Matrix:** SOIL
Received Date: 8/27/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	8/31/2020 11:47:48 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/31/2020 11:47:48 AM
Surr: DNOP	99.3	30.4-154		%Rec	1	8/31/2020 11:47:48 AM
EPA METHOD 300.0: ANIONS						Analyst: **CJS**
Chloride	ND	61		mg/Kg	20	9/2/2020 6:52:48 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**
Benzene	ND	0.025		mg/Kg	1	8/28/2020 7:13:47 PM
Toluene	ND	0.049		mg/Kg	1	8/28/2020 7:13:47 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/28/2020 7:13:47 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/28/2020 7:13:47 PM
Surr: 1,2-Dichloroethane-d4	97.8	70-130		%Rec	1	8/28/2020 7:13:47 PM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	8/28/2020 7:13:47 PM
Surr: Dibromofluoromethane	106	70-130		%Rec	1	8/28/2020 7:13:47 PM
Surr: Toluene-d8	98.4	70-130		%Rec	1	8/28/2020 7:13:47 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/28/2020 7:13:47 PM
Surr: BFB	101	70-130		%Rec	1	8/28/2020 7:13:47 PM

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

Analytical Report
Lab Order **2008E85**
Date Reported: **9/9/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Pima Environmental Services LLC
Client Sample ID: Comp- S-W4
Project: Cowpens 28 Fed Com 1
Collection Date: 8/21/2020 9:12:00 AM
Lab ID: 2008E85-004 **Matrix:** SOIL
Received Date: 8/27/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	8/31/2020 11:57:21 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/31/2020 11:57:21 AM
Surr: DNOP	103	30.4-154		%Rec	1	8/31/2020 11:57:21 AM
EPA METHOD 300.0: ANIONS						Analyst: **CJS**
Chloride	ND	59		mg/Kg	20	9/2/2020 7:05:13 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**
Benzene	ND	0.025		mg/Kg	1	8/28/2020 8:39:27 PM
Toluene	ND	0.049		mg/Kg	1	8/28/2020 8:39:27 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/28/2020 8:39:27 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/28/2020 8:39:27 PM
Surr: 1,2-Dichloroethane-d4	98.1	70-130		%Rec	1	8/28/2020 8:39:27 PM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	8/28/2020 8:39:27 PM
Surr: Dibromofluoromethane	110	70-130		%Rec	1	8/28/2020 8:39:27 PM
Surr: Toluene-d8	100	70-130		%Rec	1	8/28/2020 8:39:27 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/28/2020 8:39:27 PM
Surr: BFB	104	70-130		%Rec	1	8/28/2020 8:39:27 PM

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

Analytical Report
Lab Order **2008E85**
Date Reported: **9/9/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Pima Environmental Services LLC
Client Sample ID: BG-N1
Project: Cowpens 28 Fed Com 1
Collection Date: 8/21/2020 9:16:00 AM
Lab ID: 2008E85-005 **Matrix:** SOIL
Received Date: 8/27/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/31/2020 12:06:56 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/31/2020 12:06:56 PM
Surr: DNOP	95.2	30.4-154		%Rec	1	8/31/2020 12:06:56 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	9/2/2020 11:07:00 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**
Benzene	ND	0.025		mg/Kg	1	8/28/2020 9:07:58 PM
Toluene	ND	0.049		mg/Kg	1	8/28/2020 9:07:58 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/28/2020 9:07:58 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/28/2020 9:07:58 PM
Surr: 1,2-Dichloroethane-d4	98.5	70-130		%Rec	1	8/28/2020 9:07:58 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	8/28/2020 9:07:58 PM
Surr: Dibromofluoromethane	106	70-130		%Rec	1	8/28/2020 9:07:58 PM
Surr: Toluene-d8	102	70-130		%Rec	1	8/28/2020 9:07:58 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/28/2020 9:07:58 PM
Surr: BFB	107	70-130		%Rec	1	8/28/2020 9:07:58 PM

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

Analytical Report
Lab Order **2008E85**
Date Reported: **9/9/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Pima Environmental Services LLC
Client Sample ID: BG-E2
Project: Cowpens 28 Fed Com 1
Collection Date: 8/21/2020 9:20:00 AM
Lab ID: 2008E85-006 **Matrix:** SOIL
Received Date: 8/27/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	1300	90		mg/Kg	10	9/1/2020 8:51:57 AM
Motor Oil Range Organics (MRO)	ND	450		mg/Kg	10	9/1/2020 8:51:57 AM
Surr: DNOP	0	30.4-154	S	%Rec	10	9/1/2020 8:51:57 AM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	3300	150		mg/Kg	50	9/3/2020 10:12:34 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**
Benzene	ND	0.024		mg/Kg	1	8/28/2020 9:36:26 PM
Toluene	ND	0.048		mg/Kg	1	8/28/2020 9:36:26 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/28/2020 9:36:26 PM
Xylenes, Total	ND	0.096		mg/Kg	1	8/28/2020 9:36:26 PM
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	8/28/2020 9:36:26 PM
Surr: 4-Bromofluorobenzene	85.8	70-130		%Rec	1	8/28/2020 9:36:26 PM
Surr: Dibromofluoromethane	117	70-130		%Rec	1	8/28/2020 9:36:26 PM
Surr: Toluene-d8	99.8	70-130		%Rec	1	8/28/2020 9:36:26 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**
Gasoline Range Organics (GRO)	6.7	4.8		mg/Kg	1	8/28/2020 9:36:26 PM
Surr: BFB	114	70-130		%Rec	1	8/28/2020 9:36:26 PM

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

Analytical Report
Lab Order **2008E85**
Date Reported: **9/9/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Pima Environmental Services LLC
Client Sample ID: BG-S3
Project: Cowpens 28 Fed Com 1
Collection Date: 8/21/2020 9:24:00 AM
Lab ID: 2008E85-007 **Matrix:** SOIL
Received Date: 8/27/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	9.1	9.0		mg/Kg	1	8/31/2020 12:26:09 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	8/31/2020 12:26:09 PM
Surr: DNOP	69.5	30.4-154		%Rec	1	8/31/2020 12:26:09 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	9/2/2020 11:31:49 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**
Benzene	ND	0.024		mg/Kg	1	8/28/2020 10:04:54 PM
Toluene	ND	0.049		mg/Kg	1	8/28/2020 10:04:54 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/28/2020 10:04:54 PM
Xylenes, Total	ND	0.097		mg/Kg	1	8/28/2020 10:04:54 PM
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	8/28/2020 10:04:54 PM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	8/28/2020 10:04:54 PM
Surr: Dibromofluoromethane	108	70-130		%Rec	1	8/28/2020 10:04:54 PM
Surr: Toluene-d8	96.8	70-130		%Rec	1	8/28/2020 10:04:54 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/28/2020 10:04:54 PM
Surr: BFB	109	70-130		%Rec	1	8/28/2020 10:04:54 PM

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

Analytical Report
Lab Order **2008E85**
Date Reported: **9/9/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Pima Environmental Services LLC
Client Sample ID: BG-W4
Project: Cowpens 28 Fed Com 1
Collection Date: 8/21/2020 9:28:00 AM
Lab ID: 2008E85-008 **Matrix:** SOIL
Received Date: 8/27/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	8.6		mg/Kg	1	9/1/2020 9:15:43 AM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	9/1/2020 9:15:43 AM
Surr: DNOP	79.2	30.4-154		%Rec	1	9/1/2020 9:15:43 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	9/2/2020 11:44:14 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**
Benzene	ND	0.025		mg/Kg	1	8/29/2020 12:27:25 AM
Toluene	ND	0.050		mg/Kg	1	8/29/2020 12:27:25 AM
Ethylbenzene	ND	0.050		mg/Kg	1	8/29/2020 12:27:25 AM
Xylenes, Total	ND	0.099		mg/Kg	1	8/29/2020 12:27:25 AM
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	8/29/2020 12:27:25 AM
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	8/29/2020 12:27:25 AM
Surr: Dibromofluoromethane	109	70-130		%Rec	1	8/29/2020 12:27:25 AM
Surr: Toluene-d8	98.4	70-130		%Rec	1	8/29/2020 12:27:25 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/29/2020 12:27:25 AM
Surr: BFB	105	70-130		%Rec	1	8/29/2020 12:27:25 AM

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#: **2008E85**
09-Sep-20

Client: Pima Environmental Services LLC
Project: Cowpens 28 Fed Com 1

Sample ID: **MB-54870** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **54870** RunNo: **71522**
Prep Date: **9/1/2020** Analysis Date: **9/2/2020** SeqNo: **2499716** Units: **mg/Kg**

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

Sample ID: **LCS-54870** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **54870** RunNo: **71522**
Prep Date: **9/1/2020** Analysis Date: **9/2/2020** SeqNo: **2499717** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.2	90	110			

Sample ID: **MB-54882** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **54882** RunNo: **71554**
Prep Date: **9/2/2020** Analysis Date: **9/2/2020** SeqNo: **2501534** Units: **mg/Kg**

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

Sample ID: **LCS-54882** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **54882** RunNo: **71554**
Prep Date: **9/2/2020** Analysis Date: **9/2/2020** SeqNo: **2501535** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.9	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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2008E85**
09-Sep-20

Client: Pima Environmental Services LLC
Project: Cowpens 28 Fed Com 1

Sample ID: **MB-54763** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **54763** RunNo: **71495**
Prep Date: **8/28/2020** Analysis Date: **8/31/2020** SeqNo: **2496911** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		102	30.4	154			

Sample ID: **MB-54769** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **54769** RunNo: **71495**
Prep Date: **8/28/2020** Analysis Date: **8/31/2020** SeqNo: **2496912** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		104	30.4	154			

Sample ID: **LCS-54763** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **54763** RunNo: **71495**
Prep Date: **8/28/2020** Analysis Date: **8/31/2020** SeqNo: **2496915** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	37	10	50.00	0	74.8	70	130			
Surr: DNOP	5.0		5.000		99.1	30.4	154			

Sample ID: **LCS-54769** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **54769** RunNo: **71495**
Prep Date: **8/28/2020** Analysis Date: **8/31/2020** SeqNo: **2496916** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.0		5.000		100	30.4	154			

Sample ID: **2008E85-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **Comp- S-N1** Batch ID: **54763** RunNo: **71528**
Prep Date: **8/28/2020** Analysis Date: **9/1/2020** SeqNo: **2498459** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	9.5	47.44	0	102	47.4	136			
Surr: DNOP	4.4		4.744		92.4	30.4	154			

Sample ID: **2008E85-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **Comp- S-N1** Batch ID: **54763** RunNo: **71528**
Prep Date: **8/28/2020** Analysis Date: **9/1/2020** SeqNo: **2498460** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	9.5	47.35	0	103	47.4	136	0.352	43.4	

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#: **2008E85**
09-Sep-20

Client: Pima Environmental Services LLC
Project: Cowpens 28 Fed Com 1

Sample ID: **2008E85-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **Comp- S-N1** Batch ID: **54763** RunNo: **71528**
Prep Date: **8/28/2020** Analysis Date: **9/1/2020** SeqNo: **2498460** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.6		4.735		97.5	30.4	154	0	0	

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#: **2008E85**
09-Sep-20

Client: Pima Environmental Services LLC
Project: Cowpens 28 Fed Com 1

Sample ID: **mb-54741**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **54741**	RunNo: **71474**
Prep Date: **8/27/2020**	Analysis Date: **8/29/2020**	SeqNo: **2495676** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		99.7	75.3	105			

Sample ID: **lcs-54741**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **54741**	RunNo: **71474**
Prep Date: **8/27/2020**	Analysis Date: **8/29/2020**	SeqNo: **2495677** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	84.6	72.5	106			
Surr: BFB	1100		1000		106	75.3	105			S

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#: **2008E85**
09-Sep-20

Client: Pima Environmental Services LLC
Project: Cowpens 28 Fed Com 1

Sample ID: **mb-54741** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **54741** RunNo: **71474**
Prep Date: **8/27/2020** Analysis Date: **8/29/2020** SeqNo: **2495755** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID: **LCS-54741** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **54741** RunNo: **71474**
Prep Date: **8/27/2020** Analysis Date: **8/29/2020** SeqNo: **2495756** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	95.6	80	120			
Toluene	0.96	0.050	1.000	0	96.4	80	120			
Ethylbenzene	0.97	0.050	1.000	0	97.0	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.3	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

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#: **2008E85**
09-Sep-20

Client: Pima Environmental Services LLC
Project: Cowpens 28 Fed Com 1

Sample ID: **mb-54746** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS** Batch ID: **54746** RunNo: **71464**
Prep Date: **8/27/2020** Analysis Date: **8/28/2020** SeqNo: **2495078** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.48		0.5000		96.9	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		101	70	130			
Surr: Dibromofluoromethane	0.56		0.5000		112	70	130			
Surr: Toluene-d8	0.51		0.5000		102	70	130			

Sample ID: **lcs-54746** SampType: **LCS4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC** Batch ID: **54746** RunNo: **71464**
Prep Date: **8/27/2020** Analysis Date: **8/28/2020** SeqNo: **2495079** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	93.4	80	120			
Toluene	0.99	0.050	1.000	0	99.1	80	120			
Ethylbenzene	1.0	0.050	1.000	0	100	80	120			
Xylenes, Total	3.1	0.10	3.000	0	105	80	120			
Surr: 1,2-Dichloroethane-d4	0.49		0.5000		98.2	70	130			
Surr: 4-Bromofluorobenzene	0.53		0.5000		105	70	130			
Surr: Dibromofluoromethane	0.54		0.5000		108	70	130			
Surr: Toluene-d8	0.49		0.5000		98.1	70	130			

Sample ID: **2008e85-002ams** SampType: **MS4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **Comp- S-E2** Batch ID: **54746** RunNo: **71464**
Prep Date: **8/27/2020** Analysis Date: **8/28/2020** SeqNo: **2495081** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.025	0.9930	0	116	71.1	115			S
Toluene	1.2	0.050	0.9930	0	119	79.6	132			
Ethylbenzene	1.2	0.050	0.9930	0	119	83.8	134			
Xylenes, Total	3.8	0.099	2.979	0	128	82.4	132			
Surr: 1,2-Dichloroethane-d4	0.51		0.4965		103	70	130			
Surr: 4-Bromofluorobenzene	0.52		0.4965		104	70	130			
Surr: Dibromofluoromethane	0.57		0.4965		115	70	130			
Surr: Toluene-d8	0.50		0.4965		100	70	130			

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#: **2008E85**
09-Sep-20

Client: Pima Environmental Services LLC
Project: Cowpens 28 Fed Com 1

Sample ID: **2008e85-002amsd** SampType: **MSD4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **Comp- S-E2** Batch ID: **54746** RunNo: **71464**
Prep Date: **8/27/2020** Analysis Date: **8/28/2020** SeqNo: **2495082** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	0.9862	0	112	71.1	115	4.58	20	
Toluene	1.2	0.049	0.9862	0	119	79.6	132	0.504	20	
Ethylbenzene	1.2	0.049	0.9862	0	120	83.8	134	0.601	20	
Xylenes, Total	3.8	0.099	2.959	0	127	82.4	132	1.47	20	
Surr: 1,2-Dichloroethane-d4	0.50		0.4931		102	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.49		0.4931		100	70	130	0	0	
Surr: Dibromofluoromethane	0.56		0.4931		114	70	130	0	0	
Surr: Toluene-d8	0.52		0.4931		106	70	130	0	0	

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#: **2008E85**
09-Sep-20

Client: Pima Environmental Services LLC
Project: Cowpens 28 Fed Com 1

Sample ID: **mb-54746** SampType: **MBLK** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS** Batch ID: **54746** RunNo: **71464**
Prep Date: **8/27/2020** Analysis Date: **8/28/2020** SeqNo: **2495102** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	520		500.0		104	70	130			

Sample ID: **lcs-54746** SampType: **LCS** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS** Batch ID: **54746** RunNo: **71464**
Prep Date: **8/27/2020** Analysis Date: **8/28/2020** SeqNo: **2495103** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.3	70	130			
Surr: BFB	510		500.0		101	70	130			

Sample ID: **2008e85-003ams** SampType: **MS** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **Comp- S-S3** Batch ID: **54746** RunNo: **71464**
Prep Date: **8/27/2020** Analysis Date: **8/28/2020** SeqNo: **2495106** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	24.85	0	107	49.2	122			
Surr: BFB	520		497.0		105	70	130			

Sample ID: **2008e85-003amsd** SampType: **MSD** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **Comp- S-S3** Batch ID: **54746** RunNo: **71464**
Prep Date: **8/27/2020** Analysis Date: **8/28/2020** SeqNo: **2495107** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.8	24.11	0	101	49.2	122	9.46	20	
Surr: BFB	500		482.2		103	70	130	0	0	

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: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: Pima Environmental Services LLC | Work Order Number: 2008E85 | RcptNo: 1

Received By: **Cheyenne Cason** 8/27/2020 8:00:00 AM

Completed By: **Juan Rojas** 8/27/2020 8:58:10 AM

Reviewed By: JR 8/27/20

Chain of Custody

1. Is Chain of Custody 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 ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
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 ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: CMC 8/27/20

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	1.9	Good				
2	3.1	Good				

Released to Imaging: 1/12/2023 10:12:22 AM
Received by OCD: 3/17/2021 12:00:16 AM

Chain-of-Custody Record

Client: Pima Environmental

Mailing Address: 1601 N. Turner ste 500
Hobbs, NM 88240

Phone #: 964-7740

email or Fax#: Chris@Pimaoil.com

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 5 Days
☒ Standard ☐ Rush

Project Name: Cowpens 28 Fed Com #1

Project #: WBS # 20741814

Project Manager: Chris Jones

Sampler: Cesar Morales

On Ice: ☒ Yes ☐ No

# of Coolers: 2

Cooler Temp(including CF): Same Point (°C)

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. 2008585	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)	Chlorides
8/21/20	9:00	Soil	Comp-S-N1	Glass	Ice	-001	X	X									X
	9:04		Comp-S-E2			-002											
	9:08		Comp-S-S3			-003											
	9:12		Comp-S-W4			-004											
	9:16		BG-N1			-005											
	9:20		BG-E2			-006											
	9:24		BG-S3			-007											
	9:28		BG-W4			-008											

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
8/21/20	1530				8/26/20	1530
8/26/20	1900				8/27/20	0805

Remarks: Bill to Devon

1.9 ± 0 = 1.9
3.1 ± 0 = 3.1

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.

CARDINAL Laboratories

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

January 06, 2021

CHRIS JONES

PIMA ENVIROMENTAL

1601 N TURNER STE. 500

HOBBS, NM 88240

RE: COWPENS 28 FED COM #1

Enclosed are the results of analyses for samples received by the laboratory on 12/31/20 15:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-20-13. 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

Released to Imaging: 1/12/2023 10:12:22 AM

CARDINAL Laboratories

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

Analytical Results For:

PIMA ENVIROMENTAL
CHRIS JONES
1601 N TURNER STE. 500
HOBBS NM, 88240
Fax To:

Received:	12/31/2020	Sampling Date:	12/31/2020
Reported:	01/06/2021	Sampling Type:	Soil
Project Name:	COWPENS 28 FED COM #1	Sampling Condition:	** (See Notes)
Project Number:	44	Sample Received By:	Jodi Henson
Project Location:	DEVON - EDDY COUNTY		

Sample ID: BG - 2E (H003370-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/04/2021	ND	1.95	97.7	2.00	2.50	
Toluene*	<0.050	0.050	01/04/2021	ND	1.86	93.2	2.00	3.88	
Ethylbenzene*	<0.050	0.050	01/04/2021	ND	1.94	97.0	2.00	3.74	
Total Xylenes*	<0.150	0.150	01/04/2021	ND	5.56	92.6	6.00	3.12	
Total BTEX	<0.300	0.300	01/04/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *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	01/05/2021	ND	416	104	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/04/2021	ND	219	110	200	3.60	
DRO >C10-C28*	<10.0	10.0	01/04/2021	ND	212	106	200	1.19	
EXT DRO >C28-C36	<10.0	10.0	01/04/2021	ND					

Surrogate: 1-Chlorooctane *98.0 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *93.7 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

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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

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Pima Environmental
Project Manager:	Chris Jones
Address:	1601 N. Turner Ste 500
City:	Hobbs State: NM Zip: 88240
Phone #:	575-631-6977 Fax #:
Project #:	44 Project Owner: Devon
Project Name:	Cowpens 28 Fed Com 1
Project Location:	EDDY County
Sampler Name:	Mark Newcomb

BILL TO

P.O. #:	2074814
Company:	Devon
Attn:	Joes Mathews
Address:	
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST

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	THP EXT	BTEX	Chloride
H003370																	
1	BH-2E	✓				✓					✓		12/31/20		✓	✓	✓

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 consequental 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: 12/31/20 Time: 15:50	Received By: Jodi Henson	
Relinquished By:	Date: Time:	Received By:	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 14.3 Corrected Temp. °C	Sample Condition Cool: ☐ Yes ☑ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials)

Verbal Result: ☐ Yes ☐ No Add'l Phone #:
All Results are emailed. Please provide Email address:

REMARKS: Bill TO Devon

Turnaround Time: Standard ☑ Rush ☐
Thermometer ID #113
Correction Factor None

Bacteria (only) Sample Condition
Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No
Observed Temp. °C
Corrected Temp. °C

FORM-006 R 3.1 08/04/20

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

Received by OCD: 3/17/2021 12:00:16 AM

Released to Imaging: 1/12/2023 10:12:22 AM

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

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

CONDITIONS

Action 20944

CONDITIONS

Operator: Pima Environmental Services, LLC 5614 N Lovington Hwy Hobbs, NM 88240	OGRID: 329999
	Action Number: 20944
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	1/12/2023