REMEDIATION WORK PLAN

PREPARED FOR:
DEVON ENERGY PRODUCTION, LP.

PREPARED BY:
PIMA ENVIRONMENTAL SERIVCES, LLC.

March 25, 2025

PIMA ENVIRONMENTAL SERVICES, LLC.
5614 N LOVINGTON HWY, HOBBS, NM 88240

March 25, 2025

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

RE: REMEDIATION WORK PLAN
LOCATION: Boomslang 14 CTB 1
WELL API: 30-025-42920
GPS: 32.224333, -103.539605
INCIDENT LOCATION: B-14-T24S-R33E
COUNTY: Lea
NMOCD REF. NO. nCH1816634490

Pima Environmental Services, LLC. (Pima) has been contracted by Devon Energy Production Company, LP (Devon) to prepare this Remediation Work Plan for a produced water and crude oil release that occurred at the Boomslang 14 CTB 1 (Boomslang). The initial C-141 Form was approved on June 15, 2018 (Appendix C). This incident was assigned Incident ID: nCH1816634490, by the New Mexico Oil Conservation Division (NMOCD).

SITE CHARACTERIZATION

The Boomslang is located approximately twenty-one (21) miles northwest of Jal, NM on privately owned land. This spill site is in Unit B, Section 14, Township 24S, Range 33E, Latitude 32.224333 Longitude -103.539605, Lea County, NM. Figure 1 references a Location Map.

Per the New Mexico Bureau of Geology and Mineral Resources, the geology is in the Eolian and piedmont deposits. Interlayed 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. The soil in this area is made up of two different types: Pyote and Maljamar fine sands, and Berino-Cacique fine sandy loams association according to the United States Department of Agriculture Natural Resources Conservation Service soil survey (Appendix B). Both have 0 to 3 percent slopes and both have drainage courses that are well drained. There is a low potential for karst geology to be present in the area of the Boomslang (Figure 3). A Topographic Map can be found in Figure 2.

According to the New Mexico Office of the State Engineer, depth to the nearest groundwater in this area is greater than 105' feet below grade surface (BGS). According to the United States Geological Survey (USGS), the nearest groundwater is 63 feet BGS. The groundwater information from C-04919 establishes a lack of groundwater at 105' bgs and is located 0.06 miles from the Boomslang. This POD was drilled and recorded by H & R Enterprises, LLC on December 16, 2024. The well bore was left open for the required 72-hour timeframe then checked for saturation. No saturation or water-bearing soil was encountered, the well was then plugged. Depth to groundwater at the Boomslang will be classified as >100' BGS. The regulatory limits are as follows: Chlorides should be less than 20,000 mg/k, TPH (GRO+DRO+MRO) should be less than 2,500 mg/kg, BTEX should be less than 50 mg/kg, and Benzene should be less than 10 mg/kg. The closest waterway is Bell Lake, located approximately 2.11 miles to the west of this location. Water surveys, pod information, and water-related maps can be found in Appendix A.

RELEASE & BACKGROUND INFORMATION

nCH1816634490: On May 31, 2018, the lease operator arrived on location and found a leak in the fire tube. The production was switched to another heater to stop the release. Approximately 24.1 bbls of produced water and 10.27 bbls of crude oil were released onto the pad. No fluid left location. 0 bbls were recovered. Devon Energy contracted White Buffalo Environmental to commence remediation efforts. SMA was contracted by Devon Energy to verify remediation was completed by White Buffalo. SMA found that White Buffalo conducted a scrape to a depth of 0.5' BGS and removed the contaminated soil. Per the attached photos in Appendix D, SMA concluded that the remediation was completed, and proceeded to conduct a confirmation sampling event. SMA's Site and Sample Location Map can be found in Figure 5, the complete Laboratory Report is attached in Appendix E. SMA submitted a closure report for the incident that was subsequently denied.

On February 4, 2021, the NMOCD rejected the submitted Application for administrative approval of a release notification and corrective action (C-141), for incident ID (n#) nCH1816634490, for the following reasons:

- **The depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than 1/2 mile away from the site, and data should be no more than 25 years old, and well construction information should be provided. The responsible party may choose to remediate to the most stringent levels listed in Table 1 in lieu of drilling to determine depth to groundwater.**

  In response to this rejection, Devon had a bore hole drilled to determine depth to groundwater information. Updated groundwater information is included in this report.

- **Horizontal delineation has not been completed. The values for determination of horizontal impact are derived by either "background" value as determined appropriate to Rule 29, or Table 1 / Closure Criteria for releases where groundwater is at a depth of 50 feet or less.**

  In response to delineation not being completed, see below proposed remediation plan.

PROPOSED REMEDIATION PLAN

In response to the rejected report, Pima would like to propose the following Remediation Plan for consideration and approval:

1. Included in this Remediation Work Plan is a Proposed Sampling Map (Figure 5) showing eleven (11) vertical samples and seven (7) horizontal samples to be collected as delineation/exploration samples. Pima is requesting a variance that these samples be collected representing a surface area of no more than 400 ft2 and will be collected from surface, 1', 2', 3', and 4' bgs.

2. In the event that impact is encountered and samples come back over the regulatory limits, Devon Energy proposes to dig and haul contaminated soil to remediate/reclaim the site.

3. If the samples come back under the regulatory limits, Devon Energy is requesting a variance to use delineation samples as closure confirmation samples. Devon Energy will submit the required 48-hour sampling notification before collecting the delineation/exploration samples.

Should you have any questions or need additional information, please feel free to contact:
Devon Energy Production – Jim Raley at 575-689-7597 or jim.raley@dvn.com.
Pima Environmental – DelRae Geller at 806-724-5391 or delrae@pimaoil.com.
Respectfully,

DelRae Geller
DelRae Geller
Project Manager
Pima Environmental Services, LLC

ATTACHMENTS

FIGURES:

1- Location Map

2- Topographic Map

3- Karst Map

4- SMA's Site and Sample Location Map

5- Proposed Sampling Map

APPENDICES:

Appendix A – Water Surveys and Water Related Maps

Appendix B – Soil Survey, Geological Data

Appendix C – C-141 Form

Appendix D – Photographic Documentation

Appendix E – SMA's Laboratory Report

FIGURES

1- Location Map

2- Topographic Map

3- Karst Map

4- SMA's Site and Sample Location Map

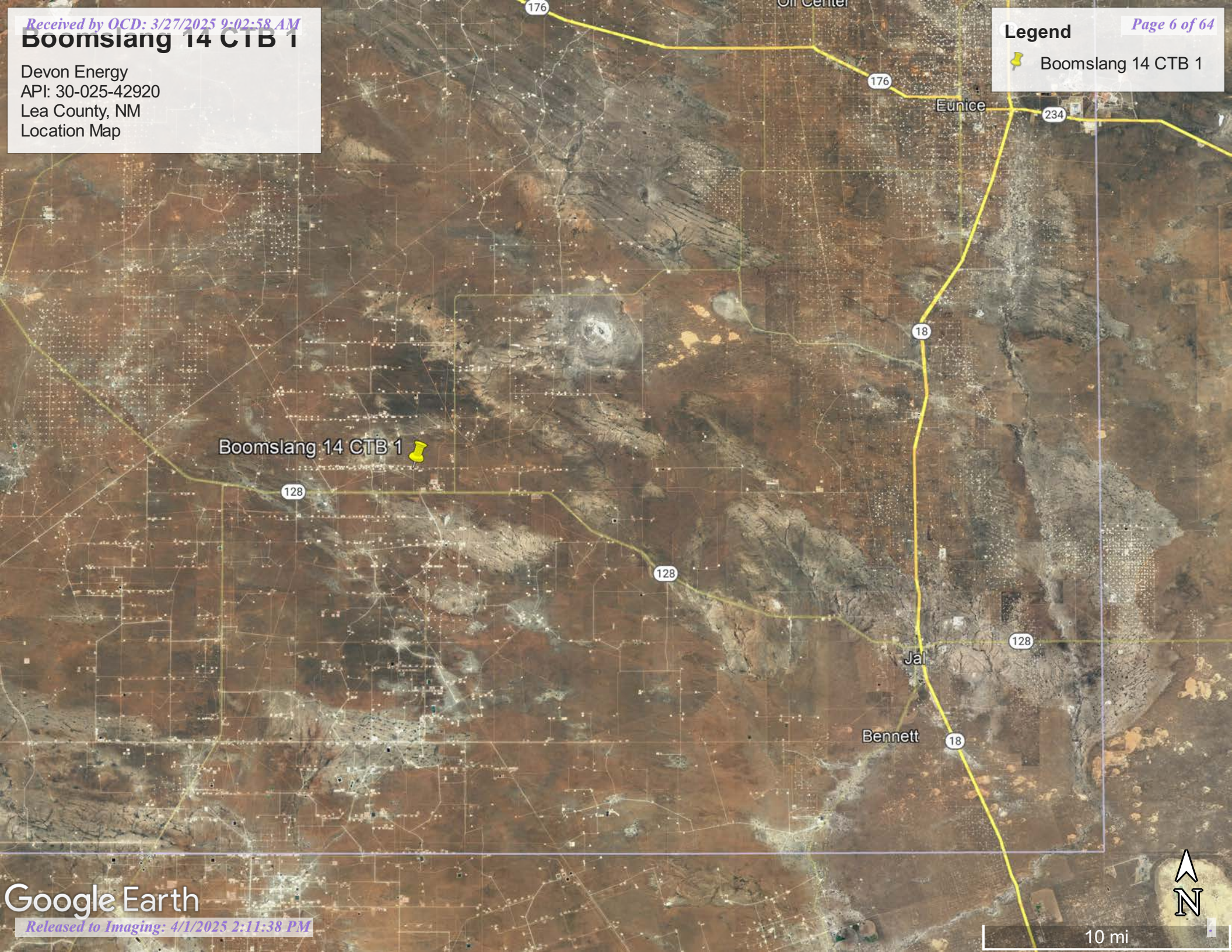
5- Proposed Sampling Map

Boomslang 14 CTB 1

Devon Energy
API: 30-025-42920
Lea County, NM
Location Map

Legend

Boomslang 14 CTB 1

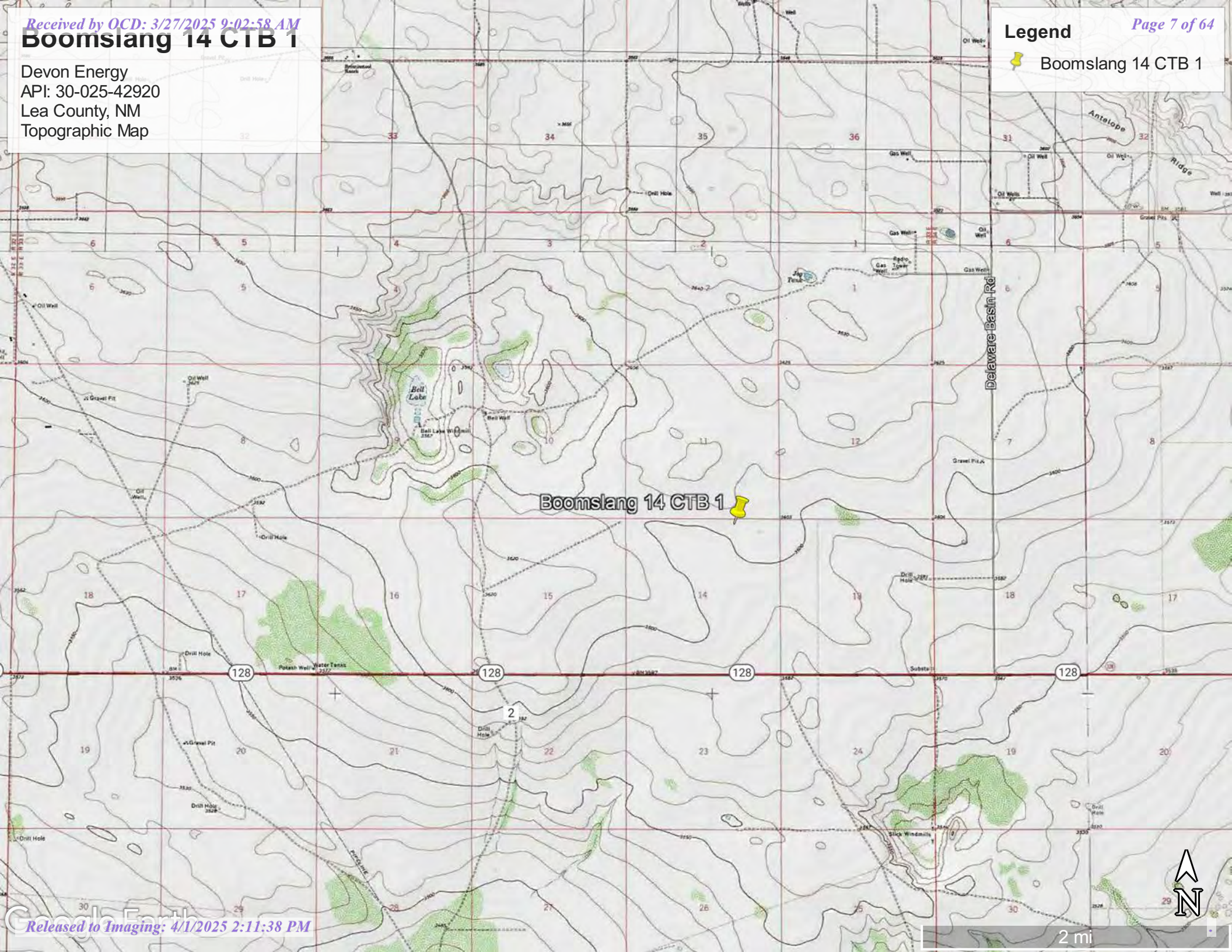


Boomslang 14 CTB 1

Devon Energy
API: 30-025-42920
Lea County, NM
Topographic Map

Legend

Boomslang 14 CTB 1

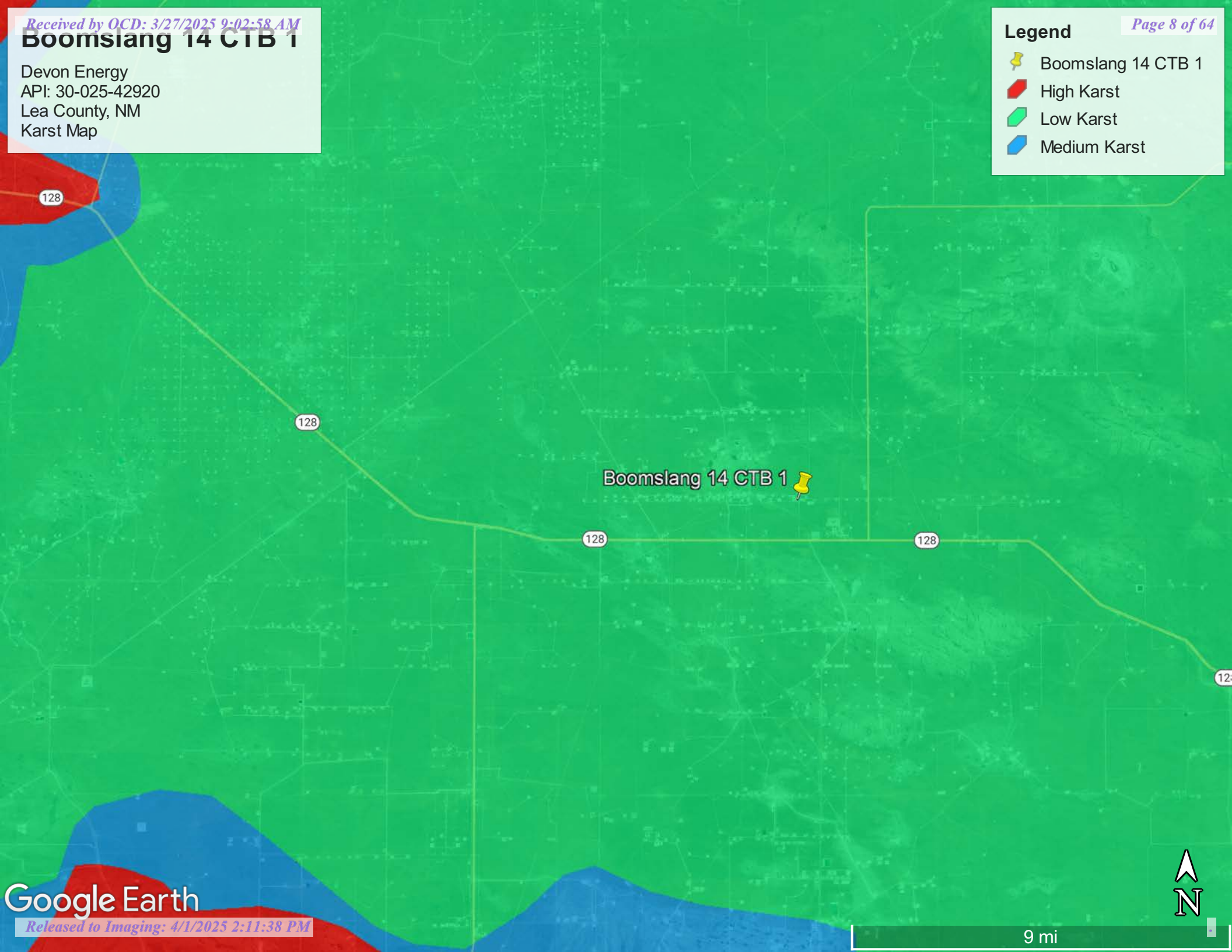


Boomslang 14 CTB 1

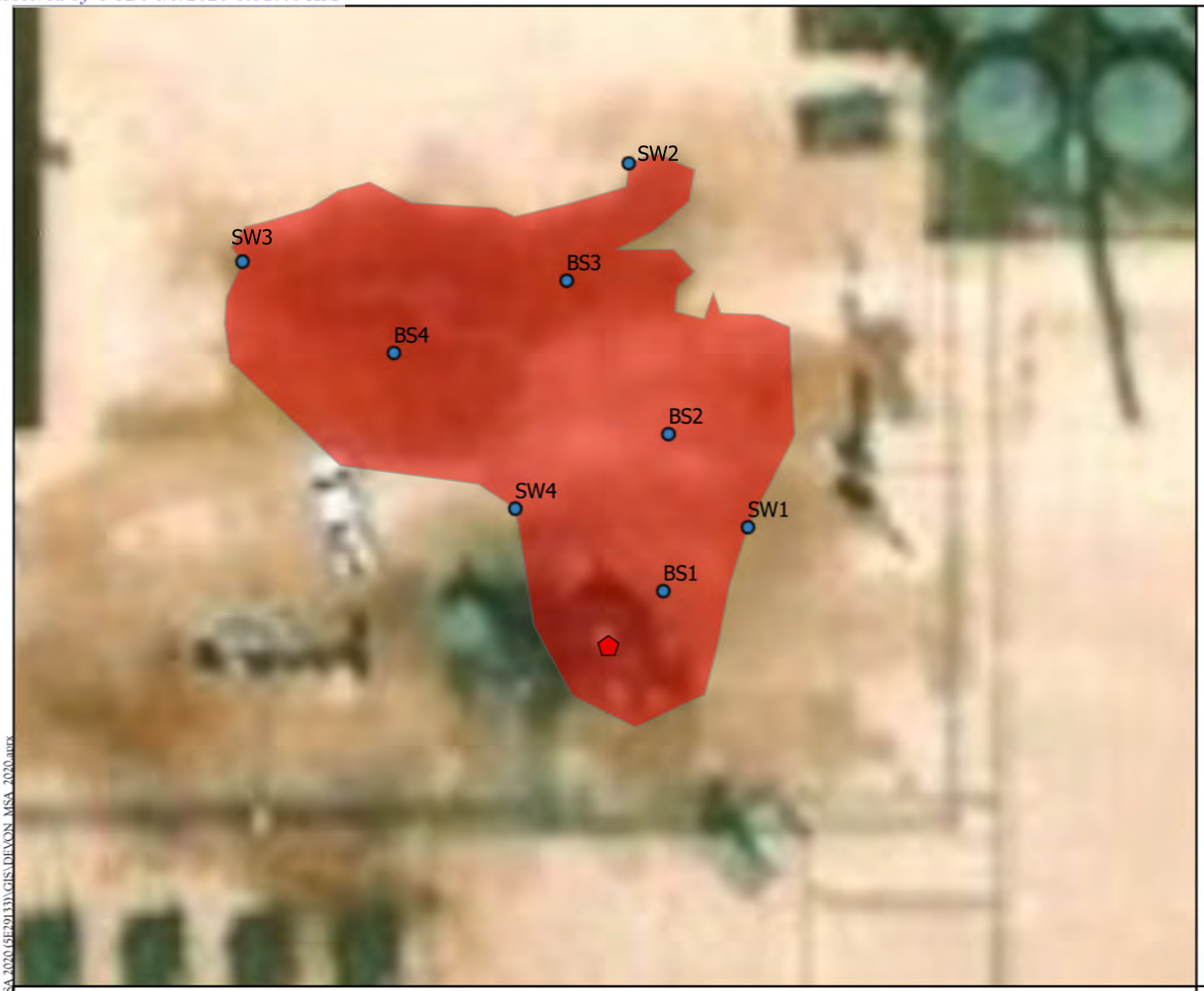
Devon Energy
API: 30-025-42920
Lea County, NM
Karst Map

Legend

- Boomslang 14 CTB 1
- High Karst
- Low Karst
- Medium Karst



Google Earth



Legend

- Point of Release
- Soil Sample
- Release Area

N

0 5 10 20 30

Feet

Site and Sample Location Map

(1RP-5097) *Boomslang 14 CTB 1 - Devon Energy Production Company*

UL: B S: 14 T: 24S R: 33E Lea County, New Mexico

Figure 3

\\192.168.72.10\Projects\5 Devon MSA 2020 (5E29133)\GIS\DEVON_MSA_2020.mxds

Date Saved: 3/24/2020

Revisions

By: Date: Descr:

By: Date: Descr:

Drawn Lynn A. Acosta

Date 3/25/2020

Checked

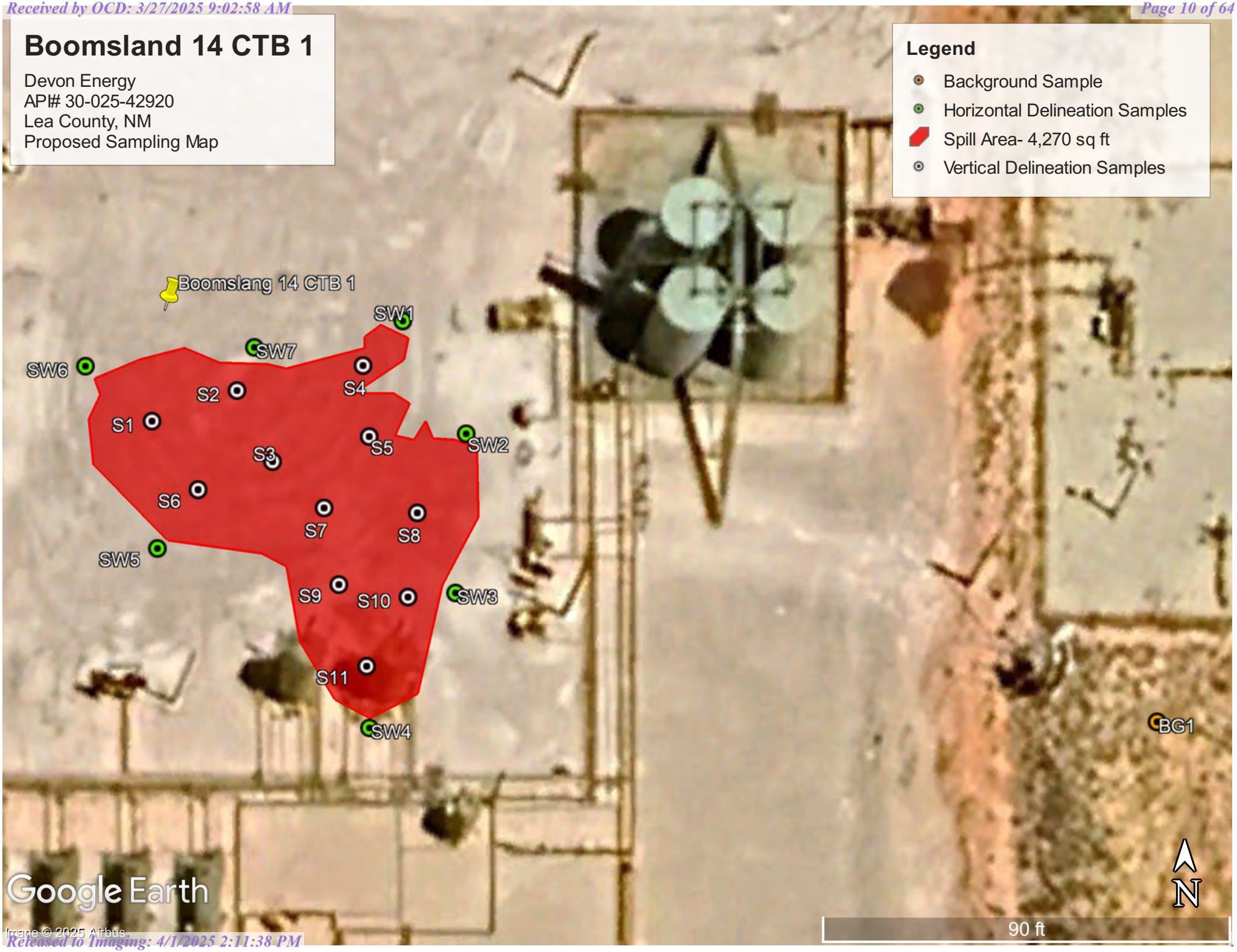
Approved

SMA

201 South Halaguena Street
Carlsbad, New Mexico 88221
(575) 689-7040
Serving the Southwest & Rocky Mountains

Boomsland 14 CTB 1

Devon Energy
API# 30-025-42920
Lea County, NM
Proposed Sampling Map



APPENDIX A

OSE Water Survey

USGS Water Survey

Water Related Maps

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.) Pod 1	WELL TAG ID NO.	OSE FILE NO(S). C-04919
WELL OWNER NAME(S) Devon Energy Production		PHONE (OPTIONAL)
WELL OWNER MAILING ADDRESS 6488 Seven Rivers HWY		CITY Artesia STATE NM ZIP 88210

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	13	29.0856	N
	LONGITUDE	103	32	25.7382	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHJIP, RANGE) WHERE AVAILABLE

S4 T24s R33e

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD-1862	James Hawley	H&R Enterprises, LLC

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
12-16-24	12-16-24	105'	105'	N/A

COMPLETED WELL IS: ☐ ARTESIAN *add Centralizer info below ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT) N/A

DATE STATIC MEASURED 12-23-24

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☑ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER – SPECIFY:

CHECK HERE IF PITLESS ADAPTER IS INSTALLED ☐

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0'	105'	6'	No casing left in hole				

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL *(if using Centralizers for Artesian wells- indicate the spacing below)	AMOUNT (cubic feet)	METHOD OF PLACEMENT
			N/A		

FOR OSE INTERNAL USE WR-20 WELL RECORD & LOG (Version 09/22/2022)

FILE NO.	POD NO.	TRN NO.
LOCATION	WELL TAG ID NO.	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES **(attach supplemental sheets to fully describe all units)**	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0'	15'	15'	Sandy Caliche	Y ✓N	
15'	20'	5'	Sand with Gravel	Y ✓N	
20'	60'	40"	Sand	Y ✓N	
60'	105'	45'	Sandy Clay	Y ✓N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☑ OTHER – SPECIFY: DTGW Bore

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

WELL TEST: TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION: Depth to groundwater bore was gauged for water on 12-23-24. DTGW bore was dry. Temporary well casing was removed, bore hole was backfilled with drill cutting to 10' BGS. Hydrated bentonite hole plug was poured from 10' BGS to surface.

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Nathan Smelcer

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:

James Hawley — 1-13-25

SIGNATURE OF DRILLER / PRINT SIGNEE NAME / DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 09/22/2022)

FILE NO.	POD NO.	TRN NO.	
LOCATION		WELL TAG ID NO.	PAGE 2 OF 2

PLUGGING RECORD

NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: C-04919-POD1

Well owner: Devon Energy Production Phone No.: _____

Mailing address: 6488 Seven Rivers HWY

City: Artesia State: NM Zip code: 88210

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: H&R Enterprises, LLC.

2) New Mexico Well Driller License No.: WD-1862 Expiration Date: 6-16-25

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): _____
Nathan Smelcer

4) Date well plugging began: 12-23-24 Date well plugging concluded: 12-23-24

5) GPS Well Location: Latitude: 32 deg, 13 min, 29.0856 sec
Longitude: 103 deg, 32 min, 25.7382 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 105' ft below ground level (bgl),
by the following manner: well sounder

7) Static water level measured at initiation of plugging: N/A ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 12-11-24

9) Were all plugging activities consistent with an approved plugging plan? yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	0' - 10' Hydrated Bentonite	Approx. 15 gallons	15 gallons	Pour	
	10' - 105' Drill Cuttibgs	Approx. 139 gallons	139 gallons	Pour	

MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

III. SIGNATURE:

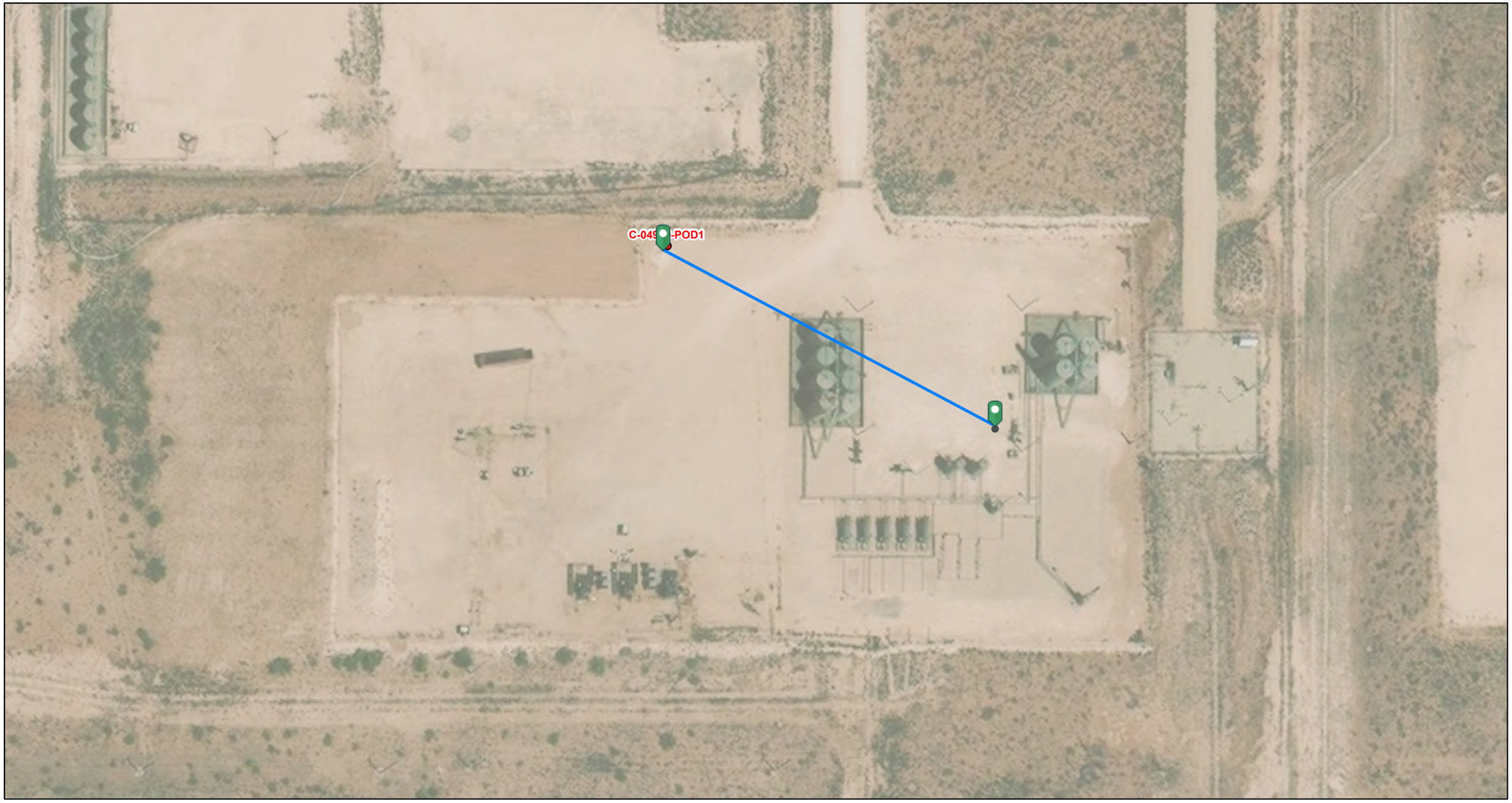
I, James Hawley, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

Signature of Well Driller

1-13-25
Date

Version: September 8, 2009
Page 2 of 2

OSE POD Location Map



3/25/2025, 9:49:08 AM

1:1,128

GIS WATERS PODs

Plugged

OSE District Boundary

Water Right Regulations

Closure Area

Artesian Planning Area

0 0.01 0.02 0.04 mi

0 0.02 0.04 0.07 km

Maxar, Microsoft, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community

Online web user

This is an unofficial map from the OSE's online application.

National Water Information System: Web Interface

USGS Water Resources

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

Click to hideNews Bulletins

- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- Full News

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

site_no list =

- 321403103300301

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

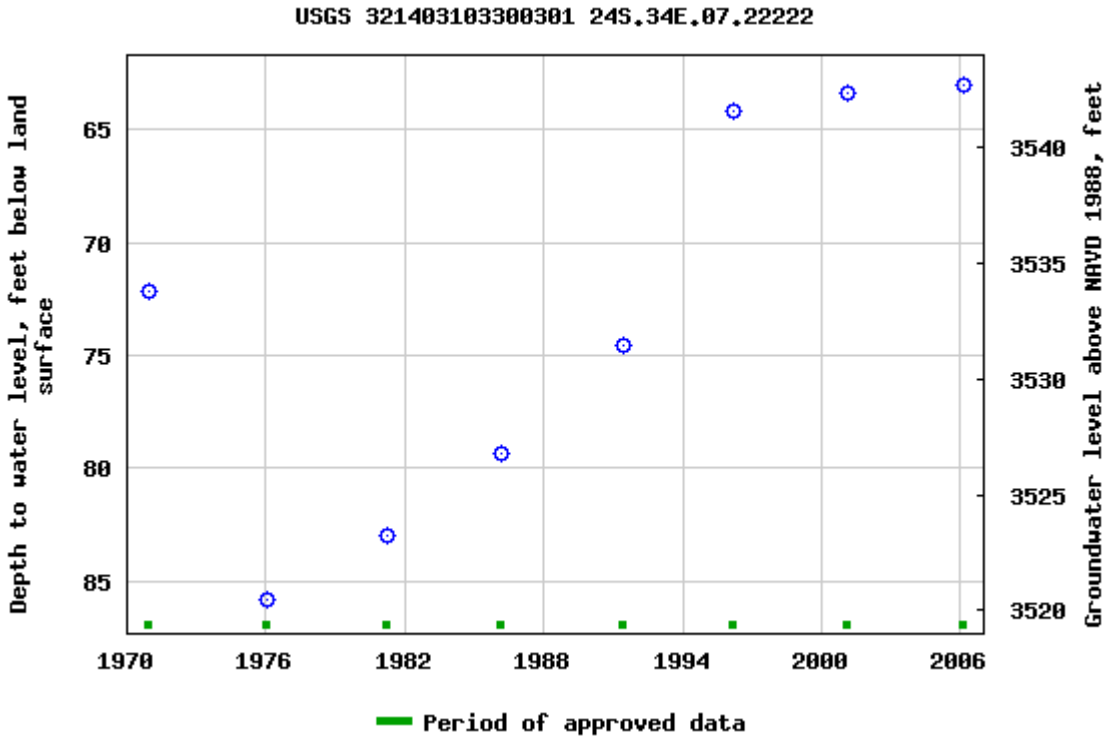
USGS 321403103300301 24S.34E.07.22222

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

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°14'03", Longitude 103°30'03" NAD27
Land-surface elevation 3,606 feet above NAVD88
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Ogallala Formation (121OGLL) 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

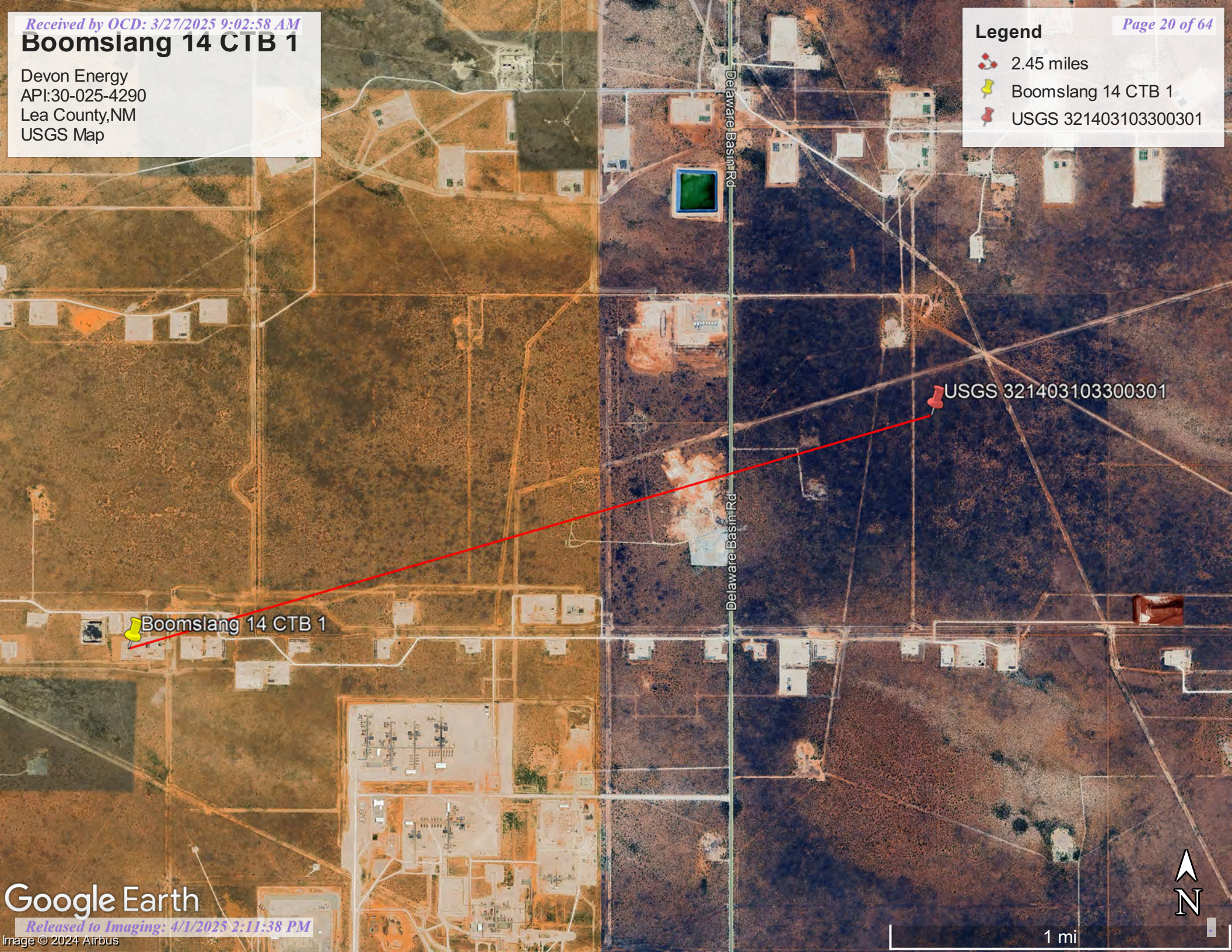
Subscribe for system changes
News

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: 2023-02-21 16:20:44 EST
0.64 0.5 nadww01

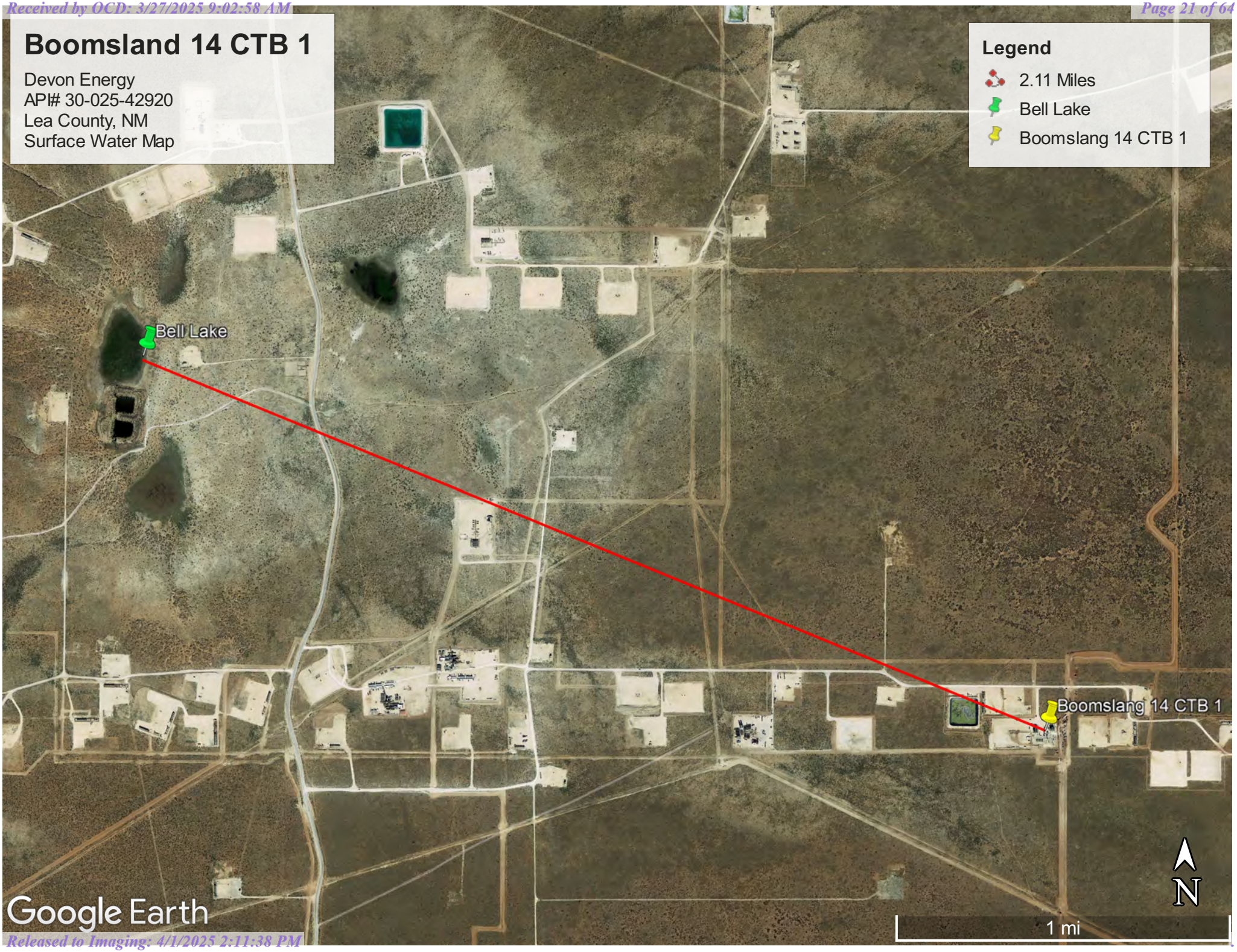
Boomslang 14 CTB 1

Devon Energy
API:30-025-4290
Lea County,NM
USGS Map



Boomsland 14 CTB 1

Devon Energy
API# 30-025-42920
Lea County, NM
Surface Water Map



National Flood Hazard Layer FIRMette

FEMA

103°32'41"W 32°13'43"N

103°32'4"W 32°13'12"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 2/21/2023 at 4:24 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.

U.S. Fish and Wildlife Service
National Wetlands Inventory

Wetlands Map

February 21, 2023

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

APPENDIX B

Soil Survey & Geological Data

Geologic Unit Map

Lea County, New Mexico

BE—Berino-Cacique loamy fine sands association

Map Unit Setting

National map unit symbol: dmpd
Elevation: 3,000 to 3,C
Mean annual precipitation: 10 to 13 inches
Mean annual air temperature: 60 to 62 degrees F
Frost-free period: 190 to 205 days
Farmland classification: Not prime farmland

Map Unit Composition

Berino and similar soils: 50 percent
Cacique and similar soils: 40 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Berino

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy eolian deposits derived from sedimentary rock over calcareous sandy alluvium derived from sedimentary rock

Typical profile

A - 0 to 6 inches: loamy fine sand
Btk - 6 to 60 inches: sandy clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
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 content: 40 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7c
Hydrologic Soil Group: B
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Description of Cacique

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Calcareous eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 12 inches: loamy fine sand
Bt - 12 to 28 inches: sandy clay loam
Bkm - 28 to 38 inches: cemented material

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 20 to 40 inches to petrocalcic
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7c
Hydrologic Soil Group: C
Ecological site: R070BD004NM - Sandy
Hydric soil rating: No

Minor Components

Maljamar

Percent of map unit: 6 percent
Ecological site: R077CY028TX - Limy Upland 16-21" PZ
Hydric soil rating: No

Palomas

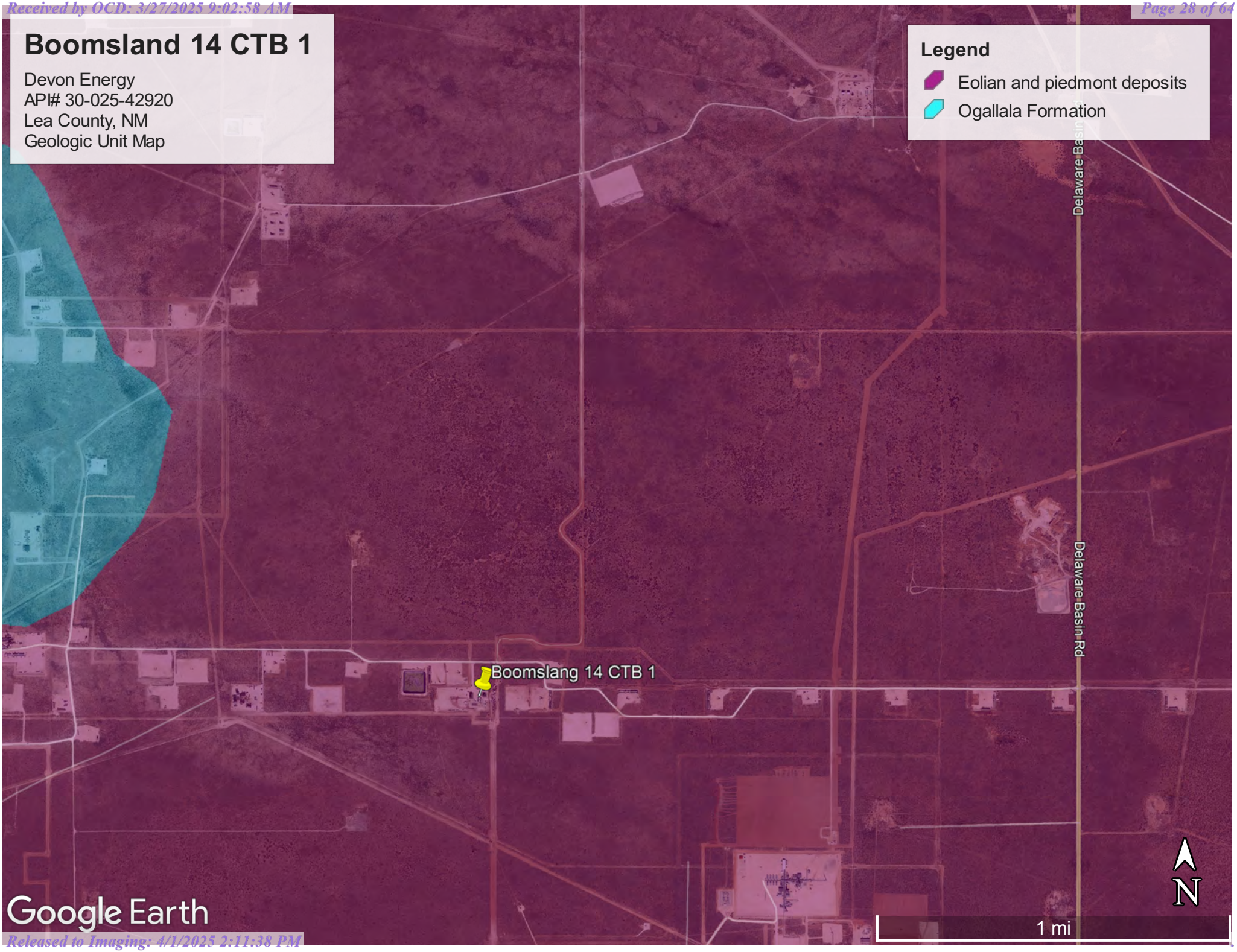
Percent of map unit: 4 percent
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Data Source Information

Soil Survey Area: Lea County, New Mexico
Survey Area Data: Version 19, Sep 8, 2022

Boomsland 14 CTB 1

Devon Energy
API# 30-025-42920
Lea County, NM
Geologic Unit Map



APPENDIX C

C-141

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Devon Energy Production Company	Contact Merle Lewis, Production Foreman
Address 6488 Seven Rivers Hwy Artesia, NM 88210	Telephone No. 575-748-3371
Facility Name Boomslang 14-23 Fed 1H (release occurred at the Boomslang 14 CTB 1)	Facility Type Oil

Surface Owner Private	Mineral Owner Federal	API No. 30-025-42920

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	14	24S	33E					Lea

Latitude_32.224333_ **Longitude**_103.539605_ NAD83

NATURE OF RELEASE

Type of Release Produced Water & Oil	Volume of Release 24.1bbls produced water & 10.27bbls oil	Volume Recovered 0bbls
Source of Release Heater treater	Date and Hour of Occurrence May 31, 2018 @ 4:00 AM MST	Date and Hour of Discovery May 31, 2018 @ 4:00 AM MST
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? NMOCD-Olivia Yu BLM-Shelly Tucker	
By Whom? Mike Shoemaker	Date and Hour 05/31/18 @ 10:41 PM MST	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

RECEIVED
By CHernandez at 10:31 am, Jun 15, 2018

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

Describe Cause of Problem and Remedial Action Taken.*
The lease operator arrived on location and found a leak in the fire tube. The production was switched to another heater to stop the release.

Describe Area Affected and Cleanup Action Taken.*
Approximately 24.1bbls produced water & 10.27bbls oil were released onto the pad. No fluid left location. 0 bbls were recovered. An Environmental contractor will be contacted to assist with further 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: Sheila Fisher	OIL CONSERVATION DIVISION
Printed Name: Sheila Fisher	Approved by Environmental Specialist: CH
Title: Field Admin Support	Approval Date: 6/15/2018 Expiration Date:
E-mail Address: Sheila.Fisher@dvn.com	Conditions of Approval: See attached directive Attached ☑
Date: 6/11/18 Phone: 575.748.1829	

* Attach Additional Sheets If Necessary

1RP-5097 nCH1816634490

pCH1816636894

Boomslang 14-23 Fed 1H(release occurred at the Boomslang 14 CTB 1)

24.1bbls pw & 10.27bls oil_5.31.18

devon

This map is for illustrative purposes only and is neither a legally recorded map nor survey and is not intended to be used as one. Devon makes no warranty, representation, or guarantee of any kind regarding this map.

WGS_1984_Web_Mercator_Auxiliary_Sphere
Prepared by: Sheila Fisher
Map is current as of: 14-Jun-2018

N

Miles
0 0.01 0.02 0.04 1:1,779

Operator/Responsible Party,

The OCD has received the form C-141 you provided on _6/14/2018_ regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number _1RP-5097__ has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

> *The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC.* [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District _1_ office in __Hobbs____ on or before _7/15/2018_. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

● Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

● Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

● Nominal detection limits for field and laboratory analyses must be provided.

● Composite sampling is not generally allowed.

● Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

●Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

● If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

● Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold
OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us

State of New Mexico
Oil Conservation Division

Incident ID	NCH1816634490
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NCH1816634490
District RP	
Facility ID	
Application ID	

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

Printed Name: Dale Woodall Title: Environmental Professional

Signature: _____ Date: _____

email: dale.woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: _____ Date: _____

Incident ID	NCH1816634490
District RP	
Facility ID	
Application ID	

Closure

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

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

[x] A scaled site and sampling diagram as described in 19.15.29.11 NMAC

[x] 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)

[x] Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

[x] 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: Dale Woodall Title: Environmental Professional

Signature: _____ Date: _____

email: dale.woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

APPENDIX D

Photographic Documentation


devon
BOOMSLANG 14 CTB 1
SL: SEC.14–T24S–R33E 200' FNL & 1570' FEL
LEA COUNTY, NEW MEXICO
LAT. N 32° 13' 27.55" LONG. W 103 °32' 22.83"
DEVON CORPORATE CONTACT: 800–361–3377

APPENDIX E

SMA's Laboratory 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

March 18, 2020

Ashley Maxwell

Souder, Miller & Associates
201 S Halagueno
Carlsbad, NM 88221
TEL: (575) 689-8801
FAX:

RE: Boomslang 14CTB1 IRP 5097 OrderNo.: 2003483

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 8 sample(s) on 3/11/2020 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 **2003483**
Date Reported: **3/18/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BS1
Project: Boomslang 14CTB1 IRP 5097
Collection Date: 3/7/2020 3:39:00 PM
Lab ID: 2003483-001 **Matrix:** SOIL **Received Date:** 3/11/2020 8:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	3/13/2020 5:06:40 PM	51087
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	39	9.6		mg/Kg	1	3/16/2020 6:43:41 PM	51053
Motor Oil Range Organics (MRO)	110	48		mg/Kg	1	3/16/2020 6:43:41 PM	51053
Surr: DNOP	109	55.1-146		%Rec	1	3/16/2020 6:43:41 PM	51053
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/14/2020 1:39:19 PM	51042
Surr: BFB	81.7	66.6-105		%Rec	1	3/14/2020 1:39:19 PM	51042
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	3/14/2020 1:39:19 PM	51042
Toluene	ND	0.048		mg/Kg	1	3/14/2020 1:39:19 PM	51042
Ethylbenzene	ND	0.048		mg/Kg	1	3/14/2020 1:39:19 PM	51042
Xylenes, Total	ND	0.095		mg/Kg	1	3/14/2020 1:39:19 PM	51042
Surr: 4-Bromofluorobenzene	90.3	80-120		%Rec	1	3/14/2020 1:39:19 PM	51042

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 **2003483**
Date Reported: **3/18/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BS2
Project: Boomslang 14CTB1 IRP 5097
Collection Date: 3/7/2020 3:42:00 PM
Lab ID: 2003483-002 **Matrix:** SOIL **Received Date:** 3/11/2020 8:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	3/13/2020 5:19:01 PM	51087
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	10	9.7		mg/Kg	1	3/13/2020 3:40:10 PM	51053
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/13/2020 3:40:10 PM	51053
Surr: DNOP	110	55.1-146		%Rec	1	3/13/2020 3:40:10 PM	51053
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/14/2020 2:02:43 PM	51042
Surr: BFB	86.1	66.6-105		%Rec	1	3/14/2020 2:02:43 PM	51042
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	3/14/2020 2:02:43 PM	51042
Toluene	ND	0.047		mg/Kg	1	3/14/2020 2:02:43 PM	51042
Ethylbenzene	ND	0.047		mg/Kg	1	3/14/2020 2:02:43 PM	51042
Xylenes, Total	ND	0.093		mg/Kg	1	3/14/2020 2:02:43 PM	51042
Surr: 4-Bromofluorobenzene	94.8	80-120		%Rec	1	3/14/2020 2:02:43 PM	51042

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 **2003483**
Date Reported: **3/18/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BS3
Project: Boomslang 14CTB1 IRP 5097
Collection Date: 3/7/2020 3:46:00 PM
Lab ID: 2003483-003 **Matrix:** SOIL **Received Date:** 3/11/2020 8:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	3/13/2020 5:56:05 PM	51099
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	730	94		mg/Kg	10	3/16/2020 7:05:46 PM	51053
Motor Oil Range Organics (MRO)	1400	470		mg/Kg	10	3/16/2020 7:05:46 PM	51053
Surr: DNOP	0	55.1-146	S	%Rec	10	3/16/2020 7:05:46 PM	51053
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	23		mg/Kg	5	3/14/2020 2:26:09 PM	51042
Surr: BFB	86.5	66.6-105		%Rec	5	3/14/2020 2:26:09 PM	51042
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.12		mg/Kg	5	3/14/2020 2:26:09 PM	51042
Toluene	ND	0.23		mg/Kg	5	3/14/2020 2:26:09 PM	51042
Ethylbenzene	ND	0.23		mg/Kg	5	3/14/2020 2:26:09 PM	51042
Xylenes, Total	ND	0.46		mg/Kg	5	3/14/2020 2:26:09 PM	51042
Surr: 4-Bromofluorobenzene	94.7	80-120		%Rec	5	3/14/2020 2:26:09 PM	51042

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 **2003483**
Date Reported: **3/18/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BS4
Project: Boomslang 14CTB1 IRP 5097
Collection Date: 3/7/2020 3:53:00 PM
Lab ID: 2003483-004 **Matrix:** SOIL **Received Date:** 3/11/2020 8:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	3/13/2020 6:08:26 PM	51099
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	120	9.8		mg/Kg	1	3/16/2020 7:28:05 PM	51053
Motor Oil Range Organics (MRO)	180	49		mg/Kg	1	3/16/2020 7:28:05 PM	51053
Surr: DNOP	114	55.1-146		%Rec	1	3/16/2020 7:28:05 PM	51053
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/14/2020 2:49:46 PM	51042
Surr: BFB	85.4	66.6-105		%Rec	1	3/14/2020 2:49:46 PM	51042
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	3/14/2020 2:49:46 PM	51042
Toluene	ND	0.046		mg/Kg	1	3/14/2020 2:49:46 PM	51042
Ethylbenzene	ND	0.046		mg/Kg	1	3/14/2020 2:49:46 PM	51042
Xylenes, Total	ND	0.092		mg/Kg	1	3/14/2020 2:49:46 PM	51042
Surr: 4-Bromofluorobenzene	93.2	80-120		%Rec	1	3/14/2020 2:49:46 PM	51042

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 **2003483**
Date Reported: **3/18/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW1
Project: Boomslang 14CTB1 IRP 5097
Collection Date: 3/7/2020 4:00:00 PM
Lab ID: 2003483-005 **Matrix:** SOIL **Received Date:** 3/11/2020 8:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	3/13/2020 6:45:29 PM	51099
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	290	9.1		mg/Kg	1	3/13/2020 4:16:53 PM	51053
Motor Oil Range Organics (MRO)	470	46		mg/Kg	1	3/13/2020 4:16:53 PM	51053
Surr: DNOP	100	55.1-146		%Rec	1	3/13/2020 4:16:53 PM	51053
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/14/2020 4:24:05 PM	51042
Surr: BFB	84.0	66.6-105		%Rec	1	3/14/2020 4:24:05 PM	51042
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	3/14/2020 4:24:05 PM	51042
Toluene	ND	0.047		mg/Kg	1	3/14/2020 4:24:05 PM	51042
Ethylbenzene	ND	0.047		mg/Kg	1	3/14/2020 4:24:05 PM	51042
Xylenes, Total	ND	0.094		mg/Kg	1	3/14/2020 4:24:05 PM	51042
Surr: 4-Bromofluorobenzene	91.1	80-120		%Rec	1	3/14/2020 4:24:05 PM	51042

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 **2003483**
Date Reported: **3/18/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW2
Project: Boomslang 14CTB1 IRP 5097
Collection Date: 3/7/2020 4:04:00 PM
Lab ID: 2003483-006 **Matrix:** SOIL **Received Date:** 3/11/2020 8:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	3/13/2020 7:22:32 PM	51099
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	200	9.8		mg/Kg	1	3/13/2020 4:35:15 PM	51053
Motor Oil Range Organics (MRO)	320	49		mg/Kg	1	3/13/2020 4:35:15 PM	51053
Surr: DNOP	102	55.1-146		%Rec	1	3/13/2020 4:35:15 PM	51053
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/14/2020 4:47:44 PM	51042
Surr: BFB	79.8	66.6-105		%Rec	1	3/14/2020 4:47:44 PM	51042
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	3/14/2020 4:47:44 PM	51042
Toluene	ND	0.049		mg/Kg	1	3/14/2020 4:47:44 PM	51042
Ethylbenzene	ND	0.049		mg/Kg	1	3/14/2020 4:47:44 PM	51042
Xylenes, Total	ND	0.098		mg/Kg	1	3/14/2020 4:47:44 PM	51042
Surr: 4-Bromofluorobenzene	86.7	80-120		%Rec	1	3/14/2020 4:47:44 PM	51042

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 **2003483**
Date Reported: **3/18/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW3
Project: Boomslang 14CTB1 IRP 5097
Collection Date: 3/7/2020 4:07:00 PM
Lab ID: 2003483-007 **Matrix:** SOIL **Received Date:** 3/11/2020 8:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	61		mg/Kg	20	3/13/2020 7:34:52 PM	51099
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	270	9.9		mg/Kg	1	3/13/2020 4:44:22 PM	51053
Motor Oil Range Organics (MRO)	460	49		mg/Kg	1	3/13/2020 4:44:22 PM	51053
Surr: DNOP	113	55.1-146		%Rec	1	3/13/2020 4:44:22 PM	51053
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/14/2020 5:11:24 PM	51042
Surr: BFB	83.8	66.6-105		%Rec	1	3/14/2020 5:11:24 PM	51042
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	3/14/2020 5:11:24 PM	51042
Toluene	ND	0.050		mg/Kg	1	3/14/2020 5:11:24 PM	51042
Ethylbenzene	ND	0.050		mg/Kg	1	3/14/2020 5:11:24 PM	51042
Xylenes, Total	ND	0.099		mg/Kg	1	3/14/2020 5:11:24 PM	51042
Surr: 4-Bromofluorobenzene	91.4	80-120		%Rec	1	3/14/2020 5:11:24 PM	51042

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 **2003483**
Date Reported: **3/18/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW4
Project: Boomslang 14CTB1 IRP 5097
Collection Date: 3/7/2020 4:10:00 PM
Lab ID: 2003483-008 **Matrix:** SOIL **Received Date:** 3/11/2020 8:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	3/13/2020 7:47:13 PM	51099
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	220	9.6		mg/Kg	1	3/13/2020 4:53:30 PM	51053
Motor Oil Range Organics (MRO)	370	48		mg/Kg	1	3/13/2020 4:53:30 PM	51053
Surr: DNOP	108	55.1-146		%Rec	1	3/13/2020 4:53:30 PM	51053
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/14/2020 5:35:03 PM	51042
Surr: BFB	83.3	66.6-105		%Rec	1	3/14/2020 5:35:03 PM	51042
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	3/14/2020 5:35:03 PM	51042
Toluene	ND	0.046		mg/Kg	1	3/14/2020 5:35:03 PM	51042
Ethylbenzene	ND	0.046		mg/Kg	1	3/14/2020 5:35:03 PM	51042
Xylenes, Total	ND	0.092		mg/Kg	1	3/14/2020 5:35:03 PM	51042
Surr: 4-Bromofluorobenzene	90.2	80-120		%Rec	1	3/14/2020 5:35:03 PM	51042

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		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2003483**
30-Apr-20

Client: Souder, Miller & Associates
Project: Boomslang 14CTB1 IRP 5097

Sample ID: **MB-51087**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **51087**	RunNo: **67280**							
Prep Date: **3/13/2020**	Analysis Date: **3/13/2020**	SeqNo: **2319975**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-51087**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **51087**	RunNo: **67280**							
Prep Date: **3/13/2020**	Analysis Date: **3/13/2020**	SeqNo: **2319976**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.0	90	110			

Sample ID: **MB-51099**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **51099**	RunNo: **67280**							
Prep Date: **3/13/2020**	Analysis Date: **3/13/2020**	SeqNo: **2320005**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-51099**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **51099**	RunNo: **67280**							
Prep Date: **3/13/2020**	Analysis Date: **3/13/2020**	SeqNo: **2320006**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.9	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#: **2003483**

30-Apr-20

Client: Souder, Miller & Associates

Project: Boomslang 14CTB1 IRP 5097

Sample ID: **LCS-51053**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **51053**	RunNo: **67261**
Prep Date: **3/12/2020**	Analysis Date: **3/13/2020**	SeqNo: **2319831** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	99.3	70	130			
Surr: DNOP	4.8		5.000		96.3	55.1	146			

Sample ID: **MB-51053**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **51053**	RunNo: **67261**
Prep Date: **3/12/2020**	Analysis Date: **3/13/2020**	SeqNo: **2319833** 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	11		10.00		106	55.1	146			

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#: **2003483**

30-Apr-20

Client: Souder, Miller & Associates

Project: Boomslang 14CTB1 IRP 5097

Sample ID: **mb-51042**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **51042**	RunNo: **67276**
Prep Date: **3/11/2020**	Analysis Date: **3/14/2020**	SeqNo: **2318760** 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	830		1000		83.2	66.6	105			

Sample ID: **lcs-51042**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **51042**	RunNo: **67276**
Prep Date: **3/11/2020**	Analysis Date: **3/14/2020**	SeqNo: **2318761** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	86.6	80	120			
Surr: BFB	960		1000		96.4	66.6	105			

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#: **2003483**
30-Apr-20

Client: Souder, Miller & Associates
Project: Boomslang 14CTB1 IRP 5097

Sample ID: **mb-51042**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **PBS**	Batch ID: **51042**	RunNo: **67276**							
Prep Date: **3/11/2020**	Analysis Date: **3/14/2020**	SeqNo: **2318870**	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	0.91		1.000		90.8	80	120			

Sample ID: **LCS-51042**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **LCSS**	Batch ID: **51042**	RunNo: **67276**							
Prep Date: **3/11/2020**	Analysis Date: **3/14/2020**	SeqNo: **2318871**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.025	1.000	0	83.3	80	120			
Toluene	0.86	0.050	1.000	0	85.7	80	120			
Ethylbenzene	0.87	0.050	1.000	0	87.3	80	120			
Xylenes, Total	2.6	0.10	3.000	0	88.0	80	120			
Surr: 4-Bromofluorobenzene	0.94		1.000		93.8	80	120			

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

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: **SMA-CARLSBAD** Work Order Number: **2003483** RcptNo: **1**

Received By: **Yazmine Garduno** **3/11/2020 8:20:00 AM**

Completed By: **Yazmine Garduno** **3/11/2020 12:39:33 PM**

Reviewed By: ENM 3/11/20

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 ☐
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: JR 3/11/20

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	5.3	Good				
2	4.2	Good				

Chain-of-Custody Record

Client: ~~XTO~~ SMA - Carlsbad

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☑ Rush 5 day turn

Project Name: Boomslang 14 CTB1 IRP-5370

Project #: 20715181

Project Manager: Ashley Maxwell

Sampler: CAA

On Ice: ☒ Yes ☐ No

# of Coolers: 2

Cooler Temp(including CF): 5.3(0)=5.3 (°C)
4.2(0)=4.2

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. 2003483	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)
3/7/20	1539	Soil	BS 1	4oz		-001	X	X					X			
	1542		BS 2			-002	X	X					X			
	1546		BS 3			-003	X	X					X			
	1553		BS 4			-004	X	X					X			
	1600		SW 1			-005	X	X					X			
	1604		SW 2			-006	X	X					X			
	1607		SW 3			-007	X	X					X			
	1610		SW 4			-008	X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
					3/10/20	1430
Date: 3/10/20	Time: 1900	Relinquished by:	Received by:	Via:	Date	Time
				courier	3/11/20	0820

Remarks:
Direct Bill: Devon
Lupe Carrasco

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.

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS

Action 446164

QUESTIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 446164
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nCH1816634490**
Incident Name	**NCH1816634490 BOOMSLANG 14 CTB 1 @ 30-025-42920**
Incident Type	**Release Other**
Incident Status	**Remediation Plan Received**
Incident Well	**[30-025-42920] BOOMSLANG 14 23 FEDERAL #001H**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	BOOMSLANG 14 CTB 1
Date Release Discovered	05/31/2018
Surface Owner	Private

Incident Details	
Please answer all the questions in this group.	
Incident Type	Release Other
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Equipment Failure | Other (Specify) | Crude Oil | Released: 10 BBL | Recovered: 0 BBL | Lost: 10 BBL.
Produced Water Released (bbls) Details	Cause: Equipment Failure | Other (Specify) | Produced Water | Released: 24 BBL | Recovered: 0 BBL | Lost: 24 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 446164
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**Yes**
Reasons why this would be considered a submission for a notification of a major release	**From paragraph A. "Major release" determine using:** **(1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.**
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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.

I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 03/27/2025

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State of New Mexico
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Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 446164
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). 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 in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	Direct Measurement
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1 and 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	61
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	2130
GRO+DRO (EPA SW-846 Method 8015M)	753
BTEX (EPA SW-846 Method 8021B or 8260B)	1
Benzene (EPA SW-846 Method 8021B or 8260B)	0.1
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	06/01/2018
On what date will (or did) the final sampling or liner inspection occur	03/07/2020
On what date will (or was) the remediation complete(d)	06/01/2025
What is the estimated surface area (in square feet) that will be reclaimed	4270
What is the estimated volume (in cubic yards) that will be reclaimed	80
What is the estimated surface area (in square feet) that will be remediated	4270
What is the estimated volume (in cubic yards) that will be remediated	80
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

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	Action Number: 446164
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	HALFWAY DISPOSAL AND LANDFILL [fEEM0112334510]
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	*Not answered.*
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
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.	
I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 03/27/2025
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 446164
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS (continued)

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	Action Number: 446164
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	***{Unavailable.}***

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	No

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CONDITIONS

Action 446164

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 446164
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	The Remediation Plan is Conditionally Approved. The Variance Request for 400 ft2 floor confirmation sample size is denied. This size of the release does not justify an alternative sampling plan. The Variance Request to use delineation samples as confirmation closure samples is denied. Confirmation samples should be collected every 200 ft2. All samples must be analyzed for all constituents listed in Table I of 19.15.29.12 NMAC. Floor confirmation samples should be delineated/excavated to meet closure criteria standards from Table 1 of the OCD Spill Rule for site assessment/characterization/depth to water determination. Sidewall/Edge samples should be delineated/excavated to 600 mg/kg for chlorides and 100 mg/kg for TPH to define the edge of the release. Please make sure that the edge of the release extent is accurately defined, especially around equipment. The work will need to be completed in 90 days after the report has been reviewed.	4/1/2025