



SITE INFORMATION

Closure Report
Colibri 10 AV Federal #024H
Incident #: NAPP2328241339
Lea County, New Mexico
Unit A Sec 10 T23S R32E
32.32591123°, -103.65681227°

Crude Oil Release

Point of Release: Petcock malfunction on sight glass of separator

Release Date: 10/7/2023

Volume Released: 9 barrels of crude oil

Volume Recovered: 9 barrels of crude oil

CARMONA RESOURCES



Prepared for:
Marathon Oil Corporation
990 Town and Country Blvd,
Houston, Texas 77024

Prepared by:
Carmona Resources, LLC
310 West Wall Street
Suite 500
Midland, Texas 79701

October 27, 2023

Oil Conservation Division, District
2 811 S. First Street
Artesia, New Mexico 88210

Re: Closure Report

Colibri 10 AV Federal #024H
Marathon Oil Corporation
Incident ID: NAPP2328241339
Site Location: Unit A, S10, T23S, R32E
(Lat 32.32591123°, Long -103.65681227°)
Lea County, New Mexico

Mr. Bratcher:

On behalf of Marathon Oil Corporation (Marathon), Carmona Resources, LLC has prepared this letter to document site activities for the Colibri 10 AV Federal #024H. The site is located at 32.32591123°, -103.65681227° within Unit A, S10, T23S, R32E, in Lea County, New Mexico (Figures 1 and 2).

1.0 Site Information and Background

Based on the initial C-141 obtained from the New Mexico Oil Conservation Division (NMOCD), the release was discovered on October 7, 2023, caused by a petcock malfunction on the sight glass of a separator. It resulted in the release of approximately nine (9) barrels of crude oil, and approximately nine (9) barrels of crude oil were recovered within the lined facility. See Figure 3. The initial C-141 form is attached in Appendix B.

2.0 Site Characterization and Groundwater

The site is located within a low karst area. Based on a review of the New Mexico Office of State Engineers and USGS databases, no known water sources are within a 0.50-mile radius of the location. The closest well is located approximately 0.75 miles northwest of the site in S03, T23S, R32E and was drilled in 1986. The well has a reported depth to groundwater of 196.65 feet below the ground surface (ft bgs). A copy of the associated point of diversion is attached in Appendix C.

3.0 NMAC Regulatory Criteria

Per the NMOCD regulatory criteria established in 19.15.29.12 NMAC, the following criteria were utilized in assessing the site.

- Benzene: 10 milligrams per kilogram (mg/kg).
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg.
- TPH: 100 mg/kg (GRO + DRO + MRO).
- Chloride: 600 mg/kg.

4.0 Liner Inspection Activities

On October 24, 2023, Carmona Resources, LLC conducted liner inspection activities to assess the liner's integrity within the facility. Before performing the liner inspection, the NMOCD division office was notified via email on October 20, 2023, per Subsection D of 19.15.29.12 NMAC. See Appendix B. Carmona Resources, LLC personnel inspected the liner visually and determined it to be intact with no integrity issues.

Refer to the Photolog.

5.0 Conclusions

Based on the liner inspection throughout the facility, no further actions are required at the site. The final C-141 is attached, and COG formally requests the closure of the spill. If you have any questions regarding this report or need additional information, please contact us at 432-813-1992.

Sincerely,

Carmona Resources, LLC



Mike Carmona
Environmental Manager

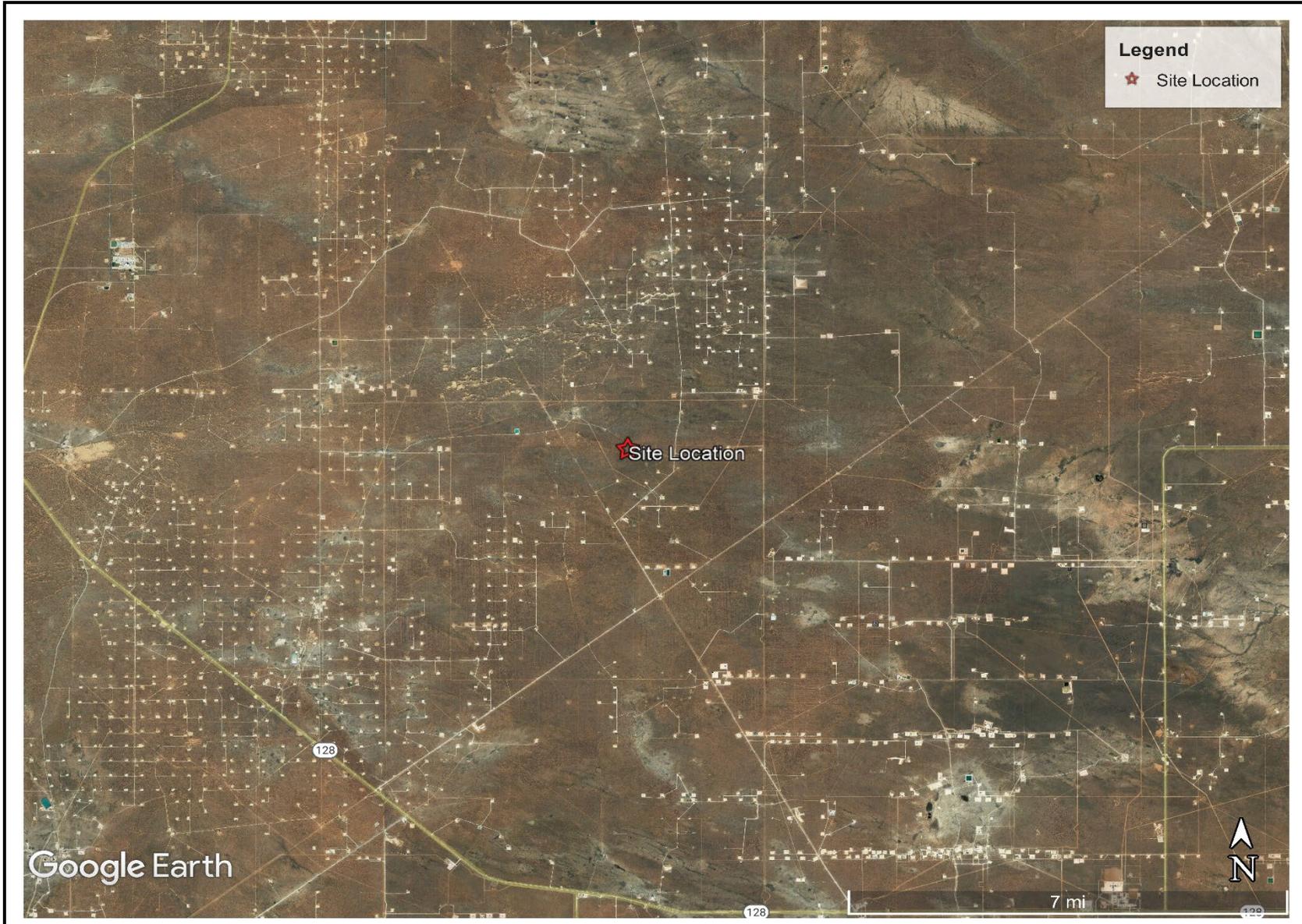


Clinton Merritt
Sr. Project Manager

FIGURES

CARMONA RESOURCES

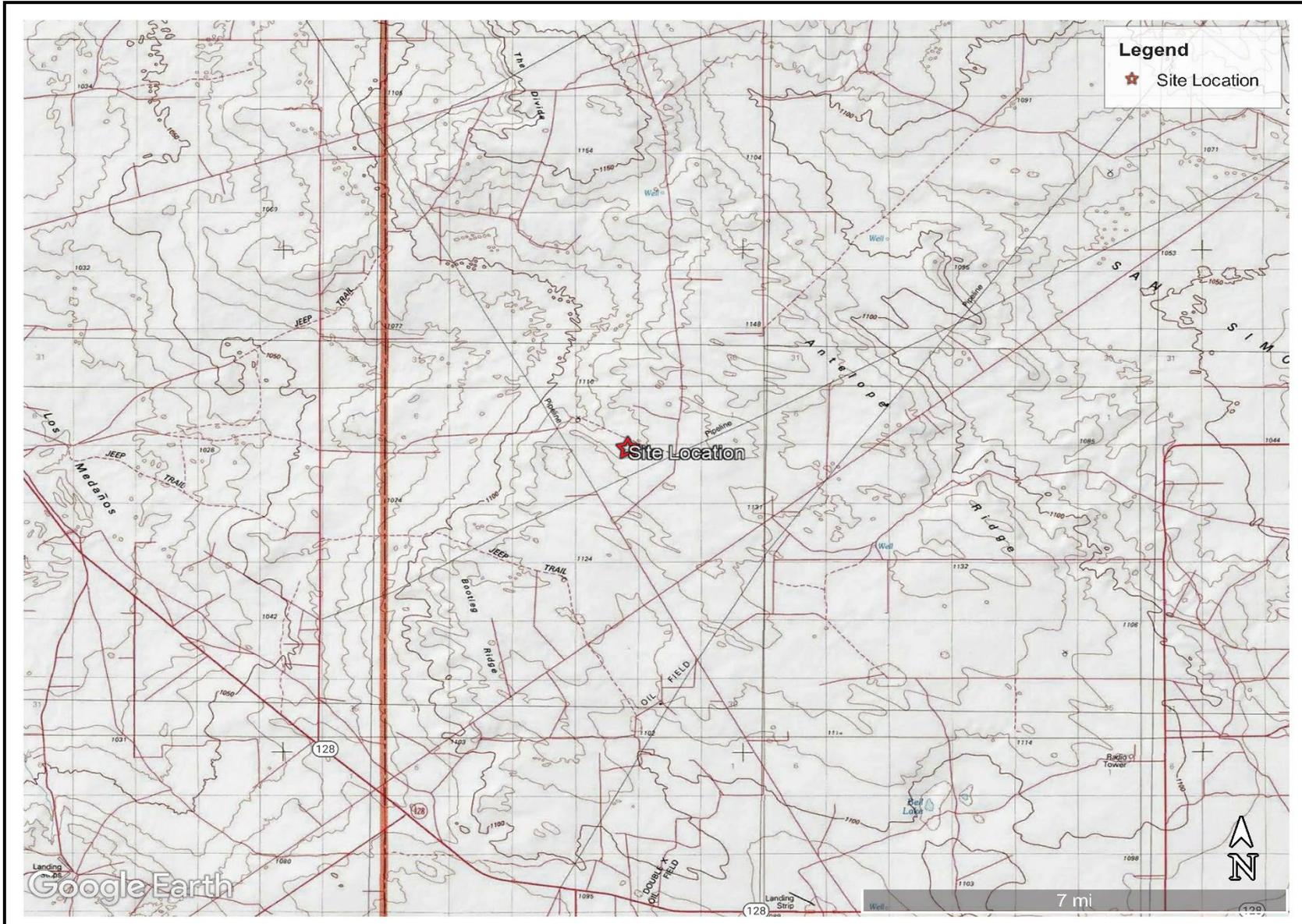




OVERVIEW MAP
MARATHON OIL CORPORATION
COLIBRI 10 AV FEDERAL #024H
LEA COUNTY, NEW MEXICO
32.32591123°, -103.65681227°



FIGURE 1



TOPOGRAPHIC MAP
MARATHON OIL CORPORATION
COLIBRI 10 AV FEDERAL #024H
LEA COUNTY, NEW MEXICO
32.32591123°, -103.65681227°



FIGURE 2



RELEASE LOCATION MAP
MARATHON OIL CORPORATION
COLIBRI 10 AV FEDERAL #024H
LEA COUNTY, NEW MEXICO
32.32591123°, -103.65681227°



FIGURE 3

APPENDIX A

CARMONA RESOURCES



PHOTOGRAPHIC LOG

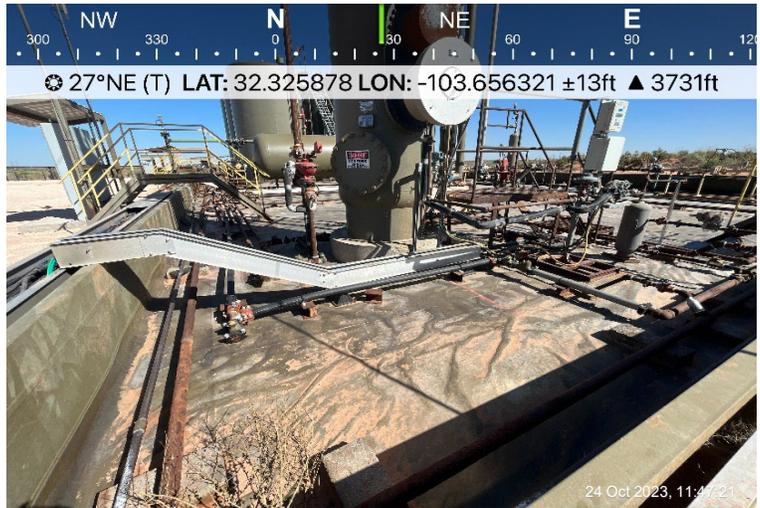
Marathon Oil Corporation

Photograph No. 1

Facility: Colibri 10 AV Federal #024H

County: Lea County, New Mexico

Description:
View Northeast of lined facility.



Photograph No. 2

Facility: Colibri 10 AV Federal #024H

County: Lea County, New Mexico

Description:
View North of lined facility.



Photograph No. 3

Facility: Colibri 10 AV Federal #024H

County: Lea County, New Mexico

Description:
View South of lined facility.



PHOTOGRAPHIC LOG

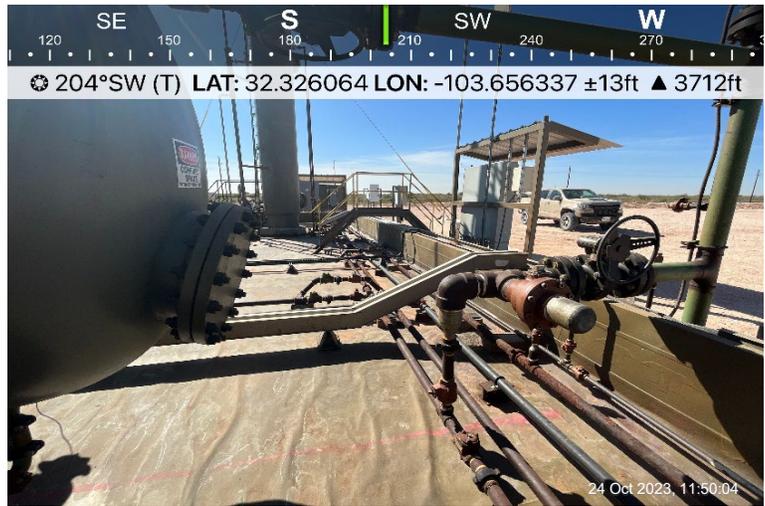
Marathon Oil Corporation

Photograph No. 4

Facility: Colibri 10 AV Federal #024H

County: Lea County, New Mexico

Description:
View Southwest of lined facility.



Photograph No. 5

Facility: Colibri 10 AV Federal #024H

County: Lea County, New Mexico

Description:
View Northwest of lined facility.



Photograph No. 6

Facility: Colibri 10 AV Federal #024H

County: Lea County, New Mexico

Description:
View North of lined facility.



PHOTOGRAPHIC LOG

Marathon Oil Corporation

Photograph No. 7

Facility: Colibri 10 AV Federal #024H

County: Lea County, New Mexico

Description:
View South of lined facility.



Photograph No. 8

Facility: Colibri 10 AV Federal #024H

County: Lea County, New Mexico

Description:
View Southeast of lined facility.

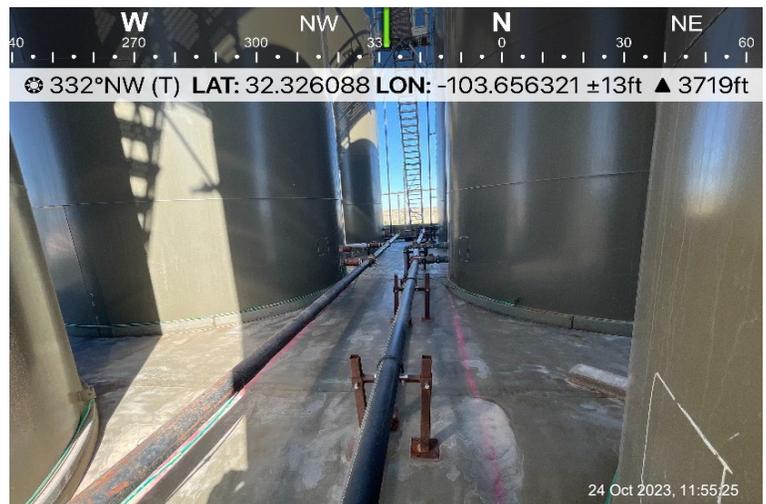


Photograph No. 9

Facility: Colibri 10 AV Federal #024H

County: Lea County, New Mexico

Description:
View Northwest of lined facility.



APPENDIX B

CARMONA RESOURCES



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

State of New Mexico
Energy Minerals and Natural
Resources Department

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

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

Incident ID	nAPP2328241339
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Marathon Oil Permian LLC	OGRID 372098
Contact Name Melodie Sanjari	Contact Telephone 575-988-8753
Contact email msanjari@marathonoil.com	Incident # (assigned by OCD)
Contact mailing address 4111 S. Tidwell Rd., Carlsbad, NM 8220	

Location of Release Source

Latitude 32.32591123 Longitude -103.65681227
(NAD 83 in decimal degrees to 5 decimal places)

Site Name COLIBRI 10 AV FEDERAL #024H	Site Type Oil & Gas Facility
Date Release Discovered: 10/7/2023	API# (if applicable) 30-025-42183

Unit Letter	Section	Township	Range	County
A	10	23S	32E	Lea

Surface Owner: State Federal Tribal Private (Name: _____)

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 9	Volume Recovered (bbls) 9
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

A petcock malfunction on the sight glass of the separator resulted in the release of ~9 bbl of fluid within the lined, secondary containment. Fluid is being recovered in tandem with the facility pressure wash as the standing fluid was so shallow. A notice will be sent out for a liner integrity inspection.

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2328241339
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> been undertaken, explain why:
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.
Printed Name: <u>Melodie Sanjari</u> Title: <u>Environmental Professional</u> Signature: <u>Melodie Sanjari</u> Date: <u>10/9/2023</u> email: <u>msanjari@marathonoil.com</u> Telephone: <u>575-988-8753</u>
OCD Only Received by: <u>Shelly Wells</u> Date: <u>10/10/2023</u>

MRO Spill Calculation Tool

Standing Liquid Inputs:

	Length (ft.)	Width (ft.) (Tank Displacement)	Avg. Liquid Depth (in.)	% Oil	Total Volume (bbls)	Water Volume (bbls)	Oil Volume (bbls)
Rectangle Area #1	60	10	1		8.91	8.91	0.00
Rectangle Area #2					0.00	0.00	0.00
Rectangle Area #3					0.00	0.00	0.00
Rectangle Area #4					0.00	0.00	0.00
Rectangle Area #5					0.00	0.00	0.00
Rectangle Area #6					0.00	0.00	0.00
Vessel Displacement					0.00	0.00	0.00
Vessel Displacement					0.00	0.00	0.00
Liquid Volume:					8.91	8.91	0.00

Saturated Soil Inputs:

Soil Type: **Gravel Loam**

	Length (ft.)	Width (ft.)	Avg. Saturated Depth (in.)	% Oil	Total Volume (bbls)	Water Volume (bbls)	Oil Volume (bbls)
Rectangle Area #1					0.00	0.00	0.00
Rectangle Area #2					0.00	0.00	0.00
Rectangle Area #3					0.00	0.00	0.00
Rectangle Area #4					0.00	0.00	0.00
Rectangle Area #5					0.00	0.00	0.00
Rectangle Area #6					0.00	0.00	0.00
Rectangle Area #7					0.00	0.00	0.00
Rectangle Area #8					0.00	0.00	0.00
Saturated Volume					0.00	0.00	0.00

	Total Volume (bbls)	Water Volume (bbls)	Oil Volume (bbls)
Total Spill Volume (bbls):	8.91	8.91	0.00
Total Spill Volume (gals):	374.03	374.03	0.00

Comments:

Color Key:	Required Input Cells	Supplemental Input Cells	No Input (Calculations)	No Input
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Ground/Vegetation Overspray

Cover Type	Microns	Approximate Depth (in)
Ground		
Dull Color	10	0.00003281
Dark Color	50	0.00016404

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 273709

CONDITIONS

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 273709
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
scwells	None	10/10/2023

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Shelly Wells _____ Date: 11/2/2023 _____

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

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

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

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Shelly Wells Date: 11/2/2023

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

Closure Approved by: Scott Rodgers Date: 12/28/2023

Printed Name: Scott Rodgers Title: Environmental Specialist Adv.

From: Rodgers, Scott, EMNRD
Sent: Friday, October 20, 2023 11:10 AM
To: Clint Merritt; Velez, Nelson, EMNRD; Wells, Shelly, EMNRD; Bratcher, Michael, EMNRD
Cc: Mike Carmona; Melodie Sanjari; Conner Moehring; Devin Dominguez
Subject: RE: [EXTERNAL] Colibri 10 AV Federal #024H Liner Inspection Notification

The OCD has received your notification. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Scott Rodgers • Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
8801 Horizon Blvd. NE, Suite 260 | Albuquerque, NM 87113
505.469.1830 | scott.rodgers@emnrd.nm.gov
<http://www.emnrd.nm.gov/oed>



From: Clint Merritt <MerrittC@carmonaresources.com>
Sent: Friday, October 20, 2023 9:49 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Mike Carmona <Mcarmona@carmonaresources.com>; Melodie Sanjari <mсанjari@marathonoil.com>; Conner Moehring <Cmoehring@carmonaresources.com>; Devin Dominguez <Ddominguez@carmonaresources.com>
Subject: [EXTERNAL] Colibri 10 AV Federal #024H Liner Inspection Notification

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Good Morning,

On behalf of Marathon Oil, Carmona Resources will conduct a liner inspection at the below-referenced site on 10/24/23 around 11:00 AM. Mountain Time. Please let me know if you have any questions.

Colibri 10 AV Federal #024H
Incident ID: nAPP2328241339
Lea County, New Mexico

Clinton Merritt
310 West Wall Street, Suite 500
Midland TX, 79701
M: 432-813-9044

MerrittC@carmonaresources.com

CARMONA RESOURCES



APPENDIX C

CARMONA RESOURCES

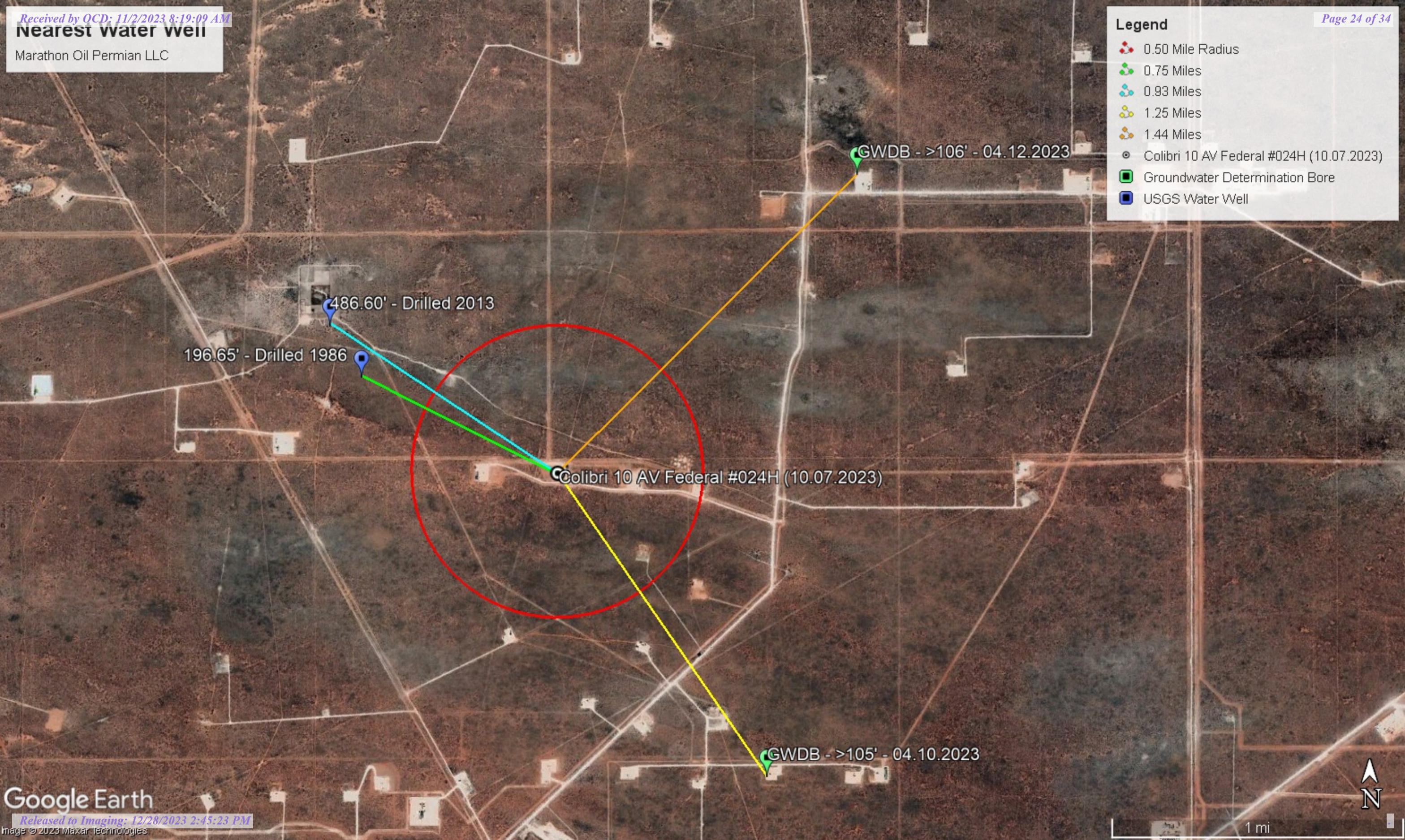


Nearest Water Well

Marathon Oil Permian LLC

Legend

- 0.50 Mile Radius
- 0.75 Miles
- 0.93 Miles
- 1.25 Miles
- 1.44 Miles
- Colibri 10 AV Federal #024H (10.07.2023)
- Groundwater Determination Bore
- USGS Water Well



486.60' - Drilled 2013

196.65' - Drilled 1986

Colibri 10 AV Federal #024H (10.07.2023)

GWDB - >106' - 04.12.2023

GWDB - >105' - 04.10.2023



Low Karst
Marathon Oil Permian LLC

Legend

- Colibri 10 AV Federal #024H (10.07.2023)
- Low

Colibri 10 AV Federal #024H (10.07.2023)





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	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 02349	CUB	ED		2	3	03	23S	32E		625678	3578004*	990	525		

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 1

UTM NAD83 Radius Search (in meters):

Easting (X): 626425

Northing (Y): 3577353

Radius: 4000

*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.



USGS Home
Contact USGS
Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater Geographic Area: New Mexico GO

Click to hide News 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 New Mexico

Click to hide state-specific text

i Important: [Next Generation Monitoring Location Page](#)

Search Results -- 1 sites found

Agency code = usgs
site_no list = 321950103400601

Minimum number of levels = 1
[Save file of selected sites](#) to local disk for future upload

USGS 321950103400601 23S.32E.03.31110

Lea County, New Mexico
Latitude 32°19'50", Longitude 103°40'06" NAD27
Land-surface elevation 3,668 feet above NAVD88
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Chinle Formation (231CHNL) local aquifer.

Output formats

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

Date	Time	Water-level date-time accuracy	Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	Status	Method of measurement	Measuring agency	Source of measurement
1972-09-13			D 62610		3462.10	NGVD29	1	Z		
1972-09-13			D 62611		3463.82	NAVD88	1	Z		
1972-09-13			D 72019	204.18			1	Z		
1977-03-10			D 62610		3452.43	NGVD29	1	Z		
1977-03-10			D 62611		3454.15	NAVD88	1	Z		
1977-03-10			D 72019	213.85			1	Z		
1981-03-26			D 62610		3468.94	NGVD29	1	Z		
1981-03-26			D 62611		3470.66	NAVD88	1	Z		
1981-03-26			D 72019	197.34			1	Z		
1986-04-16			D 62610		3469.63	NGVD29	1	Z		
1986-04-16			D 62611		3471.35	NAVD88	1	Z		
1986-04-16			D 72019	196.65			1	Z		

Explanation

10/18/23, 2:44 PM

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

[Questions or Comments](#)

[Automated retrievals](#)

[Help](#)

[Data Tips](#)

[Explanation of terms](#)

[Subscribe for system changes](#)

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Title: Groundwater for New Mexico: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?>



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Page Last Modified: 2023-10-18 15:43:59 EDT

0.31 0.26 nadww02



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Agency code = usgs
 site_no list =

- 321952103400801

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USGS 321952103400801 23S.32E.03.311114

Lea County, New Mexico
 Latitude 32°19'59.2", Longitude 103°40'12.6" NAD83
 Land-surface elevation 3,648.00 feet above NGVD29
 The depth of the well is 630 feet below land surface.
 This well is completed in the Other aquifers (N9999OTHER) national aquifer.
 This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.

Output formats

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

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measur
1976-12-09			D 62610		3227.43	NGVD29	1		Z	
1976-12-09			D 62611		3229.14	NAVD88	1		Z	
1976-12-09			D 72019	420.57			1		Z	
1981-03-26			D 62610		3209.66	NGVD29	P		Z	
1981-03-26			D 62611		3211.37	NAVD88	P		Z	
1981-03-26			D 72019	438.34			P		Z	
1981-05-21			D 62610		3210.33	NGVD29	1		Z	
1981-05-21			D 62611		3212.04	NAVD88	1		Z	
1981-05-21			D 72019	437.67			1		Z	
1986-04-17			D 62610		3209.32	NGVD29	1		Z	
1986-04-17			D 62611		3211.03	NAVD88	1		Z	
1986-04-17			D 72019	438.68			1		Z	
1991-05-30			D 62610		3210.07	NGVD29	1		Z	
1991-05-30			D 62611		3211.78	NAVD88	1		Z	

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measur
1991-05-30		D	72019	437.93			1	Z		
1992-11-05		D	62610		3209.88	NGVD29	1	S		
1992-11-05		D	62611		3211.59	NAVD88	1	S		
1992-11-05		D	72019	438.12			1	S		
1996-03-15		D	62610		3210.18	NGVD29	1	S		
1996-03-15		D	62611		3211.89	NAVD88	1	S		
1996-03-15		D	72019	437.82			1	S		
2013-01-17	01:00 UTC	m	62610		3161.40	NGVD29	P	S	USGS	
2013-01-17	01:00 UTC	m	62611		3163.11	NAVD88	P	S	USGS	
2013-01-17	01:00 UTC	m	72019	486.60			P	S	USGS	

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Status	P	Pumping
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement		Not determined
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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0.3 0.25 nadww02



Project Name :	Cuevo Federal 20H	Date :	Monday, April 10, 2023
Project No. :		Sampler :	Michael Collier
Location :	Lea County, New Mexico	Driller :	H&R Enterprises
Coordinates :	32.310922° , -103.644669°	Method :	Air Rotary
Elevation :	3,730'		

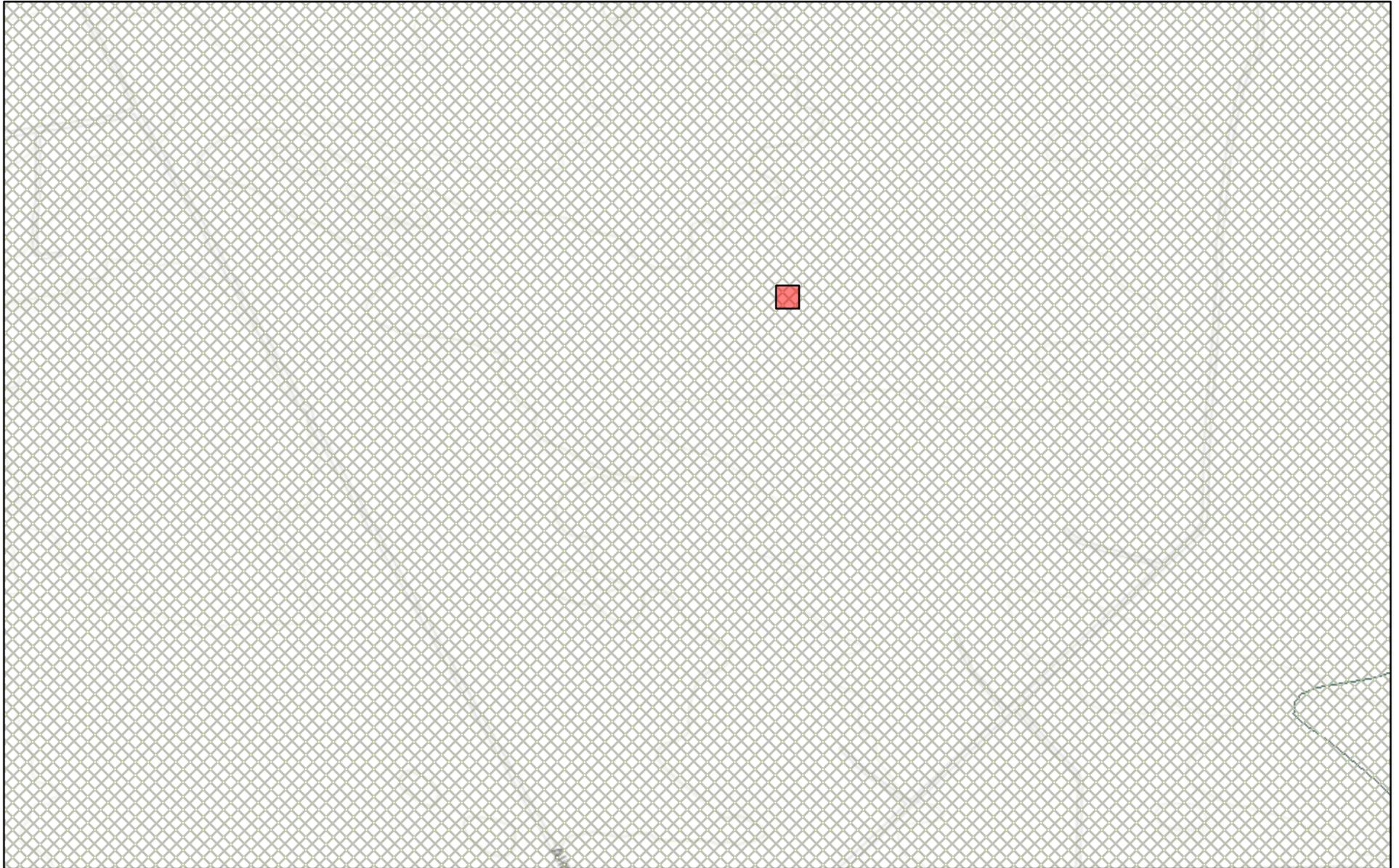
Depth (ft.)	WL	Soil Description	Lithology	Depth (ft.)	WL	Soil Description	Lithology
0		(0'-5') - Organic topsoil, no gravel or caliche.		50		(50') - Well Sorted Silty Sands with Clay, No gravels, 60% Silty Sand, 40% Clay, dry (SC).	
5		(5') - Light brown well graded gravel, caliche, no organics, dry (GM).		55		(55') - Well Sorted Silty Sands with Clay, No gravels, 60% Silty Sand, 40% Clay, dry (SC).	
10		(10') - Light brown well graded gravel, caliche, no organics, dry (GM).		60		(60') - Well Sorted Silty Sands with Clay, No gravels, 60% Silty Sand, 40% Clay, dry (SC).	
15		(15') - Light brown well graded gravel, caliche, no organics, dry (GM).		65		(65') - Well Sorted Silty Sands with Clay, No gravels, 60% Silty Sand, 40% Clay, dry (SC).	
20		(20') - Brown/Light brown well graded gravel, 70% Caliche, 30% Silty Sand, no organics, dry (SW).		70		(70') - Well Sorted Silty Sands with Clay, No gravels, 60% Silty Sand, 40% Clay, dry (SC).	
25		(25') - Brown/Light brown well graded gravel, 70% Caliche, 30% Silty Sand, no organics, dry (SW).		75		(75') - Well Sorted Silty Sands with Clay, No gravels, 60% Silty Sand, 40% Clay, dry (SC).	
30		(30') - Brown/Light brown well graded gravel, 70% Caliche, 30% Silty Sand, no organics, dry (SW).		80		(80') - Well Sorted Silty Sands with Clay, No gravels, 60% Silty Sand, 40% Clay, dry (SC).	
35		(35') - Light brown well graded gravel, 90% Silty Sand, 10% Clay, dry (ML).		85		(85') - Well Sorted Silty Sands with Clay, No gravels, 60% Silty Sand, 40% Clay, dry (SC).	
40		(40') - Light brown well graded gravel, 90% Silty Sand, 10% Clay, dry (ML).		90		(90') - Well Sorted Silty Sands with Clay, No gravels, 60% Silty Sand, 40% Clay, dry (SC).	
45		(45') - Well Sorted Silty Sands with Clay, No gravels, 60% Silty Sand, 40% Clay, dry (SC).		95		(95') - Well Sorted Silty Sands with Clay, No gravels, 60% Silty Sand, 40% Clay, dry (SC).	
50				105		(100-105') - Well Sorted Silty Sands with Clay, No gravels, 60% Silty Sand, 40% Clay, dry (SC).	

Comments : Boring terminated at 105' with no presence of groundwater or moisture.
Well measured 4/14/2023 with no detection of groundwater

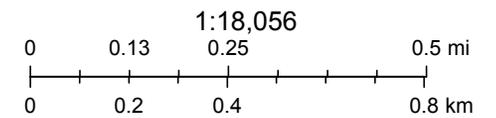
Dry @ 105'

							Sample Name: BH01		Date: 4/12/2023	
							Site Name: Redtail State Com 001H			
							Incident Number: NAPP2233239048			
							Job Number: 03D2024121			
LITHOLOGIC / SOIL SAMPLING LOG							Logged By: Peter Van Patten		Method: Hollow Stem	
Coordinates: 32.340567,-103.639398							Hole Diameter:		Total Depth: 106'	
Comments: Soil boring was advanced to a total depth of 106' bgs. No water was observed within the soil boring after at least 72 hours. On 4/17/2023 the boring was plugged and abandoned using hydrated bentonite chips.										
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions		
Dry	-	-	N	-	-	0	SP-SM	Sand (surface sample): dark tan, brown, fine grain, poorly graded, few gravel, no stain, no odor		
Dry	-	-	N	-	-	10	CHHE	Caliche: off white, white, no stain, no odor		
Dry	-	-	N	-	-	20	CHHE	SAA (Same as above)		
Dmp	-	-	N	-	-	30	SP-SM	Sand: light tan, tan, fine-medium grain, poorly graded, some caliche gravel, slightly damp, no stain, no odor		
Dry	-	-	N	-	-	40	SP-SM	Sand/Silt (Red Beds): red, pale gray/tan, very fine-fine grain, some clay, low plasticity, cohesive, little gravel, no stain, no odor		
Dry	-	-	N	-	-	50	SP-SM	SAA, no gravel		
Dry	-	-	N	-	-	60	SP-SM	SAA, color change to yellowish tan, dark tan		
Dry	-	-	N	-	-	70	SP-SM	SAA, color change to pinkish red, brownish red		
Dry	-	-	N	-	-	80	SP-SM	SAA		
Dry	-	-	N	-	-	90	SP-SM	Sand: gray, light gray, some reddish gray, fine grain, poorly graded, few gravel, non cohesive no stain, no odor		
Dry	-	-	N	-	-	100	SP-SM	Sand: blueish gray, gray, fine grain, poorly graded, no stain, no odor		
						110		TD at 106' below ground surface		
						120				

New Mexico NFHL Data



October 18, 2023



FEMA, Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,

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 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 282045

CONDITIONS

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 282045
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
scott.rodgers	None	12/28/2023