

Incident ID	nAPP2125030589
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?	<u>85 - 90</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" 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 checked="" 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 checked="" 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 checked="" 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 checked="" 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 checked="" 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 checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" 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	nAPP2125030589
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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: Jacqui Harris Title: Environmental Coordinator

Signature:  Date: 11.21.21

email: jacqui.harris@conocophillips.com Telephone: (575)745-1807

OCD Only

Received by: _____ Date: _____

Incident ID	nAPP2125030589
District RP	
Facility ID	
Application ID	

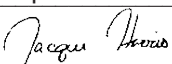
Closure

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: Jacqui Harris Title: Environmental Coordinator
Signature:  Date: 11.21.21
email: jacqui.harris@conocophillips.com Telephone: (575)745-1807

OCD Only

Received by: Chad Hensley Date: 12/29/2021

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

Closure Approved by:  Date: 12/29/2021
Printed Name: Chad Hensley Title: Environmental Specialist Advanced

Remediation Summary & Soil Closure Request

COG Operating, LLC

Merlin State Com 1

Lea County, New Mexico

Unit Letter "N", Section 29, Township 21 South, Range 34 East

Latitude 32.445588 North, Longitude 103.495157 West


NMOCD Reference No. nAPP2125030589

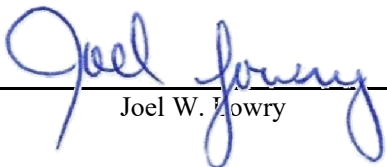
Prepared By:

Etech Environmental & Safety Solutions, Inc.

2507 79th Street, Unit A

Lubbock, Texas 79423


Ben J. Arguijo


Joel W. Howry



Midland • San Antonio • Lubbock • Hobbs • Lafayette

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1.0 PROJECT INFORMATION

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of COG Operating, LLC, has prepared this *Remediation Summary & Soil Closure Request* for the release site known as the Merlin State Com 1 (henceforth, "Site"). Details of the release are summarized below:

Location of Release Source

Latitude: 32.445588 Longitude: -103.495157

Provided GPS are in WGS84 format.

Site Name:	Merlin State Com 1	Site Type:	Tank Battery
Date Release Discovered:	8/21/2021	API # (if applicable):	30-025-41590

Unit Letter	Section	Township	Range	County
"N"	29	21S	34E	Lea

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

Nature and Volume of Release

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 0.14	Volume Recovered (bbls) 0
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water > 10,000 mg/L?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
<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	Volume/Weight Recovered

Cause of Release:

The release was caused by a malfunction sending oil down the gas line. The release resulted in a flare fire on the pad and pasture. No fluid was recovered due to the fire burning off any standing fluid.

Initial Response

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

Previously submitted portions of the NMOCD Form C-141 are available on the NMOCD Imaging System.

2.0 SITE CHARACTERIZATION

A search of groundwater databases maintained by the New Mexico Office of the State Engineer (NMOSE) and United States Geological Survey (USGS) was conducted in an effort to determine the horizontal distance to known water sources within a half-mile radius of the Site. Probable groundwater depth was determined using data generated by numeric models based on available water well data and published information. Depth to groundwater information is provided as Appendix A.

What is the shallowest depth to groundwater beneath the area affected by the release?	85' - 90'		
Did the release impact groundwater or surface water?	<input type="checkbox"/> Yes	<input checked="" 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 checked="" type="checkbox"/> No	
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Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Did the release impact areas not on an exploration, development, production or storage site?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	

NMOCD Siting Criteria data was gathered from available resources including Bureau of Land Management (BLM) and Fish & Wildlife Services (FWS) shapefiles; topographic maps; NMOSE and USGS databases; and aerial imagery. The results are depicted in Figures 1, 2, 4, and 5.

3.0 CLOSURE CRITERIA FOR SOILS IMPACTED BY A RELEASE

Based on the volume and nature of the release, inferred depth to groundwater, and NMOCD Siting Criteria, the NMOCD Closure Criteria and NMOCD Reclamation Standards for the Site are as follows:

Probable Depth to Groundwater	Constituent	Laboratory Analytical Method	Closure Criteria*†	Reclamation Standard*‡
85' - 90'	Chloride (Cl-)	EPA 300.0 or SM4500 Cl B	10,000	600
	Total Petroleum Hydrocarbons (TPH)	EPA SW-846 Method 8015M Ext	2,500	100
	Gas Range Organics + Diesel Range Organics (GRO + DRO)	EPA SW-846 Method 8015M	1,000	N/A
	Benzene	EPA SW-846 Methods 8021b or 8260b	10	10
	Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX)	EPA SW-846 Methods 8021b or 8260b	50	50

* Measured in milligrams per kilogram (mg/kg)

† Table I, Section 19.15.29.12 of the New Mexico Administrative Code (NMAC).

‡ The NMOCD Reclamation Standard applies only to the top 4' of soil in non-production areas. Section 19.15.29.13 D.(1) NMAC.

4.0 INITIAL SITE ASSESSMENT

On August 30, 2021, Etech conducted an initial site assessment. During the initial site assessment, a hand-augered soil bore (V1) was advanced within the release margins in an effort to determine the vertical extent of impacted soil. During the advancement of the hand-augered soil bore, a field soil sample was collected and field-screened for the presence of volatile organic compounds utilizing visual/olfactory senses. Based on field observations and field test results, additional vertical delineation of impacted soil was required, but deemed impracticable without heavy equipment.

Etech submitted one (1) delineation soil sample (V1 @ Surface) to a certified commercial laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results confirmed additional delineation and excavation of hydrocarbon-impacted soil was required.

5.0 REMEDIATION ACTIVITIES SUMMARY

On October 20, 2021, remediation activities commenced at the Site. In accordance with NMOCD regulatory guidelines, impacted soil affected above the NMOCD Closure Criteria and/or NMOCD Reclamation Standards was excavated and stockpiled on-site, pending transfer to an NMOCD-permitted surface waste facility for disposal. Olfactory/visual senses and/or a chloride test kit were utilized to field-screen the vertical and horizontal extent of impacted soil and to guide the excavation. The floor and sidewalls of the excavation were advanced until field tests and field observations suggested BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and/or NMOCD Reclamation Standards.

On October 22, 2021, Etech collected six (6) confirmation soil samples (NW, EW, SW, WW, FL 1 @ 1', and FL 2 @ 1') from the sidewalls and floor of the excavated area. The soil samples were submitted to a certified commercial laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated BTEX and chloride concentrations were below both the applicable NMOCD Closure Criteria and NMOCD Reclamation Standard in each of the submitted soil samples. TPH concentrations ranged from less than the laboratory method detection limit (MDL) in soil sample NW to 824 mg/kg in soil sample FL 1 @ 1'.

On October 26, 2021, the excavation was further advanced in the areas characterized by soil samples WW, FL 1 @ 1', and FL 2 @ 1'. Etech collected three (3) confirmation soil samples (WWB, FL 1 @ 2', and FL 2 @ 2') from the sidewalls and floor of the excavated area. The soil samples were submitted to the laboratory for analysis of TPH. Laboratory analytical results indicated TPH concentrations were less than the laboratory MDL in each of the submitted soil samples.

The final dimensions of the excavated area were approximately 46 feet in length, 14 to 32 feet in width, and two (2) feet in depth. During the course of remediation activities, approximately 36 cubic yards of impacted soil was transported to an NMOCD-permitted surface waste facility for disposal. Approximately 36 cubic yards of locally sourced, non-impacted material was imported to the Site for use as backfill.

Soil sample locations and the extent of the excavated area are depicted in Figure 3, "Site & Sample Location Map". Soil chemistry data is summarized in Table 1. Laboratory analytical reports are provided in Appendix B. General photographs of the Site are provided in Appendix C.

6.0 RESTORATION, RECLAMATION & RE-VEGETATION PLAN

Upon receiving laboratory analytical results from confirmation soil samples, excavated areas were backfilled with locally sourced, non-impacted "like" material placed at or near original relative positions. The affected area was compacted and contoured to achieve erosion control, stability, and preservation of surface water flow, to the extent practicable. Affected areas not on the production pad will be reseeded with an agency- and/or landowner-approved seed mixture free of noxious weeds during the first favorable growing season following closure of the Site.

7.0 SOIL CLOSURE REQUEST

Remediation activities were conducted in accordance with applicable NMOCD regulatory guidelines. Impacted soil affected above the NMOCD Closure Criteria and/or NMOCD Reclamation Standards was excavated and transported to an NMOCD-permitted disposal facility. Laboratory analytical results from confirmation soil samples indicate concentrations of BTEX, TPH, and chloride are below both the NMOCD Closure Criteria and NMOCD Reclamation Standards.

Based on laboratory analytical results and field activities conducted to date, Etech recommends COG Operating, LLC, provide copies of this *Remediation Summary & Soil Closure Request* to the appropriate agencies and request closure be granted to the Site.

8.0 LIMITATIONS

Etech Environmental & Safety Solutions, Inc., has prepared this *Remediation Summary & Soil Closure Request* to the best of its ability. No other warranty, expressed or implied, is made or intended. Etech has examined and relied upon documents reference in the report and on oral statements made by certain individuals. Etech has not conducted an independent examination of the facts contained in referenced materials and statements. Etech has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Etech has prepared the report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Etech notes that the facts and conditions referenced in this report may change over time, and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of COG Operating, LLC. Use of the information contained in this report is prohibited without the consent of Etech and/or COG Operating, LLC.

9.0 DISTRIBUTION

COG Operating, LLC

*600 West Illinois Avenue
Midland, TX 79701*

New Mexico Energy, Minerals and Natural Resources Department

*Oil Conservation Division, District 1
1220 South St. Francis Drive
Santa Fe, NM 87505*

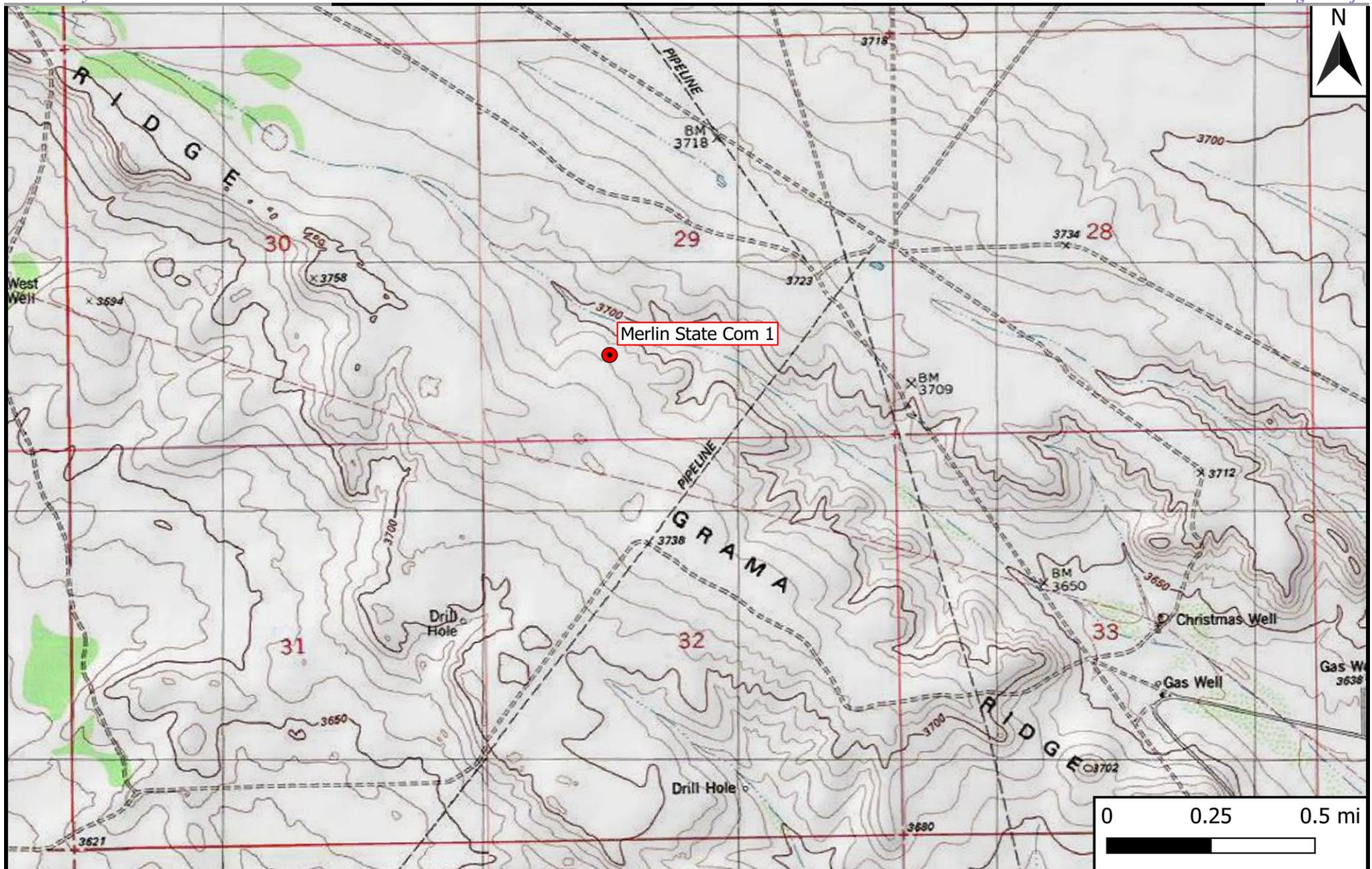
Hobbs Field Office

*New Mexico State Land Office
2827 North Dal Paso Street
Suite 117
Hobbs, NM 88240*

(Electronic Submission)

Figure 1

Topographic Map



Legend

● Site Location

Figure 1

Topographic Map
 COG Operating, LLC
 Merlin State Com 1
 GPS: 32.445588, -103.495157
 Lea County

ETECH
 Environmental & Safety Solutions, Inc.

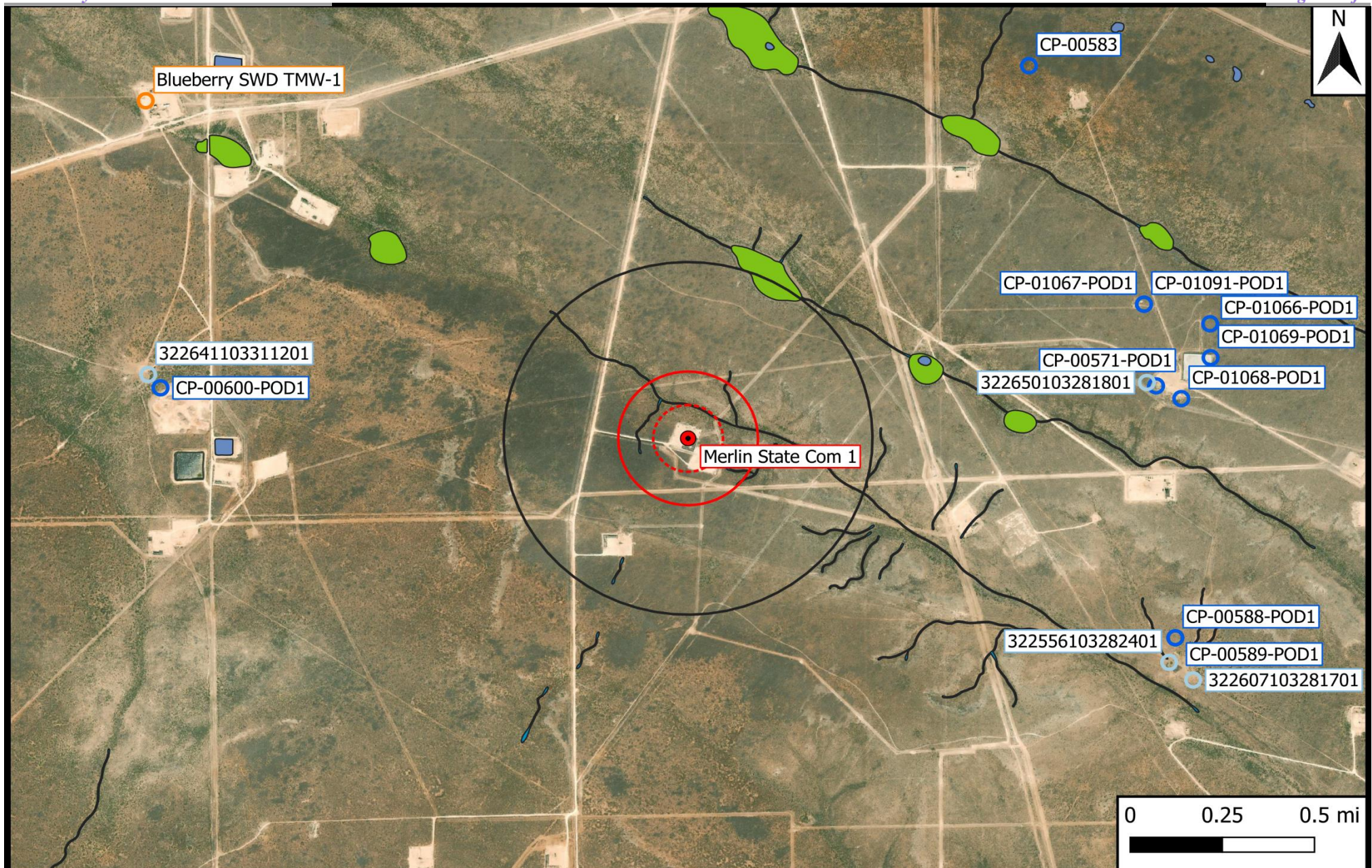
Drafted: bja

Checked: jwl

Date: 11/5/21

Figure 2

Aerial Proximity Map



Legend

- | | | |
|--------------------------------|------------------------------|-------------------|
| ● Site Location | ■ 1% Annual Flood Chance | ⋯ 500 Foot Radius |
| ○ Well - NMOSE | ■ Emergent/Forested Wetlands | ⋯ 1,000-Ft Radius |
| ○ Well - USGS | ■ Freshwater Pond/Lake | ⋯ 0.5-Mi Radius |
| ○ Well - Investigative/Monitor | ■ Medium/High Karst | |
| — Potash Mine Workings | ■ Riverine | |

Figure 2
 Aerial Proximity Map
 COG Operating, LLC
 Merlin State Com 1
 GPS: 32.445588, -103.495157
 Lea County

eTECH
 Environmental & Safety Solutions, Inc.

Drafted: bja

Checked: jwl

Date: 11/5/21

Figure 3

Site & Sample Location Map

**Legend:**





-  Excavated Area
-  Auger Hole
-  Composite Floor Sample
-  Composite Wall Sample

Figure 3

Site & Sample Location Map
COG Operating, LLC
Merlin State Com 1
GPS: 32.445588, -103.495157
Lea County



Revised: bja

Checked: jwl

Date: 11/10/21

Table 1
Concentrations of BTEX, TPH & Chloride in Soil

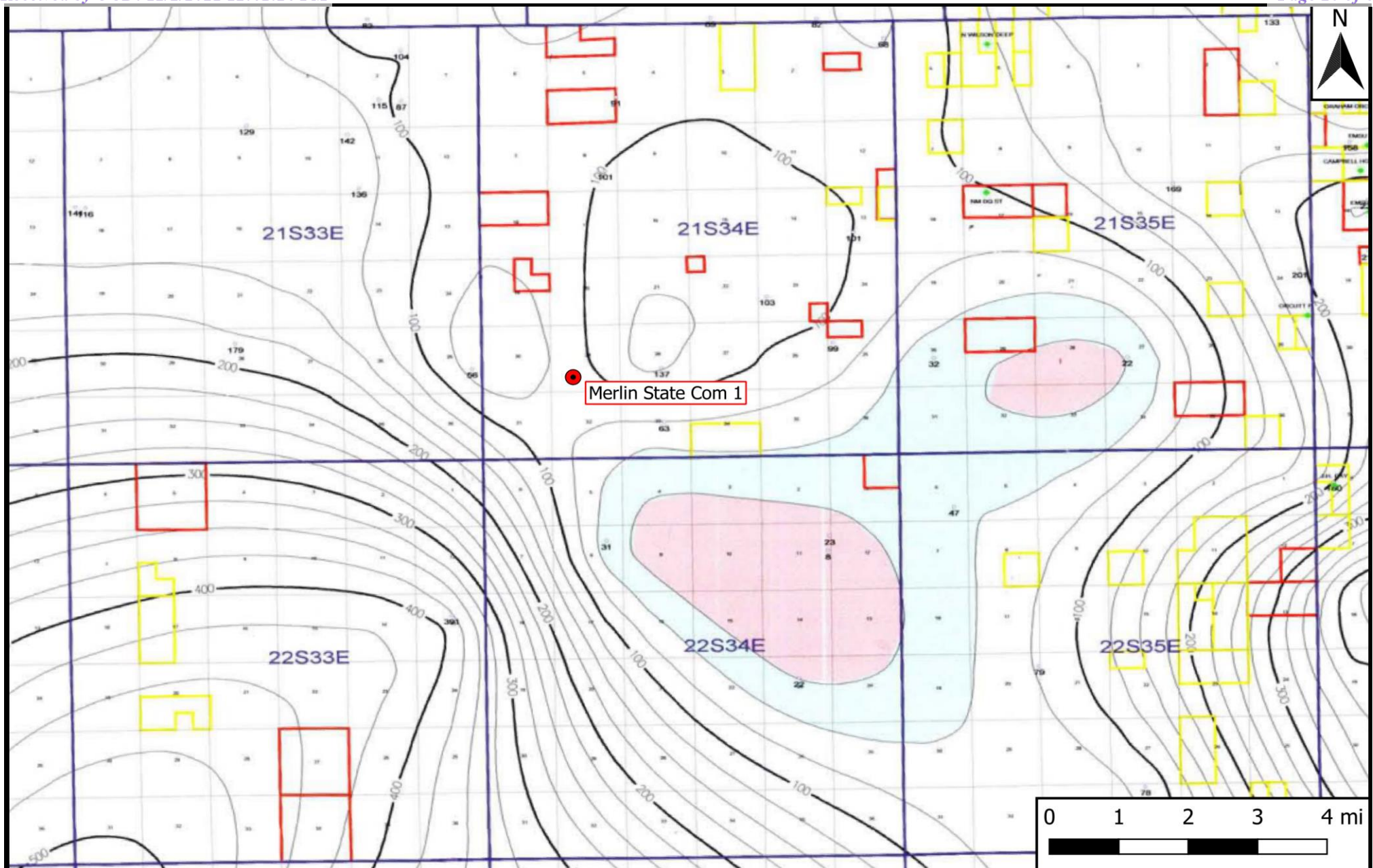
Table 1 Concentrations of BTEX, TPH & Chloride in Soil COG Operating, LLC Merlin State Com 1 NMOCD Ref. #: nAPP2125030589											
NMOCD Closure Criteria				10	50	-	-	1,000	-	2,500	10,000
NMOCD Reclamation Standard				10	50	-	-	-	-	100	600
Sample ID	Date	Depth (Feet)	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₆ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
V1 @ Surface	8/30/2021	0-0.25	Excavated	0.641	6.15	<50.0	10,400	10,400	5,090	15,500	64.0
NW	10/22/2021	0-1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
EW	10/22/2021	0-1	In-Situ	<0.050	<0.300	<10.0	38.4	38.4	13.0	51.4	16.0
SW	10/22/2021	0-1	In-Situ	<0.050	<0.300	<10.0	38.1	38.1	15.3	53.4	16.0
WW	10/22/2021	0-1	Excavated	<0.050	<0.300	<10.0	317	317	159	476	48.0
WWB	10/26/2021	0-2	In-Situ	-	-	<10.0	<10.0	<20.0	<10.0	<30.0	-
FL 1 @ 1'	10/22/2021	1	Excavated	<0.050	<0.300	<10.0	520	520	304	824	16.0
FL 1 @ 2'	10/26/2021	2	In-Situ	-	-	<10.0	<10.0	<20.0	<10.0	<30.0	-
FL 2 @ 1'	10/22/2021	1	Excavated	<0.050	<0.300	<10.0	225	225	126	351	16.0
FL 2 @ 2'	10/26/2021	2	In-Situ	-	-	<10.0	<10.0	<20.0	<10.0	<30.0	-

Dash (-): Sample not analyzed for that constituent.

Bold: NMOCD Closure Criteria exceedance.**Red:** NMOCD Reclamation Standard exceedance.

Appendix A

Depth to Groundwater Information



Legend

● Site Location

Figure 4

Inferred Depth to Groundwater Trend Map
 COG Operating, LLC
 Merlin State Com 1
 GPS: 32.445588, -103.495157
 Lea County



Drafted: bja

Checked: jwl

Date: 11/5/21



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		Q Q Q													Water
POD Number	Code	Sub-basin	County	64	16	4	Sec	Tws	Rng	X	Y		Distance	DepthWell	DepthWater	Column	
CP 00571 POD1		CP	LE	3	1	4	28	21S	34E	643499	3591063		2057	170	135	35	
CP 01091 POD1		CP	LE	3	3	2	28	21S	34E	643446	3591434		2081	200	140	60	
CP 01067 POD1		CP	LE	1	3	4	28	21S	34E	643447	3591434		2082	210	140	70	
CP 01068 POD1		CP	LE	4	1	4	28	21S	34E	643609	3591005		2160	180	140	40	
CP 00583		CP	LE			3	21	21S	34E	642944	3592518*		2254	171	128	43	
CP 01069 POD1		CP	LE	2	1	4	28	21S	34E	643737	3591191		2310	210	140	70	
CP 00588 POD1		CP	LE			3	2	33	21S	34E	643583	3589918*		2312	89		
CP 00589 POD1		CP	LE			3	2	33	21S	34E	643583	3589918*		2312	84		
CP 00600 POD1		CP	LE			2	4	25	21S	33E	639152	3591054*		2315	65		
CP 01066 POD1		CP	LE	4	3	2	28	21S	34E	643735	3591345		2338	210	140	70	

Average Depth to Water: **137 feet**

Minimum Depth: **128 feet**

Maximum Depth: **140 feet**

Record Count: 10

UTMNAD83 Radius Search (in meters):

Easting (X): 641455.71

Northing (Y): 3590824.26

Radius: 3220

*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.

9/13/21 8:19 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER



New Mexico Office of the State Engineer

Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag	POD Number	Q64 Q16 Q4	Sec	Tws	Rng	X	Y
CP 00571	POD1	3 1 4	28	21S	34E	643499	3591063

x

Driller License: 46 **Driller Company:** ABBOTT BROTHERS COMPANY

Driller Name: ABBOTT, MURRELL

Drill Start Date: 06/29/1978	Drill Finish Date: 07/12/1978	Plug Date:
Log File Date: 07/18/1978	PCW Rev Date: 07/10/2017	Source: Shallow
Pump Type: SUBMER	Pipe Discharge Size: 3	Estimated Yield:
Casing Size: 6.63	Depth Well: 170 feet	Depth Water: 135 feet

x

Water Bearing Stratifications:	Top	Bottom	Description
	135	170	Sandstone/Gravel/Conglomerate

x

Casing Perforations:	Top	Bottom
	100	170

x

Meter Number: 809	Meter Make: MASTER
Meter Serial Number: 1748542	Meter Multiplier: 100.0000
Number of Dials: 6	Meter Type: Diversion
Unit of Measure: Gallons	Return Flow Percent:
Usage Multiplier:	Reading Frequency:

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount Online
05/12/1999	1999	70037	A	fm		0
06/12/1999	1999	79037	A	fm		2.762
01/01/2000	2000	16058	A	jw		0
07/07/2000	2000	25810	A	jw		2.993
04/30/2013	2013	67955	A	RPT	beggining reading	0
04/30/2013	2013	76655	A	RPT		2.670

**YTD Meter Amounts:	Year	Amount
	1999	2.762
	2000	2.993
	2013	2.670

x

Meter Number: 2406	Meter Make: MASTER
Meter Serial Number: 1748542	Meter Multiplier: 100.0000
Number of Dials: 6	Meter Type: Diversion
Unit of Measure: Gallons	Return Flow Percent:
Usage Multiplier:	Reading Frequency:

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount Online
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06/01/2000	2000	16058	A	fm	0
07/02/2000	2000	25810	A	fm	2.993
12/12/2012	2012	58193	A	RPT No reported ending date	0
12/12/2012	2012	67955	A	RPT	2.996

**YTD Meter Amounts:		Year	Amount
		2000	2.993
		2012	2.996

Meter Number:	18285	Meter Make:	MASTER
Meter Serial Number:	5521344	Meter Multiplier:	100.0000
Number of Dials:	6	Meter Type:	Diversion
Unit of Measure:	Gallons	Return Flow Percent:	
Usage Multiplier:		Reading Frequency:	Quarterly

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount Online
10/31/2016	2019	19375800	A	RPT		0
12/31/2016	2016	20180600	A	ap		246.984
02/01/2017	2017	20180600	A	ap		0
03/01/2017	2017	20180600	A	ap		0
04/01/2017	2017	20180600	A	ap		0
05/01/2017	2017	20180600	A	ap		0
05/31/2017	2017	20180600	A	ap		0
06/30/2017	2017	20220700	A	ap		12.306
07/31/2017	2017	21237900	A	ap		312.167
10/31/2017	2017	23229100	A	ap		611.077
11/30/2017	2017	23693300	A	ap		142.458
12/30/2017	2017	23913000	A	ap		67.423
01/30/2018	2018	23913000	A	ap		0
02/28/2018	2018	23913000	A	ap		0
03/30/2018	2018	23913000	A	ap		0
04/30/2018	2018	24258100	A	ap		105.907
06/01/2018	2018	25310100	A	ap		322.847
06/29/2018	2018	26224100	A	ap		280.496
07/31/2018	2018	26367000	A	ap		43.854
08/30/2018	2018	27573540	A	ap		370.274
09/30/2018	2018	27725200	A	ap		46.543
11/30/2018	2018	27725200	A	ap		0
01/02/2019	2018	277252	A	RPT		0
02/01/2019	2019	281404	A	RPT		1.274
08/01/2019	2019	311730	A	RPT		9.307
09/01/2019	2019	311730	A	RPT		0
09/30/2019	2019	333155	A	RPT		6.575
10/31/2019	2019	341763	A	RPT		2.642
11/30/2019	2019	348644	A	RPT		2.112
12/31/2019	2019	352371	A	RPT		1.144
02/01/2020	2020	352371	A	RPT		0
03/01/2020	2020	358119	A	RPT		1.764
04/01/2020	2020	361256	A	RPT		0.963

05/01/2020	2020	361256	A	RPT	0
06/01/2020	2020	361256	A	RPT	0
08/01/2020	2020	369256	A	RPT	2.455
09/01/2020	2020	371436	A	RPT	0.669
10/01/2020	2020	371436	A	RPT	0
10/31/2020	2020	374775	A	WEB	1.025 X
11/30/2020	2020	383622	A	WEB	2.715 X
12/31/2020	2020	394637	A	WEB	3.380 X

**YTD Meter Amounts:			Year	Amount
			2016	246.984
			2017	1145.431
			2018	1169.921
			2019	23.054
			2020	12.971

Meter Number:	3933	Meter Make:	MASTER
Meter Serial Number:	1748542	Meter Multiplier:	100.0000
Number of Dials:	6	Meter Type:	Diversion
Unit of Measure:	Gallons	Return Flow Percent:	
Usage Multiplier:		Reading Frequency:	

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount Online
09/25/2000	2000	42619	A	mb	Initial reading.	0
01/06/2001	2000	52314	A	mb	Final reading for Trn#192404	2.975
02/15/2001	2001	61182	A	mb	Initial reading Trn #206823	0
02/20/2001	2001	59463	A	mb	Final reading Trn# 203419	2.194
04/17/2001	2001	70632	A	mb	Final reading Trn #206823	2.900
11/14/2012	2012	48419	A	RPT	intial reading	0
11/14/2012	2012	58193	A	RPT	no end reading date provided	3.000

**YTD Meter Amounts:			Year	Amount
			2000	2.975
			2001	5.094
			2012	3.000

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POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag	POD Number	Q64 Q16 Q4	Sec	Tws	Rng	X	Y
	CP 00583		3	21	21S 34E	642944	3592518*

x

Driller License: 46 **Driller Company:** ABBOTT BROTHERS COMPANY

Driller Name: ABBOTT, MURRELL

Drill Start Date: 06/06/1984

Drill Finish Date: 06/07/1984

Plug Date:

Log File Date: 06/18/1984

PCW Rev Date:

Source: Shallow

Pump Type:

Pipe Discharge Size:

Estimated Yield:

Casing Size: 6.63

Depth Well: 171 feet

Depth Water: 128 feet

x

Water Bearing Stratifications:

Top Bottom Description

110 169 Sandstone/Gravel/Conglomerate

x

Casing Perforations:

Top Bottom

109 169

x

Meter Number: 2974

Meter Make: MASTER

Meter Serial Number: 1746630

Meter Multiplier: 100.0000

Number of Dials: 5

Meter Type: Diversion

Unit of Measure: Gallons

Return Flow Percent:

Usage Multiplier:

Reading Frequency:

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount Online
06/05/2000	2000	16351	A	RPT		0
07/31/2000	2000	25783	A	RPT		2.895

**YTD Meter Amounts:	Year	Amount
	2000	2.895

x

*UTM location was derived from PLSS - see Help

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Well Tag	POD Number	Q64 Q16 Q4 Sec Tws Rng	X	Y
CP 01067	POD1	1 3 4 28 21S 34E	643447	3591434

x

Driller License: 421 **Driller Company:** GLENN'S WATER WELL SERVICE

Driller Name: GLENN, CLARK A."CORKY" (LD)

Drill Start Date: 05/20/2012	Drill Finish Date: 05/22/2012	Plug Date:
Log File Date: 05/30/2012	PCW Rev Date:	Source: Shallow
Pump Type:	Pipe Discharge Size:	Estimated Yield: 30 GPM
Casing Size: 6.63	Depth Well: 210 feet	Depth Water: 140 feet

x

Water Bearing Stratifications:	Top	Bottom	Description
	140	172	Sandstone/Gravel/Conglomerate

x

Meter Number: 15615	Meter Make: MASTER
Meter Serial Number: 1802941	Meter Multiplier: 100.0000
Number of Dials: 8	Meter Type: Diversion
Unit of Measure: Gallons	Return Flow Percent:
Usage Multiplier:	Reading Frequency: Quarterly

x

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr Comment	Mtr Amount Online
12/28/2012	2012	552330	A	ym	0
10/31/2019	2019	552330	A	RPT NOT USED	0

**YTD Meter Amounts:	Year	Amount
	2012	0
	2019	0

x

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(NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
CP 01068	POD1	4	1	4	28	21S	34E	643609	3591005

x

Driller License: 421 **Driller Company:** GLENN'S WATER WELL SERVICE

Driller Name: GLENN, CLARK A."CORKY" (LD)

Drill Start Date: 03/10/2012	Drill Finish Date: 03/12/2012	Plug Date:
Log File Date: 03/22/2012	PCW Rev Date: 07/10/2017	Source: Shallow
Pump Type: SUBMER	Pipe Discharge Size: 3	Estimated Yield: 40 GPM
Casing Size: 6.21	Depth Well: 180 feet	Depth Water: 140 feet

x

Water Bearing Stratifications:	Top	Bottom	Description
	140	170	Shallow Alluvium/Basin Fill

x

Meter Number: 18284	Meter Make: BLANCETT
Meter Serial Number: 112211501	Meter Multiplier: 1.0000
Number of Dials: 9	Meter Type: Diversion
Unit of Measure: Barrels 42 gal.	Return Flow Percent:
Usage Multiplier:	Reading Frequency: Quarterly

x

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount Online
10/31/2016	2016	385137	A	ap		0
12/31/2016	2016	385137	A	ap		0
02/01/2017	2017	385137	A	ap		0
03/01/2017	2017	385137	A	ap		0
04/01/2017	2017	385137	A	ap		0
05/01/2017	2017	385137	A	ap		0
05/31/2017	2017	385137	A	ap		0
06/30/2017	2017	385137	A	ap		0
07/31/2017	2017	385137	A	ap		0
10/31/2017	2017	385137	A	ap		0
11/30/2017	2017	431733	A	ap		600.591
12/30/2017	2017	435668	A	ap		50.720
01/30/2018	2018	435668	A	ap		0
02/28/2018	2018	435668	A	ap		0
03/30/2018	2018	435668	A	ap		0
04/30/2018	2018	435668	A	ap		0
06/01/2018	2018	491172	A	ap		715.409
06/29/2018	2018	506094	A	ap		192.335
07/31/2018	2018	508597	A	ap		32.262
08/30/2018	2018	524812	A	ap		209.000
09/30/2018	2018	527544	A	ap		35.214
11/30/2018	2018	532789	A	ap		67.605

01/02/2019	2018	532789	A	RPT	0
02/01/2019	2019	544135	A	RPT	1.462
08/01/2019	2019	594245	A	RPT	6.459
09/01/2019	2019	594245	A	RPT	0
09/30/2019	2019	594245	A	RPT	0
10/31/2019	2019	643103	A	RPT	6.297
11/30/2019	2019	656569	A	RPT	1.736
12/31/2019	2019	693655	A	RPT	4.780
02/01/2020	2020	700382	A	RPT	0.867
03/01/2020	2020	704200	A	RPT	0.492
04/01/2020	2020	716193	A	RPT	1.546
05/01/2020	2020	716193	A	RPT	0
06/01/2020	2020	716193	A	RPT	0
08/01/2020	2020	724131	A	RPT	1.023
09/01/2020	2020	724131	A	RPT	0
10/01/2020	2020	724131	A	RPT	0
10/31/2020	2020	724131	A	WEB	0 X
11/30/2020	2020	724131	A	WEB	0 X
12/31/2020	2020	724131	A	WEB	0 X

**YTD Meter Amounts:		
Year	Amount	
2016	0	
2017	651.311	
2018	1251.825	
2019	20.734	
2020	3.928	

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POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
CP 01069	POD1	2	1	4	28	21S	34E	643737	3591191

x

Driller License: 421 **Driller Company:** GLENN'S WATER WELL SERVICE

Driller Name: GLENN, CLARK A."CORKY" (LD)

Drill Start Date: 03/13/2012	Drill Finish Date: 03/14/2012	Plug Date:
Log File Date: 03/22/2012	PCW Rev Date: 07/10/2017	Source: Shallow
Pump Type: SUBMER	Pipe Discharge Size: 3	Estimated Yield: 40 GPM
Casing Size: 6.21	Depth Well: 210 feet	Depth Water: 140 feet

x

Water Bearing Stratifications:	Top	Bottom	Description
	140	172	Shallow Alluvium/Basin Fill

x

Meter Number: 15548	Meter Make: BLANCETT
Meter Serial Number: 040 711 502	Meter Multiplier: 10.0000
Number of Dials: 9	Meter Type: Diversion
Unit of Measure: Barrels 42 gal.	Return Flow Percent:
Usage Multiplier:	Reading Frequency: Quarterly

x

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount Online
03/28/2013	2013	0	A	RPT	Initial reading	0
03/28/2013	2013	842600	A	RPT	No ending reading provided	2.586
05/12/2013	2013	1742720	A	RPT	No ending date provided	2.762
05/17/2013	2013	1102330	A	RPT	Not date for initial reading	0
05/17/2013	2013	1928670	A	RPT	Final Reading	2.536
07/01/2014	2014	0	C	RPT	Meter Reading Correction	-248.593
10/01/2014	2014	0	A	RPT		0
01/01/2015	2014	0	A	RPT		0
04/01/2015	2015	529903	A	AP		68.301
07/01/2015	2015	639766	A	ap		141.606
10/01/2015	2015	663386	A	ap		30.445
10/31/2015	2015	663386	A	ap		0
11/30/2015	2015	663386	A	ap		0
03/17/2016	2016	663386	A	ap		0
03/17/2016	2016	0	A	ap	batteryreplacedresetmeterzero	0
03/31/2016	2016	20160	A	ap		25.985
04/30/2016	2016	20160	A	ap		0
06/01/2016	2016	84030	A	ap		82.324
06/30/2016	2016	116449	A	ap		41.786
07/27/2016	2016	154786	A	ap		49.414
09/01/2016	2016	182026	A	ap		35.111
10/01/2016	2016	202637	A	ap		26.566

10/31/2016	2016	202637	A	ap	0
11/29/2016	2016	226853	A	ap	31.213
12/31/2016	2016	228029	A	ap	1.516
02/01/2017	2017	230071	A	ap	2.632
03/01/2017	2017	230071	A	ap	0
04/01/2017	2017	230071	A	ap	0
05/01/2017	2017	230071	A	ap	0
05/31/2017	2017	230071	A	ap	0
06/30/2017	2017	232477	A	ap	3.101
07/31/2017	2017	285471	A	ap	68.306
10/31/2017	2017	376519	A	ap	117.355
11/30/2017	2017	422524	A	ap	59.297
12/30/2017	2017	456841	A	ap	44.232
01/30/2018	2018	490850	A	ap	43.835
02/28/2018	2018	514178	A	ap	30.068
03/30/2018	2018	514178	A	ap	0
04/30/2018	2018	548737	A	ap	44.544
06/01/2018	2018	597358	A	ap	62.669
06/29/2018	2018	625767	A	ap	36.617
07/31/2018	2018	641059	A	ap	19.710
08/30/2018	2018	688988	A	ap	61.777
09/30/2018	2018	711879	A	ap	29.505
11/30/2018	2018	751612	A	ap	51.213
03/01/2019	2019	872166	A	ap	155.386
04/01/2019	2019	899476	A	ap	35.201
05/01/2019	2019	942399	A	ap	55.325
05/31/2019	2019	967491	A	ap	32.342
06/30/2019	2019	987328	A	ap	25.569
10/31/2019	2019	1118349	A	ap	168.877

**YTD Meter Amounts:		
Year	Amount	
2013	7.884	
2014	-248.593	
2015	240.352	
2016	293.915	
2017	294.923	
2018	379.938	
2019	472.700	

Meter Number:	18704	Meter Make:	BLANCETT
Meter Serial Number:	040711502	Meter Multiplier:	1.0000
Number of Dials:	9	Meter Type:	Diversion
Unit of Measure:	Barrels 42 gal.	Return Flow Percent:	
Usage Multiplier:		Reading Frequency:	Quarterly

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount Online
01/02/2019	2018	795282	A	RPT		0
02/01/2019	2019	823150	A	RPT		3.592
08/01/2019	2019	1026416	A	RPT		26.200

09/01/2019	2019	1026416	A	RPT	0
09/30/2019	2019	1097360	A	RPT	9.144
10/31/2019	2019	1118349	A	RPT	2.705
11/30/2019	2019	1118384	A	RPT	0.005
12/31/2019	2019	1129601	A	RPT	1.446
02/01/2020	2020	1146148	A	RPT	2.133
03/01/2020	2020	1167232	A	RPT	2.718
04/01/2020	2020	1175693	A	RPT	1.091
05/01/2020	2020	1175693	A	RPT	0
06/01/2020	2020	1175693	A	RPT	0
08/01/2020	2020	1205598	A	RPT	3.855
09/01/2020	2020	1213942	A	RPT	1.075
10/01/2020	2020	1213942	A	RPT	0
10/31/2020	2020	1226372	A	WEB	1.602 X
11/30/2020	2020	1265040	A	WEB	4.984 X
12/31/2020	2020	1281533	A	WEB	2.126 X

—
Y

**YTD Meter Amounts:	Year	Amount
	2018	0
	2019	43.092
	2020	19.584

X

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POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)							
		(quarters are smallest to largest)						(NAD83 UTM in meters)	
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	CP 01091 POD1	3	3	2	28	21S	34E	643446	3591434 
<hr/>									
Driller License: 421		Driller Company:				GLENN'S WATER WELL SERVICE			
Driller Name:		GLENN, CLARK A."CORKY" (LD)							
Drill Start Date: 05/21/2012		Drill Finish Date:				05/22/2012		Plug Date:	
Log File Date: 05/31/2012		PCW Rev Date:				07/10/2017		Source: Shallow	
Pump Type: SUBMER		Pipe Discharge Size:				3		Estimated Yield: 40 GPM	
Casing Size: 8.63		Depth Well:				200 feet		Depth Water: 140 feet	

Water Bearing Stratifications:		Top	Bottom	Description
		140	172	Sandstone/Gravel/Conglomerate
		173	200	Sandstone/Gravel/Conglomerate
Meter Number: 18287		Meter Make: BLANCETT		
Meter Serial Number: 112211709		Meter Multiplier: 1.0000		
Number of Dials: 9		Meter Type: Diversion		
Unit of Measure: Barrels 42 gal.		Return Flow Percent:		
Usage Multiplier:		Reading Frequency: Quarterly		

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount Online
04/01/2014	2014	657555	A	ap		0
07/01/2014	2014	814130	A	ap		201.815
10/01/2014	2014	984741	A	ap		219.906
01/01/2015	2015	1137297	A	ap		196.634
04/01/2015	2015	1276915	A	ap		179.958
07/01/2015	2015	1417372	A	ap		181.040
10/01/2015	2015	1456407	A	ap		50.313
10/31/2015	2015	1456407	A	ap		0
11/30/2015	2015	1456407	A	ap		0
03/31/2016	2016	1502679	A	ap		59.641
04/30/2016	2016	1543517	A	ap		52.637
06/30/2016	2016	1609758	A	ap		85.380
07/27/2016	2016	1649735	A	ap		51.528
09/01/2016	2016	1675775	A	ap		33.564
10/01/2016	2016	1702611	A	ap		34.590
10/31/2016	2016	1702611	A	ap		0
11/29/2016	2016	1739967	A	ap		48.149
12/31/2016	2016	1739967	A	ap		0
02/01/2017	2017	1744162	A	ap		5.407
03/01/2017	2017	1744162	A	ap		0
04/01/2017	2017	1744162	A	ap		0

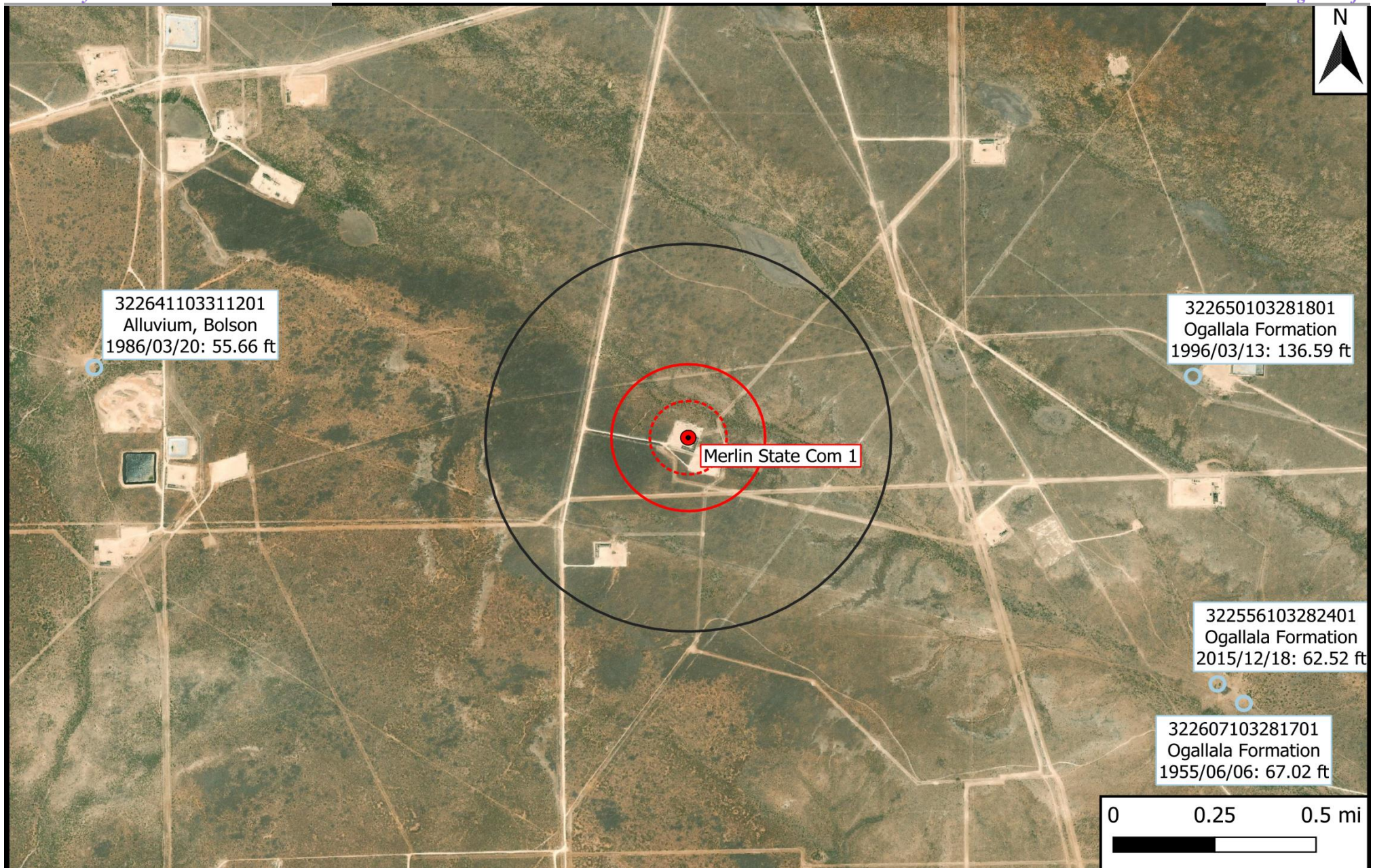
05/01/2017	2017	1744162	A	ap	0
05/31/2017	2017	1744162	A	ap	0
06/30/2017	2017	1759551	A	ap	19.835
07/31/2017	2017	1808910	A	ap	63.620
10/31/2017	2017	1905760	A	ap	124.833
11/30/2017	2017	1963258	A	ap	74.111
12/30/2017	2017	2003974	A	ap	52.480
01/30/2018	2018	2023631	A	ap	25.337
02/28/2018	2018	2042988	A	ap	24.950
03/30/2018	2018	2042988	A	ap	0
04/30/2018	2018	2055652	A	ap	16.323
06/01/2018	2018	2092727	A	ap	47.787
06/29/2018	2018	2128644	A	ap	46.295
07/31/2018	2018	2148302	A	ap	25.338
08/30/2018	2018	2180906	A	ap	42.024
09/30/2018	2018	2211843	A	ap	39.876
11/30/2018	2018	2295749	A	ap	108.149
01/02/2019	2018	2341197	A	RPT	5.858
02/01/2019	2019	2358997	A	RPT	2.294
08/01/2019	2019	2620653	A	RPT	33.726
09/01/2019	2019	2620653	A	RPT	0
09/30/2019	2019	2701362	A	RPT	10.403
10/31/2019	2019	2754195	A	RPT	6.810
11/30/2019	2019	2801195	A	RPT	6.058
12/31/2019	2019	2826118	A	RPT	3.212
02/01/2020	2020	2849612	A	RPT	3.028
03/01/2020	2020	2876542	A	RPT	3.471
04/01/2020	2020	2911972	A	RPT	4.567
05/01/2020	2020	2911972	A	RPT	0
06/01/2020	2020	2911972	A	RPT	0
08/01/2020	2020	2940442	A	RPT	3.670
09/01/2020	2020	2951258	A	RPT	1.394
10/01/2020	2020	2951258	A	RPT	0
10/31/2020	2020	2991954	A	WEB	5.245 X
11/30/2020	2020	3030565	A	WEB	4.977 X
12/31/2020	2020	3079246	A	WEB	6.275 X

**YTD Meter Amounts:	Year	Amount
	2014	421.721
	2015	607.945
	2016	365.489
	2017	340.286
	2018	381.937
	2019	62.503
	2020	32.627

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.

9/13/21 8:19 AM

POINT OF DIVERSION SUMMARY



Legend

- Site Location
- Well - USGS
- ⊞ 500-Ft Radius
- ⊞ 1,000-Ft Radius
- ⊞ 0.5-Mi Radius

Figure 5

USGS Well Proximity Map
COG Operating, LLC
Merlin State Com 1
GPS: 32.445588, -103.495157
Lea County

eTECH
Environmental & Safety Solutions, Inc.

Drafted: bja

Checked: jwl

Date: 11/5/21



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Search Results -- 1 sites found

Agency code = usgs

site_no list =

- 322556103282401

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 322556103282401 21S.34E.33.233442

Lea County, New Mexico

Latitude 32°26'10.1", Longitude 103°28'22.7" NAD83

Land-surface elevation 3,642 feet above NAVD88

The depth of the well is 92 feet below land surface.

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

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	? Water-level approval status
1968-03-28			D	72019	64.05			3	Z		A
1971-02-04			D	72019	64.45			3	Z		A
1976-12-15			D	72019	63.10			1	Z		A
1981-03-05			D	72019	63.06			1	Z		A
1986-03-20			D	72019	62.67			1	Z		A
1991-05-03			D	72019	62.62			1	Z		A

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	? Water-level approval status
1996-02-16			D	72019	62.57		1	S			A
2015-12-18	17:30 UTC	m	72019	62.52			1	S	USGS	S	A

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	3	True value is above reported value due to local conditions
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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[Policies and Notices](#)
[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)
Title: Groundwater for USA: Water Levels
URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>

 Page Contact Information: [USGS Water Data Support Team](#)

Page Last Modified: 2021-11-09 16:49:26 EST

0.31 0.24 nadww02





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Data Category: Geographic Area:

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Search Results -- 1 sites found

Agency code = usgs

site_no list =
• 322607103281701

Minimum number of levels = 1

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USGS 322607103281701 21S.34E.33.233443

Lea County, New Mexico

Latitude 32°26'07", Longitude 103°28'17" NAD27

Land-surface elevation 3,639 feet above NAVD88

The depth of the well is 80 feet below land surface.

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

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	? Water-level approval status
<input type="text" value="1955-06-06"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="72019"/>	<input type="text" value="67.02"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="1"/>	<input type="text" value="Z"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="A"/>

Explanation		
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.

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0.42 0.27 nadww01





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Agency code = usgs

site_no list =
• 322641103311201

Minimum number of levels = 1

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USGS 322641103311201 21S.33E.25.42322

Lea County, New Mexico

Latitude 32°26'41", Longitude 103°31'12" NAD27

Land-surface elevation 3,660 feet above NAVD88

The depth of the well is 68 feet below land surface.

This well is completed in the Other aquifers (N9999OTHER) national aquifer.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) 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	? Water-level approval status
1968-03-28			D	72019	56.53			1	Z		A
1971-02-04			D	72019	58.95			1	Z		A
1972-09-22			D	72019	56.53			1	Z		A
1976-12-16			D	72019	57.58			1	Z		A
1981-03-10			D	72019	56.03			1	Z		A
1986-03-20			D	72019	55.66			1	Z		A

Explanation		
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.

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Title: Groundwater for USA: Water Levels

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

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0.28 0.24 nadww02





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Data Category:
Groundwater

Geographic Area:
United States

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Search Results -- 1 sites found

Agency code = usgs
site_no list =
• 322650103281801

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

USGS 322650103281801 21S.34E.28.413232

Lea County, New Mexico
Latitude 32°26'51", Longitude 103°28'24" NAD27
Land-surface elevation 3,728.00 feet above NGVD29
The depth of the well is 170 feet below land surface.
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

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	? Water-level approval status
1981-09-16			D	72019	137.62			1	Z		A
1986-03-20			D	72019	137.04			1	Z		A
1991-04-19			D	72019	137.67			1	Z		A
1996-03-13			D	72019	136.59			1	S		A

Explanation		
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	S	Steel-tape measurement.
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.

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0.48 0.28 nadww01



Appendix B

Laboratory Analytical Reports



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

September 07, 2021

JOEL LOWRY

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: MERLIN STATE COM 1

Enclosed are the results of analyses for samples received by the laboratory on 09/02/21 13:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 09/02/2021
 Reported: 09/07/2021
 Project Name: MERLIN STATE COM 1
 Project Number: 14751
 Project Location: COG - LEA CO NM

Sampling Date: 08/30/2021
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: V 1 @ SURFACE (H212395-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.641	0.050	09/07/2021	ND	1.93	96.6	2.00	3.07	
Toluene*	3.32	0.050	09/07/2021	ND	1.94	96.9	2.00	2.23	
Ethylbenzene*	0.767	0.050	09/07/2021	ND	1.93	96.5	2.00	0.286	
Total Xylenes*	1.42	0.150	09/07/2021	ND	5.94	99.0	6.00	0.751	
Total BTX	6.15	0.300	09/07/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	09/03/2021	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: CK						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<50.0	50.0	09/03/2021	ND	222	111	200	2.31		
DRO >C10-C28*	10400	50.0	09/03/2021	ND	215	107	200	2.23		
EXT DRO >C28-C36	5090	50.0	09/03/2021	ND						

Surrogate: 1-Chlorooctane 91.8 % 44.3-133

Surrogate: 1-Chlorooctadecane 452 % 38.9-142

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 4 of 4

Company Name: Etech Environmental Project Manager: Joel Lowry Address: 2617 Marland City: Hobbs State: NM Zip: 88240 Phone #: 575-964-2881 Fax #: Project #: 14751 Project Owner: COG Project Name: Merlin State com 1 Project Location: Rural Lea Co, NM Sampler Name: Miguel Ramirez				BILL TO P.O. #: Company: COG Attn: Address: City: State: Zip: Phone #: Fax #:				ANALYSIS REQUEST																			
FOR LAB USE ONLY Lab I.D. H212395 1		Sample I.D. VI @ surface		(G)RAB OR (C)OMP. GI		# CONTAINERS 1		MATRIX GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER:				PRESERV. ACID/BASE: ICE / COOL OTHER:		SAMPLING DATE 8/30/21 TIME		Chlorides BTEX TPH											

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Relinquished By: 		Date: 9/2/21 Time: 13:15		Received By: Gadi Munson		Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #: All Results are emailed. Please provide Email address:	
Relinquished By: 		Date: Time:		Received By:		REMARKS: PM@etechenv.com	
Delivered By: (Circle One) Sampler - <input checked="" type="checkbox"/> GPS - <input type="checkbox"/> Bus - <input type="checkbox"/> Other:		Observed Temp. °C 1.4 Corrected Temp. °C		Sample Condition Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Turnaround Time: Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/> Thermometer ID #113 Correction Factor None	
				CHECKED BY: (Initials) 		Bacteria (only) Sample Condition Cool Intact Observed Temp. °C <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No Corrected Temp. °C	

FORM-006 R 3.1 06/04/20

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



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

October 25, 2021

JOEL LOWRY

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: MERLIN STATE COM 1

Enclosed are the results of analyses for samples received by the laboratory on 10/22/21 16:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 10/22/2021
 Reported: 10/25/2021
 Project Name: MERLIN STATE COM 1
 Project Number: 14751
 Project Location: COG - LEA CO NM

Sampling Date: 10/22/2021
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: NW (H212988-01)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2021	ND	2.16	108	2.00	8.49	
Toluene*	<0.050	0.050	10/25/2021	ND	2.10	105	2.00	8.43	
Ethylbenzene*	<0.050	0.050	10/25/2021	ND	2.06	103	2.00	8.10	
Total Xylenes*	<0.150	0.150	10/25/2021	ND	6.27	105	6.00	7.77	
Total BTEX	<0.300	0.300	10/25/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	10/25/2021	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/25/2021	ND	230	115	200	2.94	
DRO >C10-C28*	<10.0	10.0	10/25/2021	ND	224	112	200	3.76	
EXT DRO >C28-C36	<10.0	10.0	10/25/2021	ND					

Surrogate: 1-Chlorooctane 79.5 % 44.3-133

Surrogate: 1-Chlorooctadecane 76.5 % 38.9-142

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 10/22/2021
 Reported: 10/25/2021
 Project Name: MERLIN STATE COM 1
 Project Number: 14751
 Project Location: COG - LEA CO NM

Sampling Date: 10/22/2021
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: EW (H212988-02)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2021	ND	2.16	108	2.00	8.49	
Toluene*	<0.050	0.050	10/25/2021	ND	2.10	105	2.00	8.43	
Ethylbenzene*	<0.050	0.050	10/25/2021	ND	2.06	103	2.00	8.10	
Total Xylenes*	<0.150	0.150	10/25/2021	ND	6.27	105	6.00	7.77	
Total BTEx	<0.300	0.300	10/25/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	10/25/2021	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/25/2021	ND	230	115	200	2.94	
DRO >C10-C28*	38.4	10.0	10/25/2021	ND	224	112	200	3.76	
EXT DRO >C28-C36	13.0	10.0	10/25/2021	ND					

Surrogate: 1-Chlorooctane 81.9 % 44.3-133

Surrogate: 1-Chlorooctadecane 80.2 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 10/22/2021
 Reported: 10/25/2021
 Project Name: MERLIN STATE COM 1
 Project Number: 14751
 Project Location: COG - LEA CO NM

Sampling Date: 10/22/2021
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: SW (H212988-03)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2021	ND	2.16	108	2.00	8.49	
Toluene*	<0.050	0.050	10/25/2021	ND	2.10	105	2.00	8.43	
Ethylbenzene*	<0.050	0.050	10/25/2021	ND	2.06	103	2.00	8.10	
Total Xylenes*	<0.150	0.150	10/25/2021	ND	6.27	105	6.00	7.77	
Total BTX	<0.300	0.300	10/25/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	10/25/2021	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/25/2021	ND	230	115	200	2.94	
DRO >C10-C28*	38.1	10.0	10/25/2021	ND	224	112	200	3.76	
EXT DRO >C28-C36	15.3	10.0	10/25/2021	ND					

Surrogate: 1-Chlorooctane 76.2 % 44.3-133

Surrogate: 1-Chlorooctadecane 74.4 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 10/22/2021
 Reported: 10/25/2021
 Project Name: MERLIN STATE COM 1
 Project Number: 14751
 Project Location: COG - LEA CO NM

Sampling Date: 10/22/2021
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: WW (H212988-04)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2021	ND	2.16	108	2.00	8.49	
Toluene*	<0.050	0.050	10/25/2021	ND	2.10	105	2.00	8.43	
Ethylbenzene*	<0.050	0.050	10/25/2021	ND	2.06	103	2.00	8.10	
Total Xylenes*	<0.150	0.150	10/25/2021	ND	6.27	105	6.00	7.77	
Total BTEx	<0.300	0.300	10/25/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	10/25/2021	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/25/2021	ND	230	115	200	2.94	
DRO >C10-C28*	317	10.0	10/25/2021	ND	224	112	200	3.76	
EXT DRO >C28-C36	159	10.0	10/25/2021	ND					

Surrogate: 1-Chlorooctane 80.1 % 44.3-133

Surrogate: 1-Chlorooctadecane 89.4 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 10/22/2021
 Reported: 10/25/2021
 Project Name: MERLIN STATE COM 1
 Project Number: 14751
 Project Location: COG - LEA CO NM

Sampling Date: 10/22/2021
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: FL 1 @ 1' (H212988-05)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2021	ND	2.16	108	2.00	8.49	
Toluene*	<0.050	0.050	10/25/2021	ND	2.10	105	2.00	8.43	
Ethylbenzene*	<0.050	0.050	10/25/2021	ND	2.06	103	2.00	8.10	
Total Xylenes*	<0.150	0.150	10/25/2021	ND	6.27	105	6.00	7.77	
Total BTX	<0.300	0.300	10/25/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	10/25/2021	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/25/2021	ND	230	115	200	2.94	
DRO >C10-C28*	520	10.0	10/25/2021	ND	224	112	200	3.76	
EXT DRO >C28-C36	304	10.0	10/25/2021	ND					

Surrogate: 1-Chlorooctane 78.2 % 44.3-133

Surrogate: 1-Chlorooctadecane 94.7 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 10/22/2021
 Reported: 10/25/2021
 Project Name: MERLIN STATE COM 1
 Project Number: 14751
 Project Location: COG - LEA CO NM

Sampling Date: 10/22/2021
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: FL 2 @ 1' (H212988-06)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2021	ND	2.16	108	2.00	8.49	
Toluene*	<0.050	0.050	10/25/2021	ND	2.10	105	2.00	8.43	
Ethylbenzene*	<0.050	0.050	10/25/2021	ND	2.06	103	2.00	8.10	
Total Xylenes*	<0.150	0.150	10/25/2021	ND	6.27	105	6.00	7.77	
Total BTX	<0.300	0.300	10/25/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	10/25/2021	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/25/2021	ND	230	115	200	2.94	
DRO >C10-C28*	225	10.0	10/25/2021	ND	224	112	200	3.76	
EXT DRO >C28-C36	126	10.0	10/25/2021	ND					

Surrogate: 1-Chlorooctane 86.9 % 44.3-133

Surrogate: 1-Chlorooctadecane 92.6 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>ETech Environmental</u>				BILL TO				ANALYSIS REQUEST											
Project Manager: <u>Joel Lowry</u>				P.O. #:															
Address: <u>2617 Marland</u>				Company: <u>COG</u>															
City: <u>Hobbs</u> State: <u>NM</u> Zip: <u>88240</u>				Attn:															
Phone #: <u>575-964-2880</u> Fax #: <u>-</u>				Address:															
Project #: <u>14751</u> Project Owner: <u>COG</u>				City:															
Project Name: <u>Merlin State Com #1</u>				State: Zip:															
Project Location: <u>Rural Lea Co, NM.</u>				Phone #:															
Sampler Name: <u>Miguel Rumin</u>				Fax #:															
FOR LAB USE ONLY																			
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		MATRIX		PRESERV.		SAMPLING							
				GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER:					
				ACID/BASE:		ICE / COOL		OTHER:		DATE		TIME							
<u>H212988</u>																			
<u>1 NW</u>		<u>C</u>		<u>1</u>				<u>X</u>		<u>X</u>		<u>10/22/21</u>		<u>X</u>					
<u>2 EW</u>														<u>X</u>					
<u>3 SW</u>														<u>X</u>					
<u>4 WW</u>														<u>X</u>					
<u>5 FL1Q1'</u>																			
<u>6 FL2Q1'</u>																			

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Relinquished By: <u>[Signature]</u>		Date: <u>10-22-21</u>		Received By: <u>[Signature]</u>		Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #:	
Time: <u>1625</u>		Time: <u>1625</u>		Time: <u>1625</u>		All Results are emailed. Please provide Email address:	
Relinquished By:		Date:		Received By:		REMARKS: <u>PWR@etechenv.com</u>	
Time:		Time:		Time:		Rush please	
Delivered By: (Circle One)		Observed Temp. °C <u>25.3</u>		Sample Condition		Turnaround Time: <u>Standard</u>	
Sampler - UPS - Bus - Other:		Corrected Temp. °C <u>24.8</u>		Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No		Bacteria (only) Sample Condition	
				Checked By: (Initials) <u>J.O.</u>		Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
						Thermometer ID #113	
						Correction Factor <u>None</u> <u>-0.52</u>	
						Corrected Temp. °C	

FORM-006 R.S. 1/06/04/20

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



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

October 27, 2021

JOEL LOWRY

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: MERLIN STATE COM 1

Enclosed are the results of analyses for samples received by the laboratory on 10/26/21 16:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 10/26/2021
 Reported: 10/27/2021
 Project Name: MERLIN STATE COM 1
 Project Number: 14751
 Project Location: COG - LEA CO NM

Sampling Date: 10/26/2021
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: FL 1 @ 2' (H213014-01)

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/27/2021	ND	205	102	200	0.151	
DRO >C10-C28*	<10.0	10.0	10/27/2021	ND	204	102	200	1.23	
EXT DRO >C28-C36	<10.0	10.0	10/27/2021	ND					
<hr/>									
Surrogate: 1-Chlorooctane	94.8 %	44.3-133							
Surrogate: 1-Chlorooctadecane	91.9 %	38.9-142							

Sample ID: FL 2 @ 2' (H213014-02)

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/27/2021	ND	205	102	200	0.151	
DRO >C10-C28*	<10.0	10.0	10/27/2021	ND	204	102	200	1.23	
EXT DRO >C28-C36	<10.0	10.0	10/27/2021	ND					
<hr/>									
Surrogate: 1-Chlorooctane	93.2 %	44.3-133							
Surrogate: 1-Chlorooctadecane	91.2 %	38.9-142							

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 10/26/2021
 Reported: 10/27/2021
 Project Name: MERLIN STATE COM 1
 Project Number: 14751
 Project Location: COG - LEA CO NM

Sampling Date: 10/26/2021
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: WWB (H213014-03)

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	10/27/2021	ND	205	102	200	0.151		
DRO >C10-C28*	<10.0	10.0	10/27/2021	ND	204	102	200	1.23		
EXT DRO >C28-C36	<10.0	10.0	10/27/2021	ND						
Surrogate: 1-Chlorooctane	87.6 %	44.3-133								
Surrogate: 1-Chlorooctadecane	85.9 %	38.9-142								

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 5 of 5

Company Name: <u>Etech Environmental</u>				BILL TO				ANALYSIS REQUEST											
Project Manager: <u>Jed Lowry</u>				P.O. #:															
Address: <u>2617 Mariand</u>				Company: <u>COG</u>															
City: <u>Hobbs</u> State: <u>NM</u> Zip: <u>88240</u>				Attn:															
Phone #: <u>575 964 2880</u> Fax #: <u>-</u>				Address:															
Project #: <u>14751</u> Project Owner: <u>COG</u>				City:															
Project Name: <u>Merlin</u>				State: Zip:															
Project Location: <u>Rural Lea Co, NM</u>				Phone #:															
Sampler Name: <u>Miguel Ramirez</u>				Fax #:															
FOR LAB USE ONLY																			
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		MATRIX		PRESERV.		SAMPLING		TPH					
				GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :					
				ACID/BASE		ICE / COOL		OTHER :		DATE		TIME							
<u>H213014</u>		<u>FL1 @ 2'</u>		<u>G</u>		<u>X</u>		<u>X</u>		<u>10/26/21</u>				<u>X</u>					
<u>2</u>		<u>FL2 @ 2'</u>		<u>↓</u>		<u>↓</u>		<u>↓</u>		<u>↓</u>				<u>↓</u>					
<u>3</u>		<u>WNB</u>		<u>↓</u>		<u>↓</u>		<u>↓</u>		<u>↓</u>				<u>↓</u>					

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Relinquished By: <u>Miguel Ramirez</u>		Date: <u>10/26/21</u>		Received By: <u>Jamara Elda K...</u>		Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #:	
Relinquished By: <u>Miguel Ramirez</u>		Time: <u>1635</u>		Received By: <u>Jamara Elda K...</u>		All Results are emailed. Please provide Email address:	
Date: <u>10/26/21</u>		Time: <u>1635</u>		Date: <u>10/26/21</u>		Time: <u>1635</u>	
Delivered By: (Circle One)		Observed Temp. °C <u>4.4</u>		Sample Condition		CHECKED BY: (Initials) <u>TP</u>	
Sampler - UPS - Bus - Other: <u>C</u>		Corrected Temp. °C <u>3.9</u>		Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Turnaround Time: <u>Standard</u> <input checked="" type="checkbox"/> Rush	
				Thermometer ID #113		Bacteria (only) Sample Condition	
				Correction Factor <u>None - 0.5°C</u>		Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
						Observed Temp. °C	
						Corrected Temp. °C	

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

Appendix C

Photographic Log

Photographic Log




Photo Number: 1	
Photo Direction: Northwest	
Photo Description: View of the affected area.	

Photo Number: 2	
Photo Direction: Northwest	
Photo Description: View of the affected area.	

Photographic Log

Photo Number: 3	
Photo Direction: East	
Photo Description: View of the affected area.	

Photo Number: 4	
Photo Direction: East	
Photo Description: View of the affected area.	

Photographic Log


Photo Number: 5	
Photo Direction: Northeast	
Photo Description: View of the affected area.	

Photo Number: 6	
Photo Direction: Southeast	
Photo Description: View of the excavated area.	

Photographic Log


Photo Number: 7	
Photo Direction: East	
Photo Description: View of the excavated area.	

Photo Number: 8	
Photo Direction: North	
Photo Description: View of the remediated area following backfill & regrading.	

Photographic Log



Photo Number: 9	 <p>Nov 4, 2021 at 1:50:15 PM 98° E</p> <p>A photograph showing a remediated area with a sandy, textured ground surface. In the background, a tall crane or drilling rig is visible. To the right, there is a yellow metal frame structure. The sky is clear and blue. A compass rose in the top left corner indicates North (N), South (S), East (E), and West (W). The photo was taken on Nov 4, 2021 at 1:50:15 PM, facing 98° E.</p>
Photo Direction: East	
Photo Description: View of the remediated area following backfill & regrading.	

Photo Number: 10	 <p>Nov 4, 2021 at 1:50:21 PM 97° E</p> <p>A photograph showing a remediated area with a sandy, textured ground surface. In the background, a tall crane or drilling rig is visible. To the right, there is a yellow metal frame structure. The sky is clear and blue. A compass rose in the top left corner indicates North (N), South (S), East (E), and West (W). The photo was taken on Nov 4, 2021 at 1:50:21 PM, facing 97° E.</p>
Photo Direction: East	
Photo Description: View of the remediated area following backfill & regrading.	

District I

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District II

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District III

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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 64775

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 64775
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
chensley	None	12/29/2021