

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	NRM1935430604
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

SA905-191101-C-1410

Responsible Party	XTO Energy	OGRID	5380
Contact Name	Kyle Littrell	Contact Telephone	432-221-7331
Contact email	Kyle_Littrell@xtoenergy.com	Incident # (assigned by OCD)	
Contact mailing address	522 W. Mermod, Carlsbad, NM 88220		

Location of Release Source

Latitude 32.535876

Longitude -103.687964

(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Hat Mesa 32 State #2	Site Type	Well Location
Date Release Discovered	10/21/2019	API# (if applicable)	30-025-34819 (Hat Mesa 32 State #002)

Unit Letter	Section	Township	Range	County
C	32	20S	33E	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) 3.27	Volume Recovered (bbls) .50
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 6.64	Volume Recovered (bbls) 1.01
	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: The lease operator reported a buried poly flowline was found ruptured. Additional third party resources have been retained to assist in the remediation.

Form C-141

State of New Mexico
Oil Conservation Division

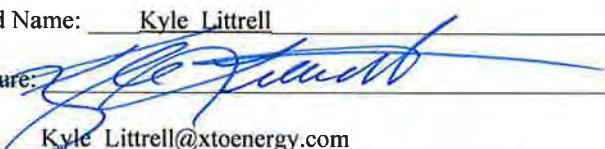
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Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? N/A
If YES, was immediate notice given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

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: N/A	
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>Kyle Littrell</u>	Title: <u>SH&E Supervisor</u>
Signature: 	Date: <u>11/1/2019</u>
email: <u>Kyle_Littrell@xtoenergy.com</u>	Telephone: _____
<u>OCD Only</u>	
Received by: <u>Ramona Marcus</u>	Date: <u>12/20/2019</u>

Location:	Hat Mesa 32 State # 2 (30-025-34819)	
Spill Date:	10/21/2019	
POOLED AREA		
Approximate Area =	2694.00	sq. ft.
Average Saturation (or depth) of spill =	1.00	inches
Approximate oil % =	33.00	
Average Porosity Factor =	0.15	
VOLUME OF LEAK		
Total Oil =	2.47	bbls
Total Produced Water =	5.02	bbls
HEAVY SPRAY		
Approximate Area =	1632.00	sq. ft.
Average Saturation (or depth) of spill =	0.50	inches
Approximate oil % =	33.00	
Average Porosity Factor =	0.15	
VOLUME OF LEAK		
Total Oil =	0.60	bbls
Total Produced Water =	1.22	bbls
LIGHT SPRAY		
Approximate Area =	1071.00	sq. ft.
Average Saturation (or depth) of spill =	0.25	inches
Approximate oil % =	33.00	
Average Porosity Factor =	0.15	
VOLUME OF LEAK		
Total Oil =	0.20	bbls
Total Produced Water =	0.40	bbls
TOTAL VOLUME OF LEAK		
Total Oil =	3.27	bbls
Total Produced Water =	6.64	bbls
VOLUME RECOVERED		
Total Oil =	0.50	bbls
Total Produced Water =	1.01	bbls

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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?	<50 (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 checked="" 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

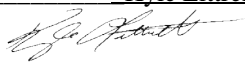
If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, 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

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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: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 10/15/2020

email: Kyle_Littrell@xtoenergy.com Telephone: (432)-221-7331

OCD Only

Received by: _____ Date: _____

Incident ID	NRM1935430604
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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: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 10/15/2020

email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____



LT Environmental, Inc.

3300 North "A" Street
Building 1, Unit 222
Midland, Texas 79705
432.704.5178

October 20, 2020

New Mexico Oil Conservation Division
District 1
1625 N. French Drive
Hobbs, New Mexico 88240

**RE: Closure Request
Hat Mesa 32 State #2
Incident Number NRM1935430604
Lea County, New Mexico**

To Whom It May Concern:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment, excavation, and soil sampling activities at the Hat Mesa 32 State #2 (Site) located in Unit C, Section 32, Township 20 South, Range 33 East, in Lea County, New Mexico (Figure 1). The purpose of the site assessment, excavation, and soil sampling activities was to address impacts to soil following the release of crude oil and produced water at the Site. Based on field observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this Closure Request and requesting no further action (NFA) for Incident Number NRM1935430604.

RELEASE BACKGROUND

On October 21, 2019, a flowline ruptured, resulting in the release of 3.27 barrels (bbls) of crude oil and 6.64 bbls of produced water into the surrounding pasture. A vacuum truck was dispatched to the Site to recover freestanding fluids; approximately 0.50 bbls of crude oil and 1.01 bbls of produced water were recovered. The damaged section of the flowline was repaired. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on November 1, 2019. The release was assigned Incident Number NRM1935430604.

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be less than 50 feet below ground surface (bgs) based on the nearest groundwater well data. The nearest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 323158103425301, located approximately 1.60 miles west of the Site. The groundwater well has a depth to groundwater of 44 feet bgs and a total depth of 50 feet bgs. All wells used for depth



to groundwater determination are depicted on Figure 1 and the associated well water records are included in Attachment 1. The closest continuously flowing water or significant watercourse to the Site is a freshwater emergent wetland located approximately 1,066 feet northwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

CLOSURE CRITERIA

Based on the results of the site characterization, the following NMOCD Table 1 Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH): 100 mg/kg
- Chloride: 600 mg/kg

SITE ASSESSMENT ACTIVITIES AND ANALYTICAL RESULTS

On December 12, 2019, LTE personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. LTE personnel collected six preliminary assessment soil samples (SS01 through SS06) within the release extent from a depth of approximately 0.5 feet bgs to assess the lateral extent of impacted soil. Soil from the preliminary soil samples was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2.

The preliminary soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for preliminary soil samples SS02 through SS06 indicated that chloride concentrations exceeded the Closure Criteria. Laboratory analytical results for preliminary soil sample SS01 indicated that benzene, BTEX, TPH, and chloride concentrations



were compliant with Closure Criteria. Based on visible staining in the release area, field screening activities, and laboratory analytical results for the preliminary soil samples, delineation and excavation activities were warranted.

EXCAVATION AND DELINEATION SOIL SAMPLING ACTIVITIES

Further delineation and remediation efforts were postponed. Per 19.15.29.12.B. (1) NMAC, three extensions for submission of a Remediation Plan or Closure Request were granted. The initial extension was approved on January, 16, 2020, the second was approved on April 2, 2020 extending the deadline to July 19, 2020. The final extension was approved on July 6, 2020 by the NMOCD office extending the deadline to October 22, 2020.

Between July 15, 2020 and July 28, 2020, LTE personnel returned to the site to oversee delineation and excavation activities as indicated by visual observations, field screening activities, and laboratory analytical results for the preliminary soil samples.

Two potholes (PH01 and PH02) were advanced via trackhoe to depths ranging from 1 foot to 2 feet bgs in the southern portion of the excavation to confirm the absence of impacted soil near preliminary soil sample SS01. Discrete delineation soil samples were collected from each pothole at depths ranging from 1 foot to 2 feet bgs. Soil from the potholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for each pothole were logged on lithologic/soil sampling logs, which are included in Attachment 2. The potholes and delineation soil sample locations are presented on Figure 3. The delineation soil samples were collected, handled, and analyzed as described above at Xenco in Carlsbad, New Mexico.

Based on field screening activities and laboratory analytical results for the preliminary and delineation soil samples, excavation activities were completed to remove impacted soil in the area surrounding preliminary soil samples SS02 through SS06. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. The excavation was completed to depths ranging from 1 foot to 2.5 feet bgs. Following removal of impacted soil, LTE collected 5-point composite soil samples at least every 200 square feet from the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite samples FS01 through FS25, FS02A, FS03A, FS05A, and FS20A were collected from the floor of the excavation from depths ranging from 1 foot to 2.5 feet bgs. Due to the shallow depth of the excavation, the soil samples represented the floor and sidewalls of the excavation. The excavation soil samples were collected, handled, and analyzed as described above. The excavation extent and excavation soil sample locations are presented on Figure 4. Photographic documentation was conducted during the visits to the Site. A photographic log is included in Attachment 3.



The excavation measured approximately 4,900 square feet. A total of approximately 230 cubic yards of impacted soil were removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility located in Hobbs, New Mexico. After completion of confirmation sampling, the excavation was secured with fencing.

ANALYTICAL RESULTS

Laboratory analytical results for preliminary soil samples SS02 through SS06 indicated that chloride concentrations exceeded the Closure Criteria. Laboratory analytical results for preliminary soil sample SS01 indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with Closure Criteria.

Laboratory analytical results for the delineation soil samples collected from potholes PH01 and PH02 indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with Closure Criteria.

Laboratory analytical results for excavation samples FS01, FS02A, FS03A, FS04, FS05A, FS06 through FS19, FS20A, and FS21 through FS25, collected from the final excavation extent, indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria.

The laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are provided in Attachment 4.

CONCLUSIONS

Initial and follow-up response efforts as a result of the October 21, 2019 crude oil and produced water release included removal of freestanding fluid by a hydrovac truck, excavation and removal of impacted soil, and collection of confirmation soil samples. Preliminary soil samples SS01 through SS06 were collected from within the release extent. Laboratory analytical results for soil samples SS02 through SS06 indicated that chloride concentrations exceeded the Closure Criteria in the northern portion of the release extent. Based on the analytical results, the impacted soil was excavated to depths ranging from 1 foot bgs to 2.5 feet bgs. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria and no further remediation was required. The excavation encompassed an area of approximately 4,900 square feet in the pasture and a total volume of 230 cubic yards of soil was removed.

Initial response efforts and excavation of impacted soil have mitigated impacts at this Site. Based on the confirmation soil sample analytical results, XTO respectfully requests NFA for Incident Number NRM1935430604.



District 1
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If you have any questions or comments, please do not hesitate to contact Ms. Ashley Ager at (970) 385-1096.

Sincerely,

LT ENVIRONMENTAL, INC.

A handwritten signature in black ink that reads 'Kalei Jennings'.

Kalei Jennings
Project Environmental Scientist

A handwritten signature in black ink that reads 'Ashley L. Ager'.

Ashley L. Ager, P.G.
Senior Geologist

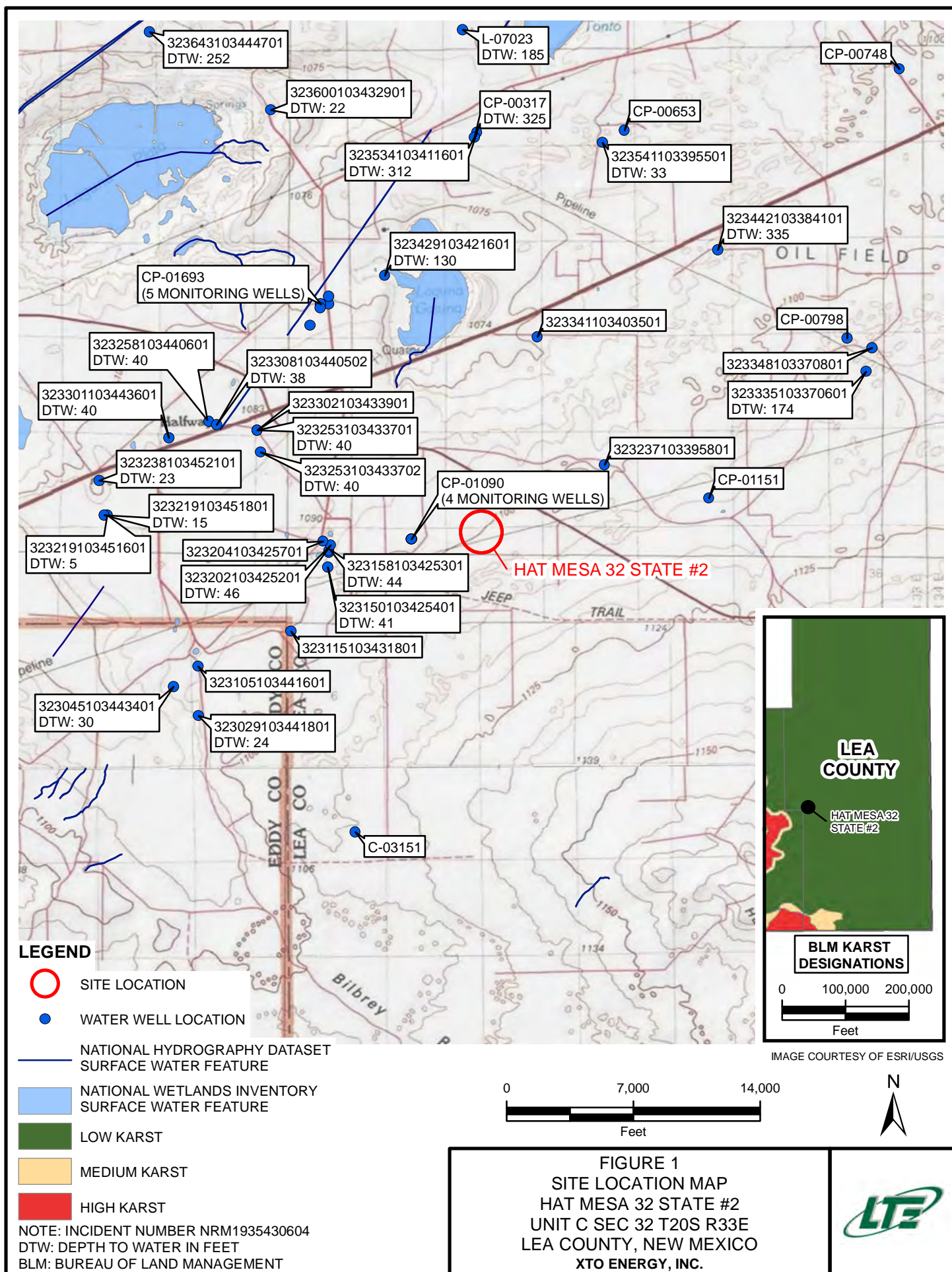
cc: Kyle Littrell, XTO
Ryan Mann, New Mexico State Land Office
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD

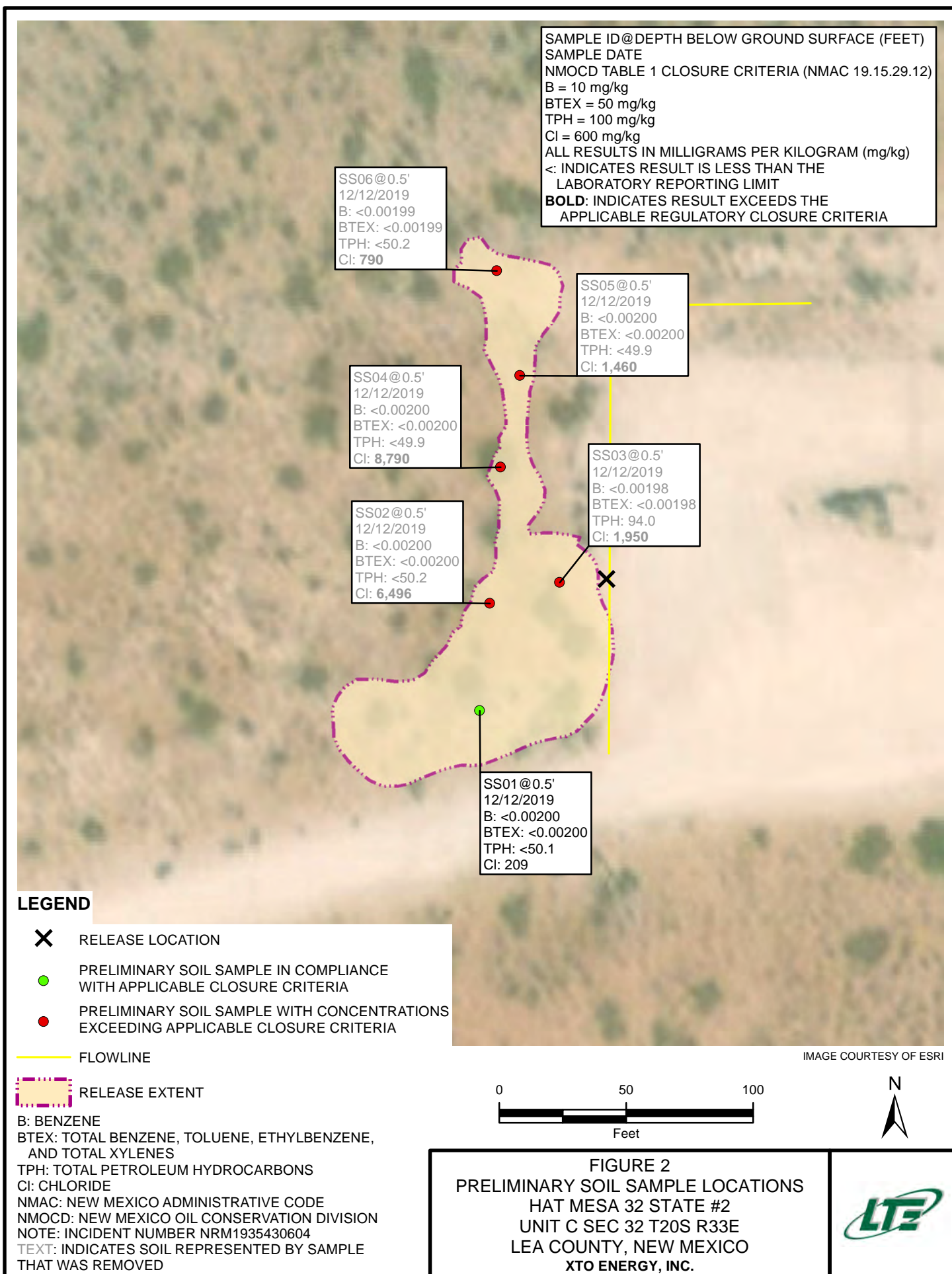
Appendices:

Figure 1 Site Location Map
Figure 2 Preliminary Soil Sample Locations
Figure 3 Delineation Soil Sample Locations
Figure 4 Excavation Soil Sample Locations
Table 1 Soil Analytical Results
Attachment 1 Water Well Records
Attachment 2 Lithologic/Soil Sampling Logs
Attachment 3 Photographic Log
Attachment 4 Laboratory Analytical Reports

FIGURES







SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
 SAMPLE DATE
 NMOCD TABLE 1 CLOSURE CRITERIA (NMAC 19.15.29.12)
 B = 10 mg/kg
 BTEX = 50 mg/kg
 TPH = 100 mg/kg
 Cl = 600 mg/kg
 ALL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)
 <: INDICATES RESULT IS LESS THAN THE
 LABORATORY REPORTING LIMIT

PH01@1'	PH01A@2'
07/15/2020	07/15/2020
B: <0.00200	B: <0.00201
BTEX: <0.00200	BTEX: <0.00201
TPH: <50.0	TPH: <50.2
Cl: 104	Cl: 61.8

PH02@1'
 07/15/2020
 B: <0.00198
 BTEX: <0.00198
 TPH: <50.0
 Cl: 99.2

LEGEND

RELEASE LOCATION

DELINEATION SOIL SAMPLE IN COMPLIANCE
WITH APPLICABLE CLOSURE CRITERIA

FLOWLINE



RELEASE EXTENT

B: BENZENE

BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE,
AND TOTAL XYLENES

TPH: TOTAL PETROLEUM HYDROCARBONS

Cl: CHLORIDE

NMAC: NEW MEXICO ADMINISTRATIVE CODE

NMOCD: NEW MEXICO OIL CONSERVATION DIVISION

NOTE: INCIDENT NUMBER NRM1935430604

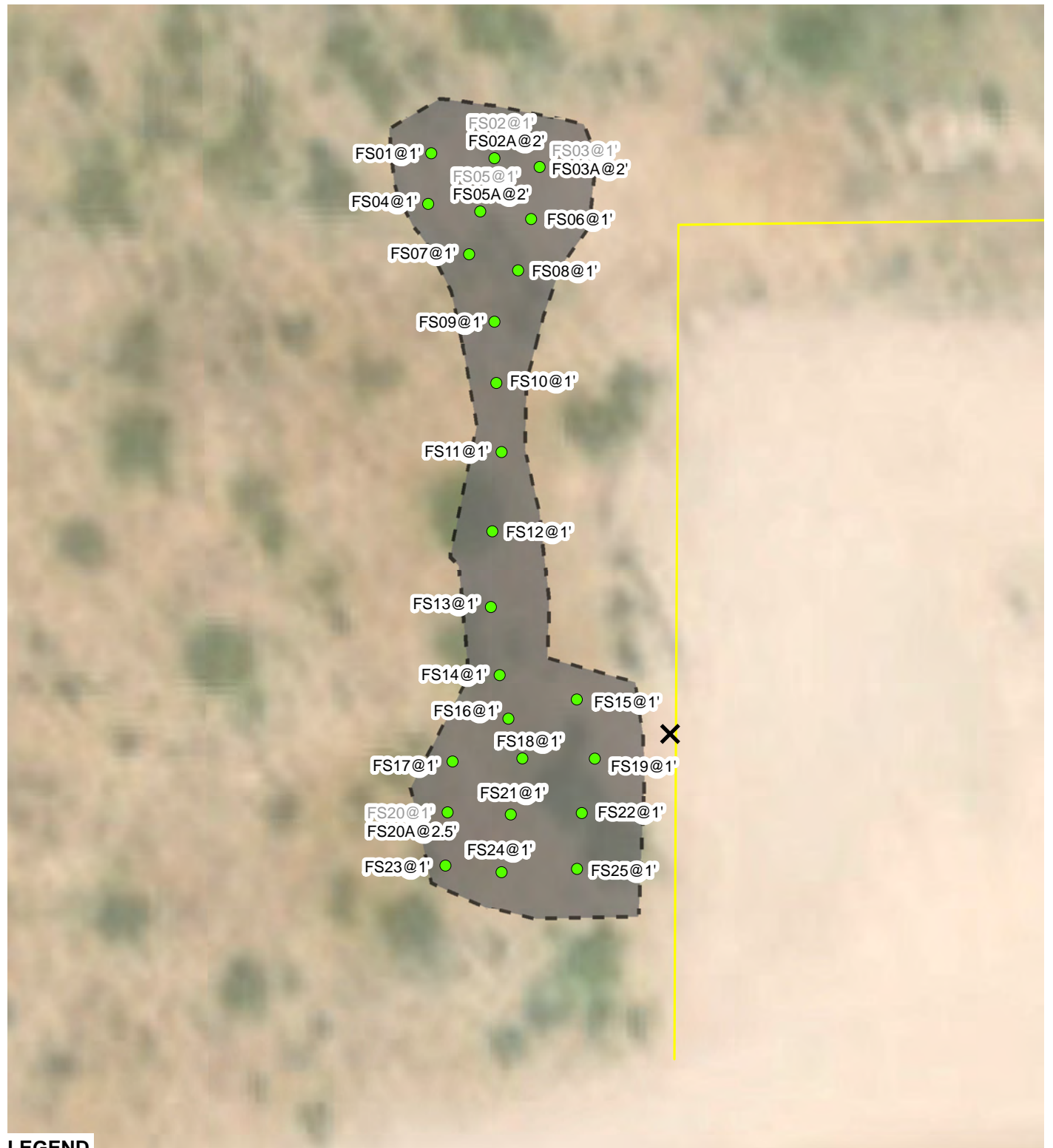
0 50 100
 Feet



IMAGE COURTESY OF ESRI

FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
HAT MESA 32 STATE #2
UNIT C SEC 32 T20S R33E
LEA COUNTY, NEW MEXICO
XTO ENERGY, INC.



**LEGEND**

- X RELEASE LOCATION
 ● FLOOR SAMPLE IN COMPLIANCE
 WITH APPLICABLE CLOSURE CRITERIA
 — FLOWLINE

EXCAVATION EXTENT

NOTE: INCIDENT NUMBER NRM1935430604
 SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
 TEXT: INDICATES SOIL REPRESENTED BY SAMPLE
 THAT WAS REMOVED

IMAGE COURTESY OF ESRI

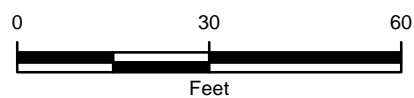


FIGURE 4
EXCAVATION SOIL SAMPLE LOCATIONS
 HAT MESA 32 STATE #2
 UNIT C SEC 32 T20S R33E
 LEA COUNTY, NEW MEXICO
 XTO ENERGY, INC.



TABLES



**TABLE 1
SOIL ANALYTICAL RESULTS**

**HAT MESA 32 STATE #2
INCIDENT ID # NRM1935430604
LEA COUNTY, NEW MEXICO
XTO ENERGY, INC.**

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	NE	100	600
SS01	0.5	12/12/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	209
SS02	0.5	12/12/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	6,490
SS03	0.5	12/12/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.8	94.0	<49.8	94.0	94.0	1,950
SS04	0.5	12/12/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	8,790
SS05	0.5	12/12/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	1,460
SS06	0.5	12/12/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	<50.2	790
PH01	1	07/15/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	104
PH01A	2	07/15/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	61.8
PH02	1	07/15/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	99.2
FS01	1	07/15/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	253
FS02	1	07/15/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	1,370
FS02A	2	07/28/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.3	<50.3	<50.3	<50.3	<50.3	346
FS03	1	07/15/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	771
FS03A	2	07/28/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	378
FS04	1	07/15/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	129
FS05	1	07/15/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	70.7	<49.8	70.7	70.7	1,040
FS05A	2	07/28/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	315
FS06	1	07/15/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	255
FS07	1	07/15/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	153
FS08	1	07/15/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	424
FS09	1	07/15/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	142
FS10	1	07/15/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	171
FS11	1	07/15/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	<50.2	215

**TABLE 1
SOIL ANALYTICAL RESULTS**

**HAT MESA 32 STATE #2
INCIDENT ID # NRM1935430604
LEA COUNTY, NEW MEXICO
XTO ENERGY, INC.**

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCDC Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	NE	100	600
FS12	1	07/15/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	190
FS13	1	07/15/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.3	<50.3	<50.3	<50.3	<50.3	296
FS14	1	07/15/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	285
FS15	1	07/15/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	170
FS16	1	07/15/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.8	<49.8	<49.8	<49.8	<49.8	129
FS17	1	07/15/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	334
FS18	1	07/15/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	81.1	<49.9	81.1	81.1	380
FS19	1	07/15/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	69.0	<50.0	69.0	69.0	526
FS20	1	07/15/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.9	70.3	<49.9	70.3	70.3	622
FS20A	2.5	07/28/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.3	<50.3	<50.3	<50.3	<50.3	300
FS21	1	07/15/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	342
FS22	1	07/15/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	326
FS23	1	07/15/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	57.1	<50.1	57.1	57.1	369
FS24	1	07/15/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	360
FS25	1	07/15/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	342

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

MRO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCDC - New Mexico Oil Conservation Division

NE - not established

TPH - total petroleum hydrocarbons

Bold - indicates result exceeds the applicable regulatory standard

< - indicates result is below laboratory reporting limits

Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018

TEXT - indicates soil was removed during excavation activities

ATTACHMENT 1: WATER WELL RECORDS





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site_no list =

- 323029103441801

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USGS 323029103441801 21S.31E.01.13143

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Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°30'29", Longitude 103°44'18" NAD27

Land-surface elevation 3,579 feet above NAVD88

The depth of the well is 36 feet below land surface.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

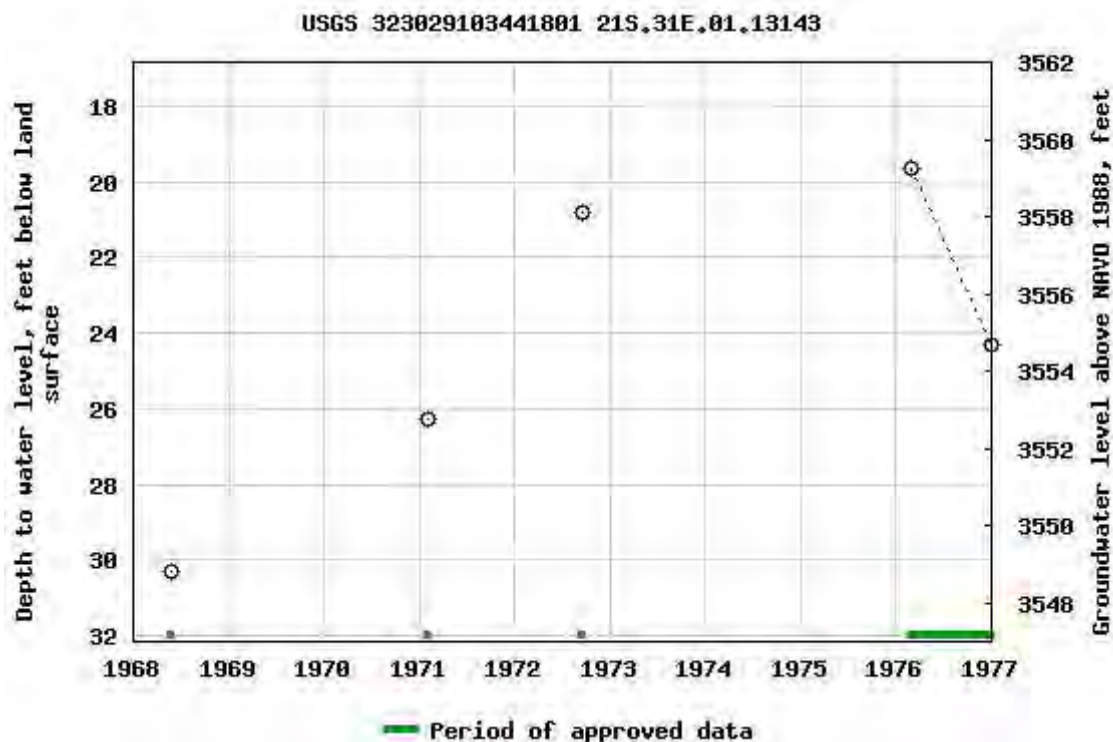
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site_no list =

- 323045103443401

Minimum number of levels = 1

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USGS 323045103443401 21S.31E.02.22123

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Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°30'45", Longitude 103°44'34" NAD27

Land-surface elevation 3,580 feet above NAVD88

The depth of the well is 32 feet below land surface.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

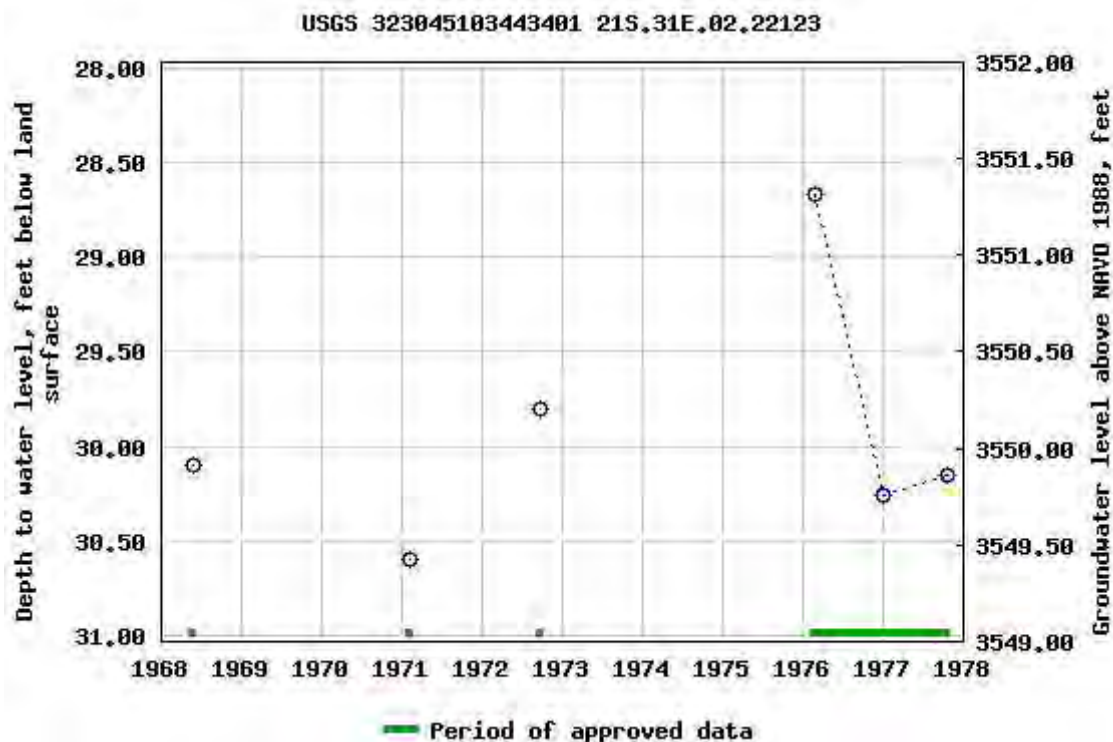
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site_no list =

- 323150103425401

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USGS 323150103425401 20S.32E.36.214+DUP

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Lea County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°31'50", Longitude 103°42'54" NAD27

Land-surface elevation 3,587 feet above NAVD88

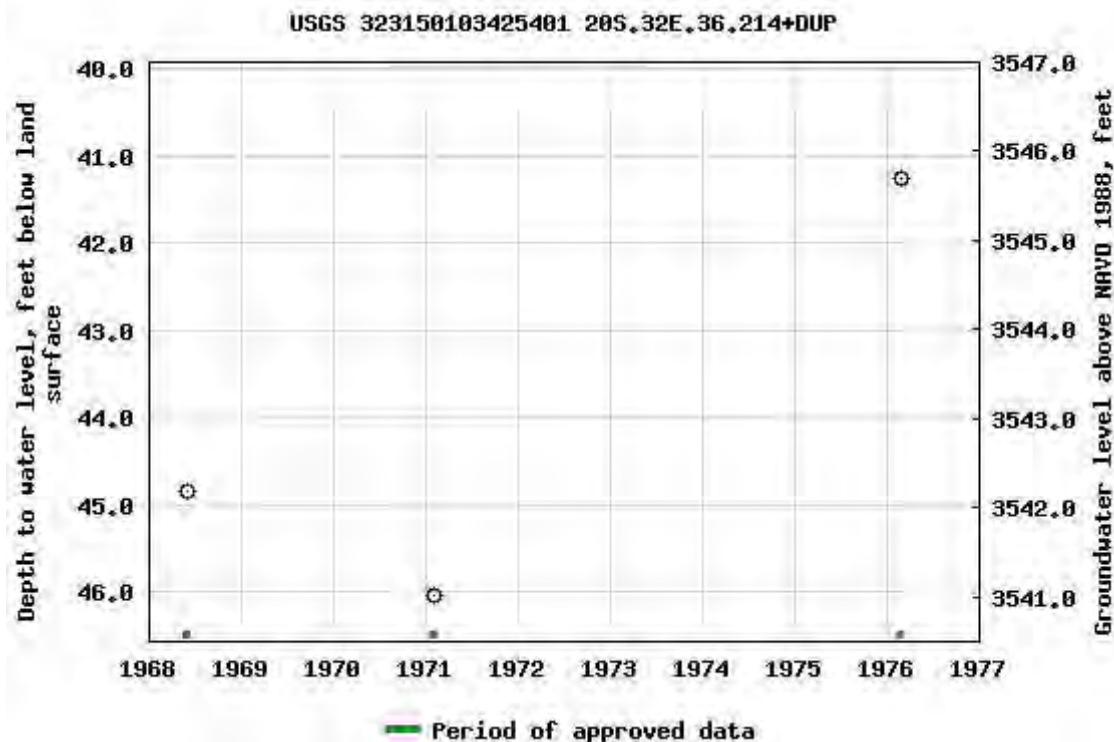
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site_no list =

- 323158103425301

Minimum number of levels = 1

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USGS 323158103425301 20S.32E.36.21442

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Lea County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°31'58", Longitude 103°42'53" NAD27

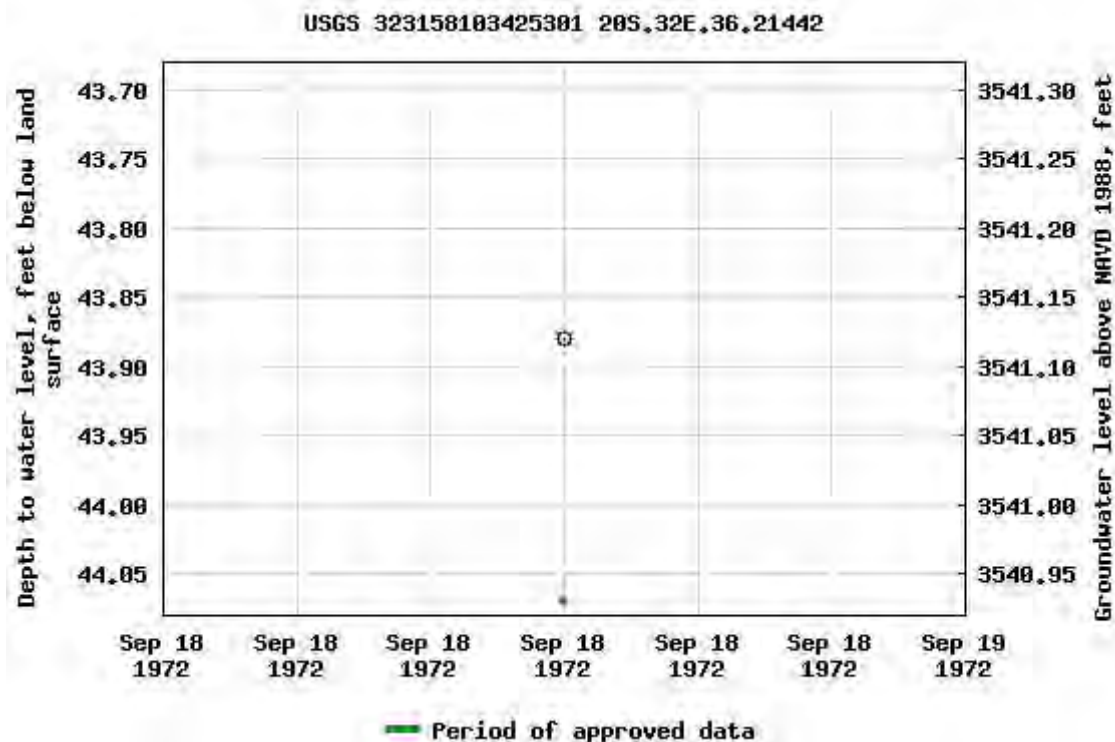
Land-surface elevation 3,585 feet above NAVD88

The depth of the well is 50 feet below land surface.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

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- 323202103425201

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USGS 323202103425201 20S.32E.36.22311

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Lea County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°32'02", Longitude 103°42'52" NAD27

Land-surface elevation 3,586 feet above NAVD88

The depth of the well is 65 feet below land surface.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

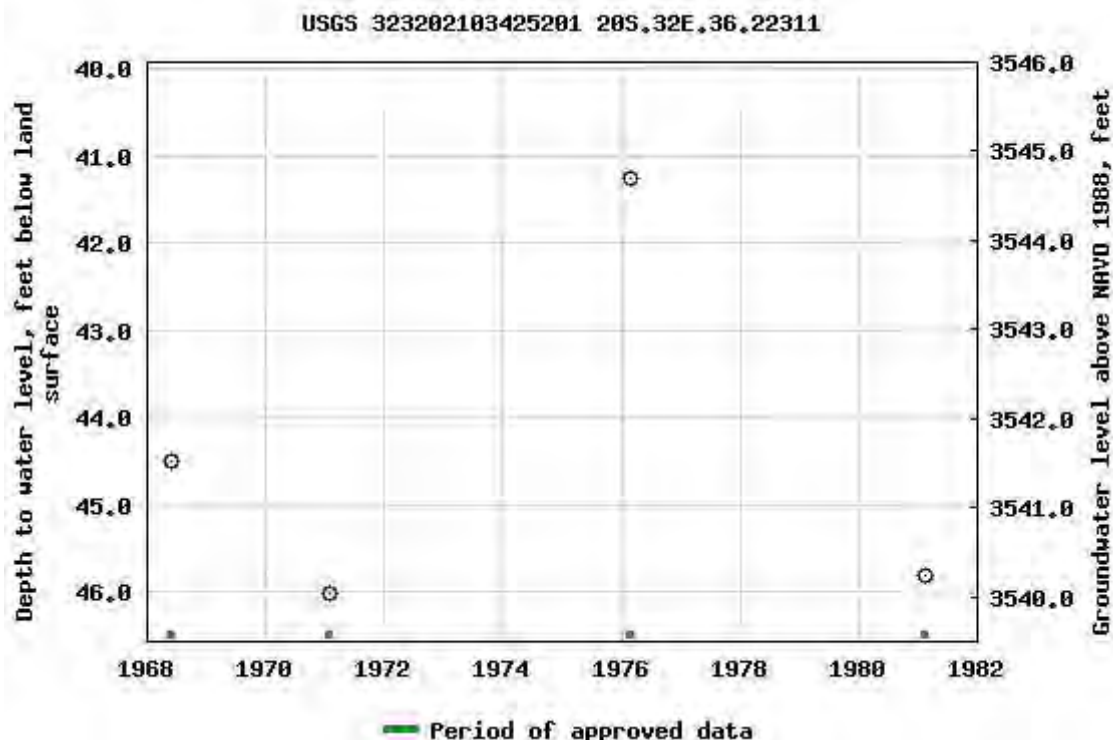
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- 323219103451601

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USGS 323219103451601 20S.32E.27.32411

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Lea County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°32'19", Longitude 103°45'16" NAD27

Land-surface elevation 3,544 feet above NAVD88

The depth of the well is 75 feet below land surface.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

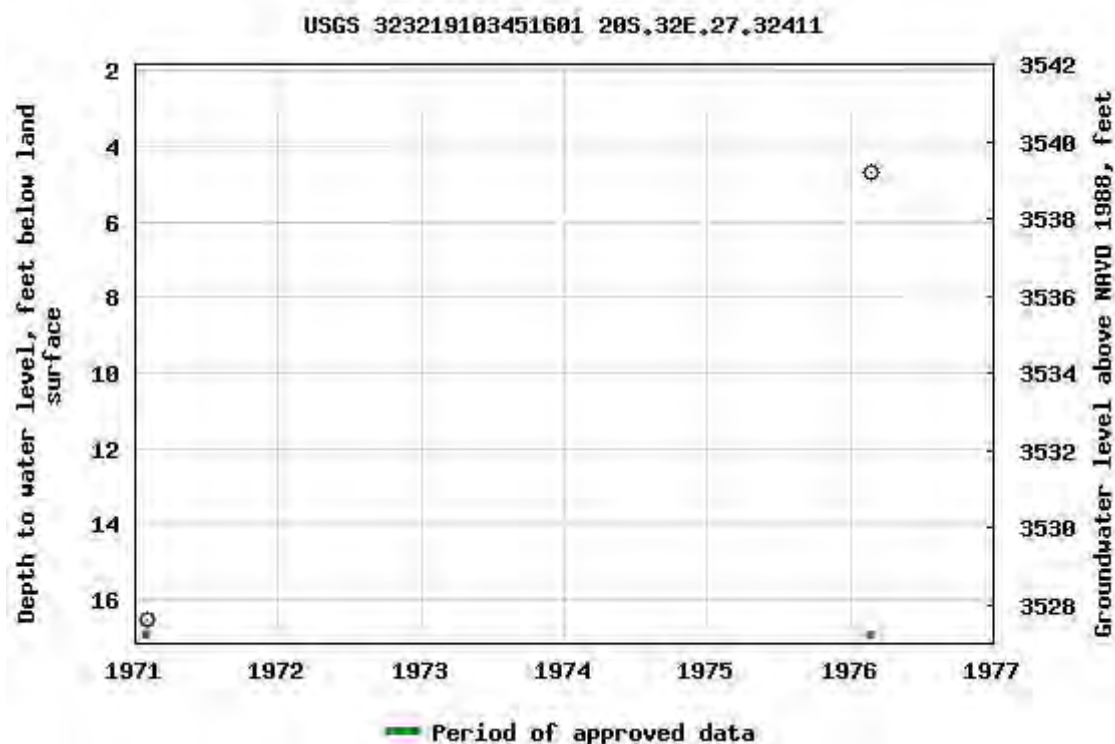
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site_no list =

- 323219103451801

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Lea County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°32'19", Longitude 103°45'18" NAD27

Land-surface elevation 3,543 feet above NAVD88

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

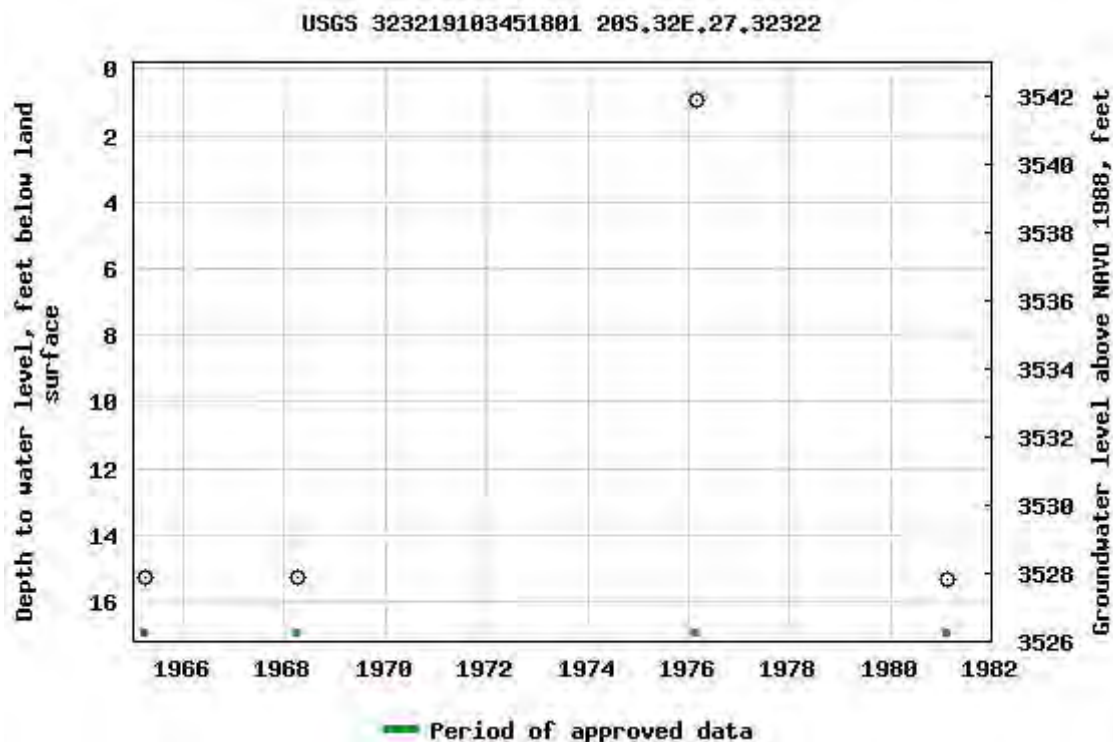
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1.5 0.58 nadww01





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site_no list =

- 323238103452101

Minimum number of levels = 1

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USGS 323238103452101 20S.32E.27.14332

Available data for this site

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Lea County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°32'38", Longitude 103°45'21" NAD27

Land-surface elevation 3,539 feet above NAVD88

The depth of the well is 25 feet below land surface.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

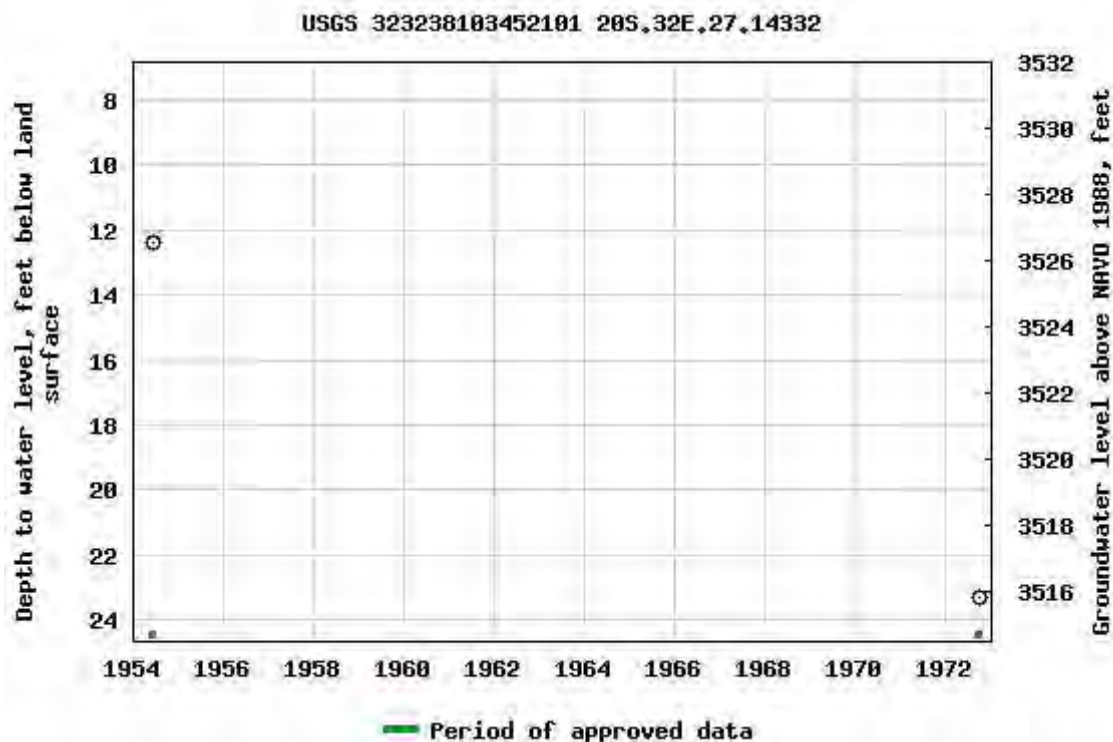
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- 323253103433701

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Lea County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°33'05.3", Longitude 103°43'40.7" NAD83

Land-surface elevation 3,556 feet above NAVD88

The depth of the well is 65 feet below land surface.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

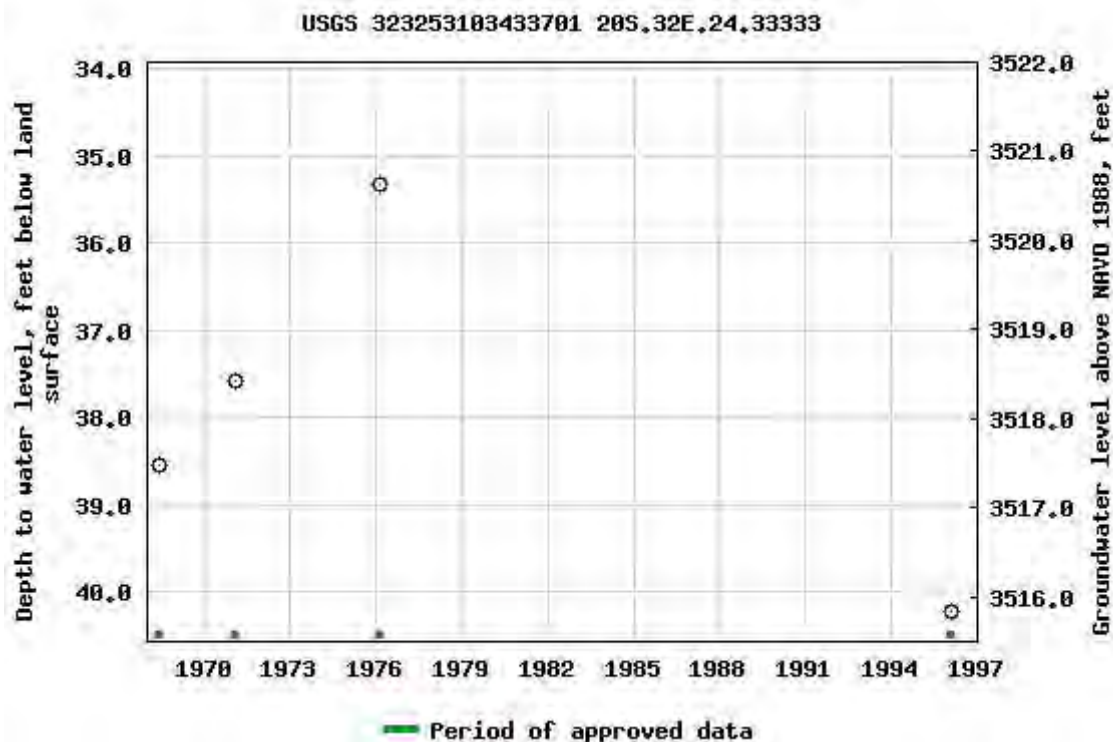
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Title: Groundwater for USA: Water Levels

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



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0.67 0.54 nadww01



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Search Results -- 1 sites found

site_no list =

- 323253103433702

Minimum number of levels = 1

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

USGS 323253103433702 20S.32E.24.333333

Available data for this site

Groundwater: Field measurements



GO

Lea County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°32'53", Longitude 103°43'37" NAD27

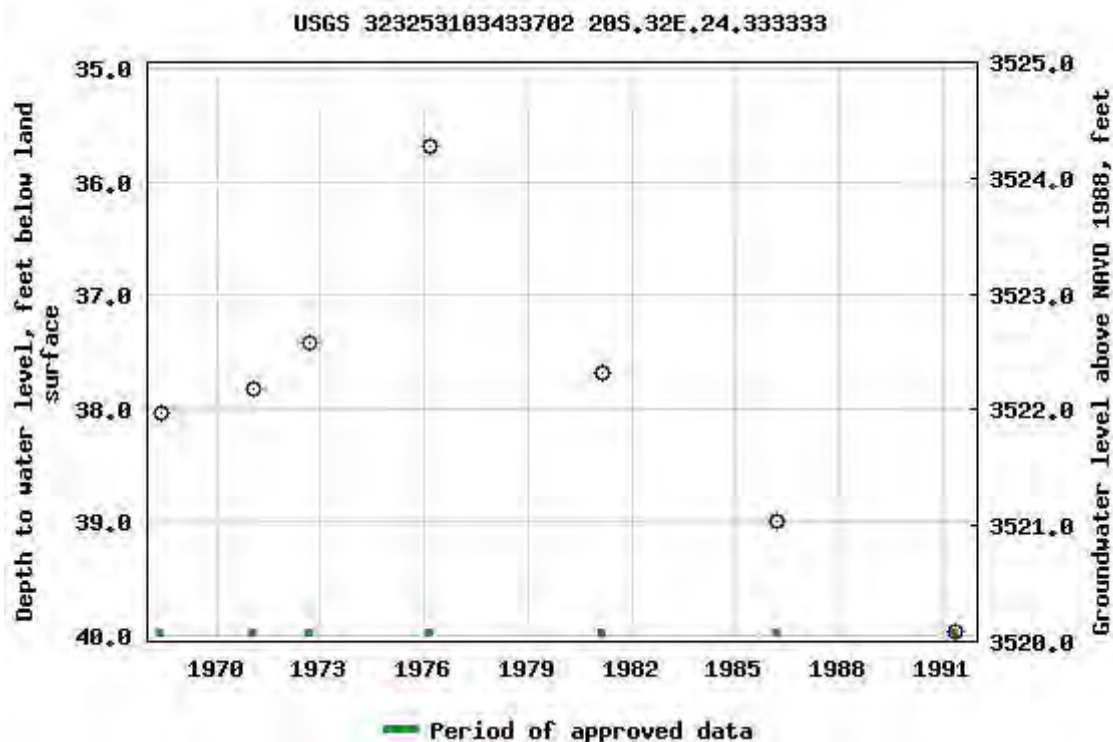
Land-surface elevation 3,560 feet above NAVD88

The depth of the well is 65 feet below land surface.

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



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0.53 0.47 nadww01





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Data Category:


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Search Results -- 1 sites found

site_no list =

- 323258103440601

Minimum number of levels = 1

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

USGS 323258103440601 20S.32E.23.43312

Available data for this site

Groundwater: Field measurements

GO

Lea County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°33'10", Longitude 103°44'10" NAD27

Land-surface elevation 3,551.00 feet above NGVD29

The depth of the well is 78 feet below land surface.

This well is completed in the Chinle Formation (231CHNL) local aquifer.

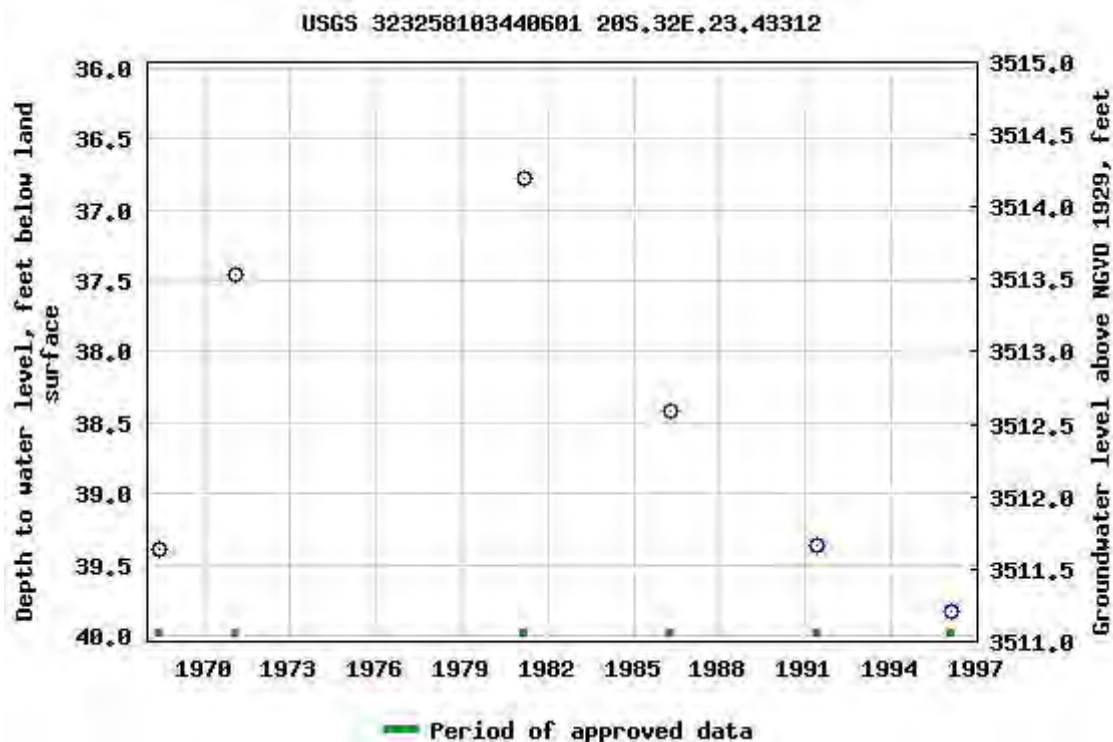
Output formats

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0.68 0.57 nadww01



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site_no list =

- 323301103443601

Minimum number of levels = 1

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

USGS 323301103443601 20S.32E.23.33132

Available data for this site

Groundwater: Field measurements

GO

Lea County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°33'01", Longitude 103°44'36" NAD27

Land-surface elevation 3,542 feet above NAVD88

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

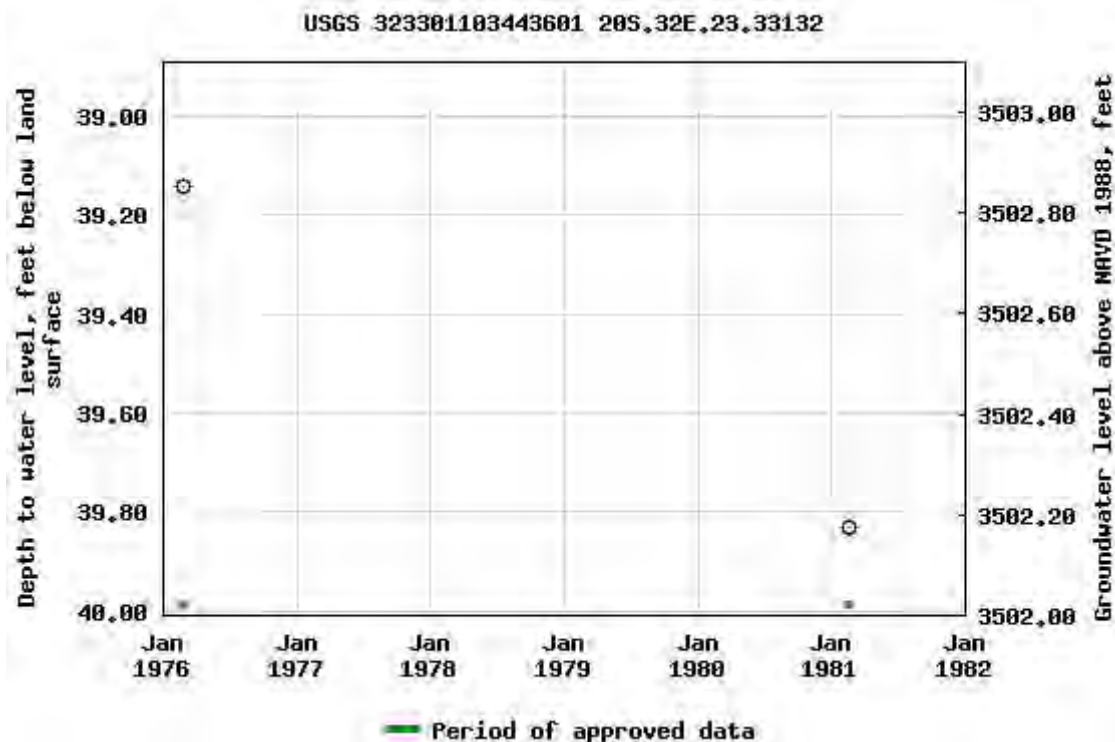
Output formats

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0.59 0.53 nadww01



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site_no list =

- 323308103440502

Minimum number of levels = 1

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

USGS 323308103440502 20S.32E.23.43312 A

Available data for this site

Groundwater: Field measurements

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Lea County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°33'08", Longitude 103°44'05" NAD27

Land-surface elevation 3,549 feet above NAVD88

This well is completed in the Chinle Formation (231CHNL) local aquifer.

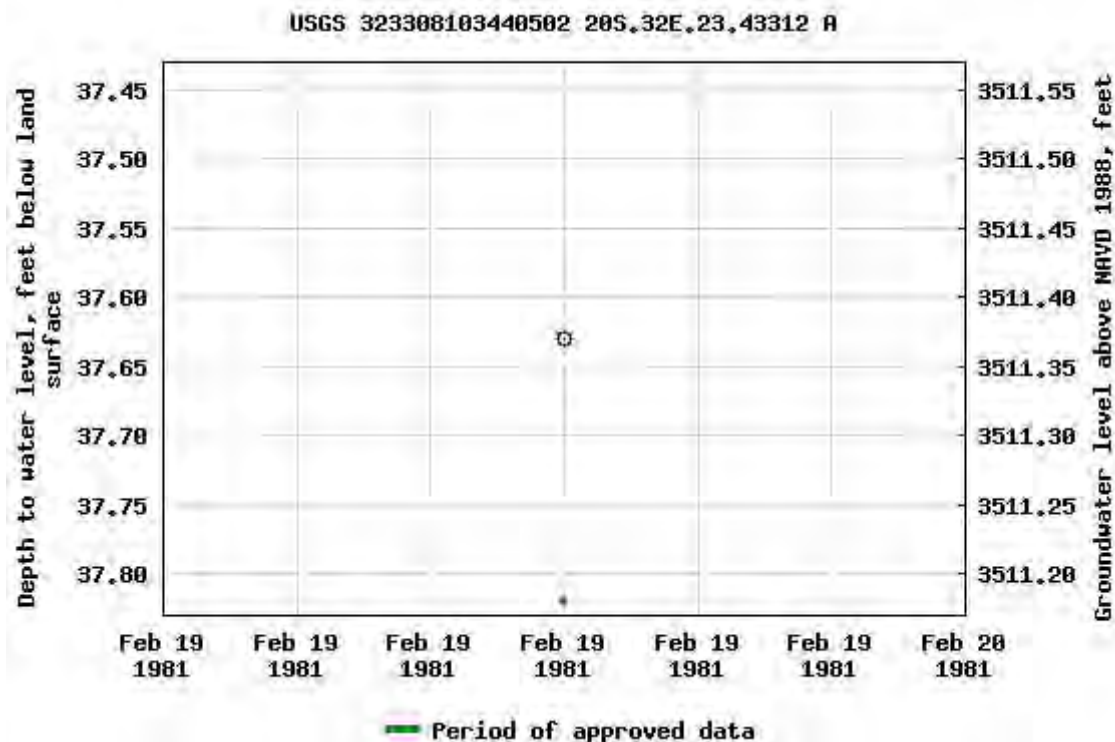
Output formats

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site_no list =

- 323335103370601

Minimum number of levels = 1

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USGS 323335103370601 20S.33E.24.12411

Available data for this site

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GO

Lea County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°33'35", Longitude 103°37'06" NAD27

Land-surface elevation 3,641 feet above NAVD88

The depth of the well is 676 feet below land surface.

This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.

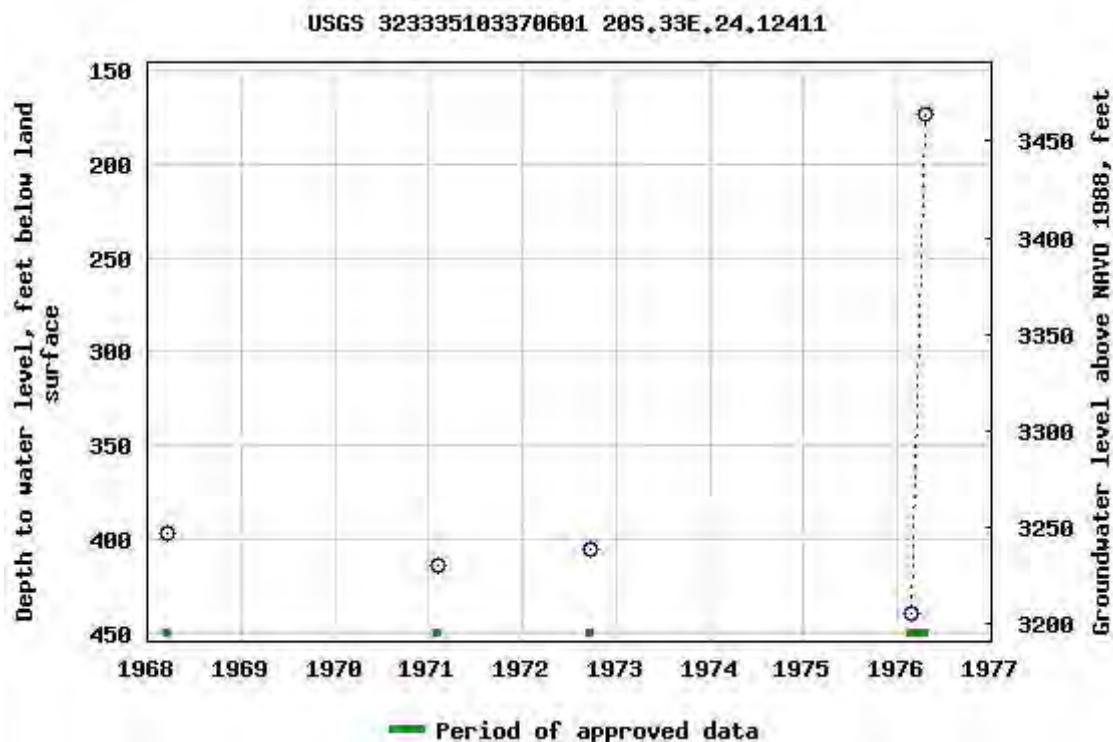
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0.64 0.55 nadww01



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site_no list =

- 323429103421601

Minimum number of levels = 1

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

USGS 323429103421601 20S.33E.18.12322

Available data for this site

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Lea County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°34'29", Longitude 103°42'16" NAD27

Land-surface elevation 3,503 feet above NAVD88

This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.

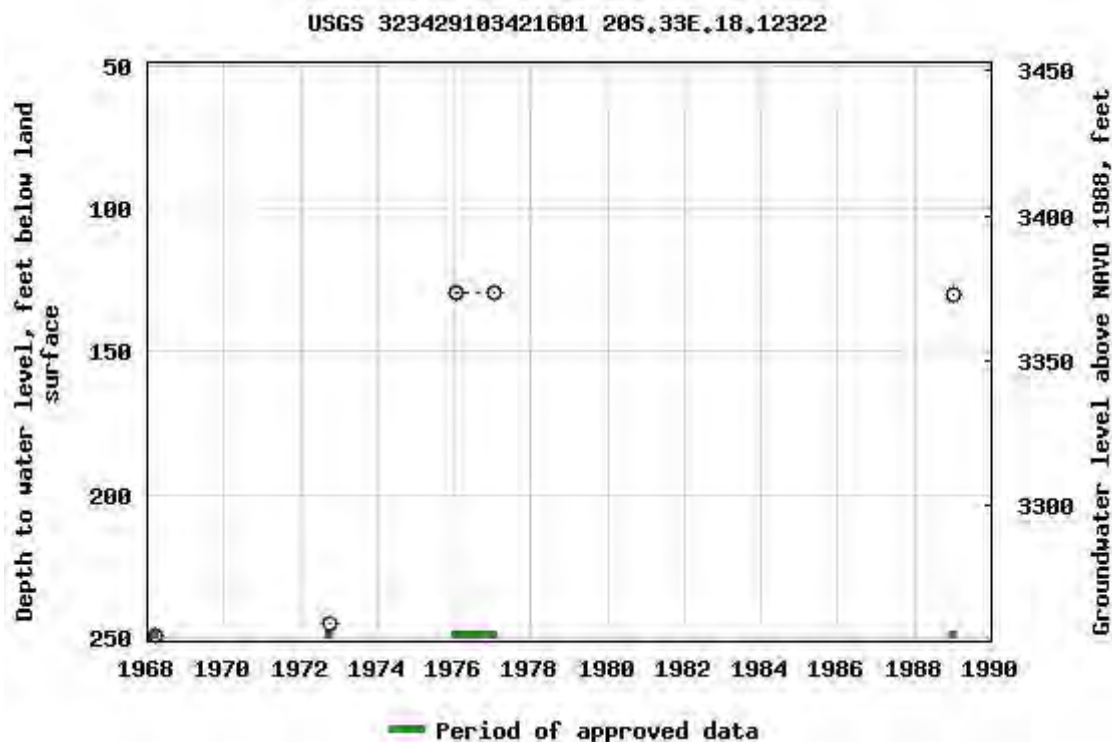
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site_no list =

- 323442103384101

Minimum number of levels = 1

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USGS 323442103384101 20S.33E.15.22143

Available data for this site

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Lea County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°34'42", Longitude 103°38'41" NAD27

Land-surface elevation 3,583 feet above NAVD88

This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.

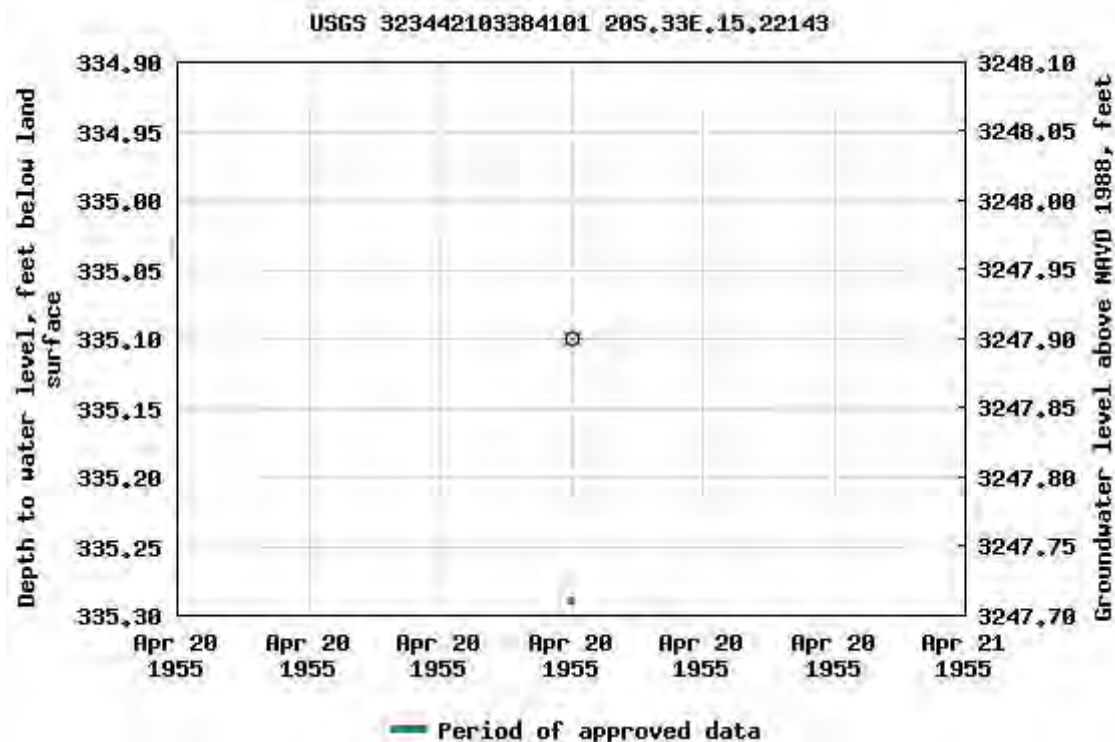
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site_no list =

- 323534103411601

Minimum number of levels = 1

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USGS 323534103411601 20S.33E.05.34321

Available data for this site

Groundwater: Field measurements

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Lea County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°35'47.4", Longitude 103°41'17.9" NAD83

Land-surface elevation 3,551 feet above NAVD88

The depth of the well is 680 feet below land surface.

This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.

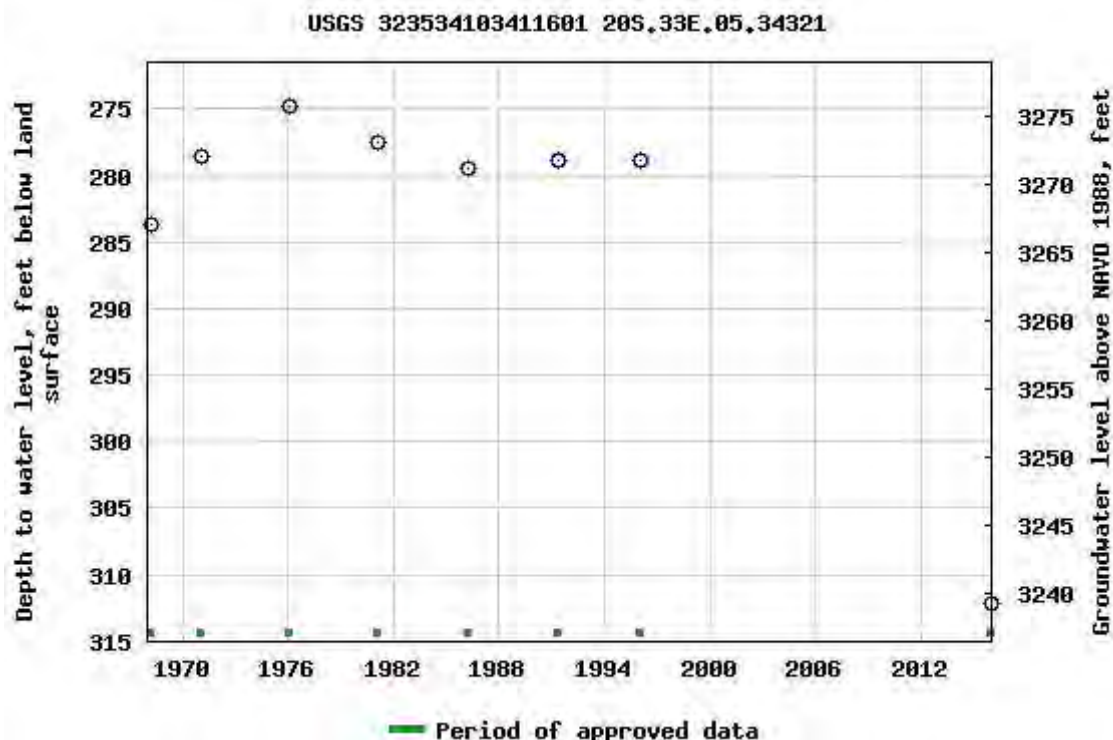
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- 323541103395501

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USGS 323541103395501 20S.33E.04.43211

Available data for this site

Groundwater: Field measurements



GO

Lea County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°35'41", Longitude 103°39'55" NAD27

Land-surface elevation 3,553 feet above NAVD88

The depth of the well is 58 feet below land surface.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

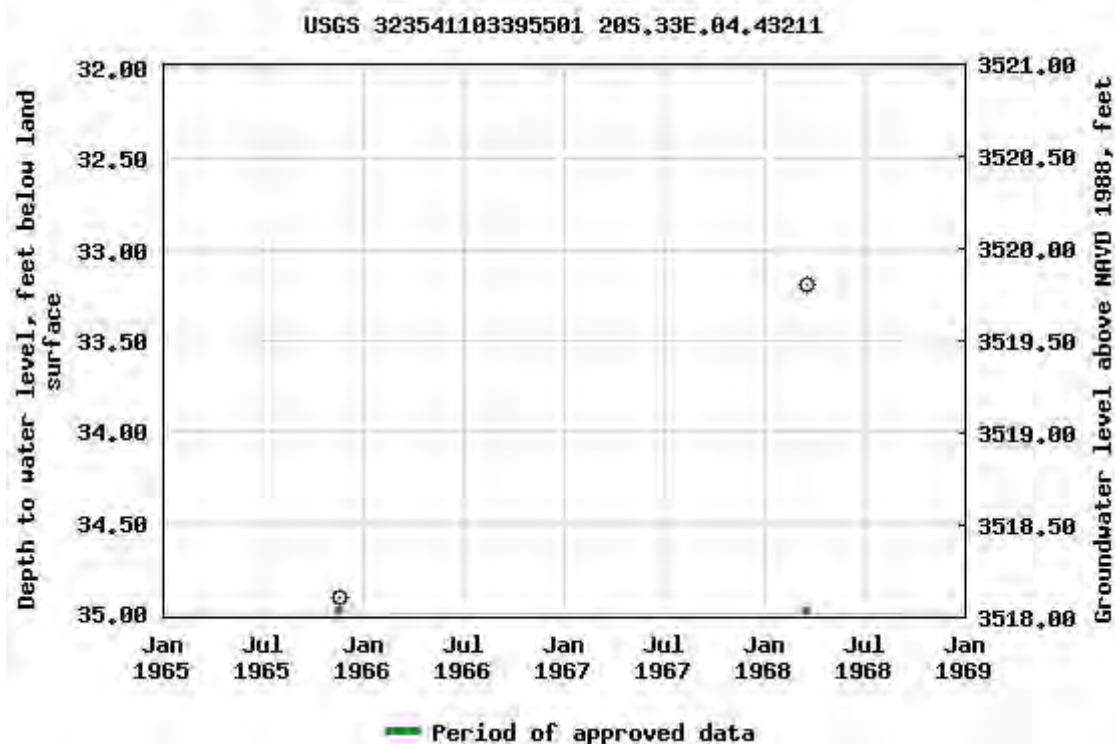
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site_no list =

- 323600103432901

Minimum number of levels = 1

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USGS 323600103432901 20S.32E.01.314114

Available data for this site

Groundwater: Field measurements



GO

Lea County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°36'00", Longitude 103°43'29" NAD27

Land-surface elevation 3,497 feet above NAVD88

The depth of the well is 30 feet below land surface.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

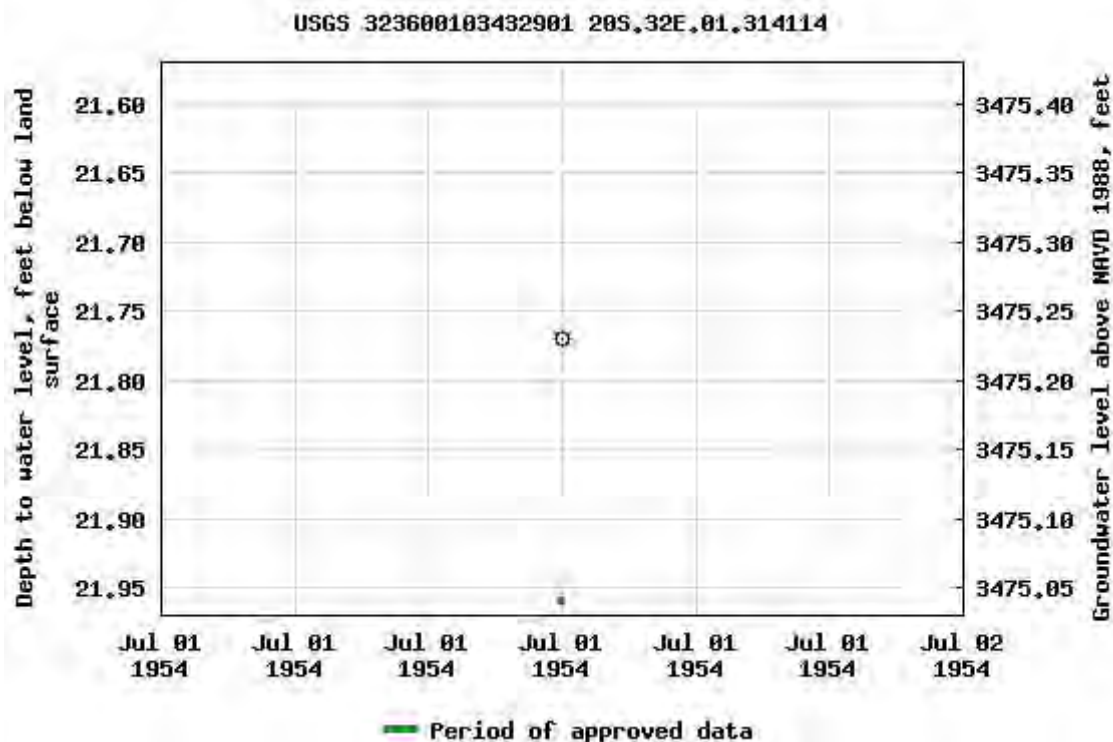
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- 323643103444701

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USGS 323643103444701 19S.32E.34.421442

Available data for this site

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Lea County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°36'43", Longitude 103°44'47" NAD27

Land-surface elevation 3,553 feet above NAVD88

The depth of the well is 575 feet below land surface.

This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.

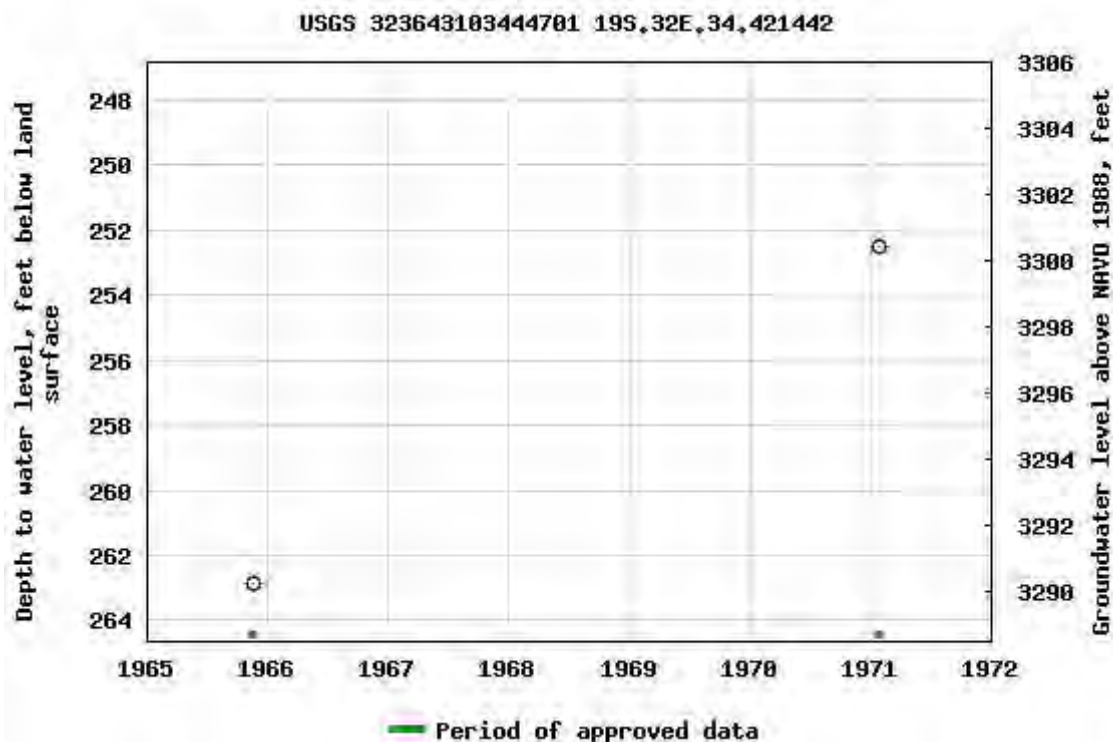
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New Mexico Office of the State Engineer

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	Tw	Rng	X	Y
	CP 00317	3	4	3	05	20S	33E	623054	3607235*

Driller License: 46

Driller Company: ABBOTT BROTHERS COMPANY

Driller Name: ABBOTT, MURRIEL

Drill Start Date: 02/05/1966

Drill Finish Date: 02/17/1966

Plug Date: 04/20/1967

Log File Date: 02/24/1966

PCW Rev Date:

Source: Shallow

Pump Type:

Pipe Discharge Size:

Estimated Yield:

Casing Size: 7.00

Depth Well: 680 feet

Depth Water: 325 feet

Water Bearing Stratifications:

Top Bottom Description

520 540 Sandstone/Gravel/Conglomerate

625 645 Sandstone/Gravel/Conglomerate

660 675 Sandstone/Gravel/Conglomerate

Casing Perforations:

Top Bottom


515 575

*UTM location was derived from PLSS - see Help

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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	Tw	Rng	X	Y		
L	07023	2	3	3	32	19S	33E	622840	3609047*		

Driller License:	46	Driller Company:	ABBOTT BROTHERS COMPANY									
Driller Name:	MURRELL ABBOTT											
Drill Start Date:	11/12/1970	Drill Finish Date:	11/15/1970				Plug Date:					
Log File Date:	11/19/1970	PCW Rev Date:					Source:	Shallow				
Pump Type:			Pipe Discharge Size:					Estimated Yield:				
Casing Size:	7.00	Depth Well:	262 feet				Depth Water:	185 feet				

x		Water Bearing Stratifications:		Top	Bottom	Description
				185	214	Sandstone/Gravel/Conglomerate


x		Casing Perforations:		Top	Bottom
				200	260


*UTM location was derived from PLSS - see Help

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ATTACHMENT 2: LITHOLOGIC/SOIL SAMPLING LOG



 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP		BH or PH Name: PH01		Date: 7.15.20				
		Site Name: Hat Mesa 32 State #2						
		RP or Incident Number: NRM1935430604						
		LTE Job Number:						
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long:		Field Screening: HACH Chloride strips, PID		Logged By: SL Hole Diameter: — Method: Trackhoe Total Depth: 2'				
Comments: TD @ 2'								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	<186	0.2	N	PH01	1	1	CL	0-1 Clayey sand, low plasticity, low cohesion, m-f, no odor, no stain, Brown
D	<186	0.0	N	PH01A	2	2	SP-SM	1-2 Sand w/caliche, Brown, no odor, no stain, m-f, poorly graded tan caliche, trace silt
						3		TD @ 2
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP		BH or PH Name: PH02		Date: 7.15.20				
		Site Name: Hat mesa 32 state #2						
		RP or Incident Number: NRM1935430604						
		LTE Job Number:						
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long:			Field Screening: HACH Chloride strips, PID		Logged By: SL Hole Diameter: — Method: Trackhoe Total Depth: 2'			
Comments: TD @ 2'								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		0-1 clayey sand, low plasticity, low cohesion
						1		m-f, no odor, no stain, brown
D	CL66	0.1	N	PH02	2	2		1-2 Sand w/ caliche, Brown, no odor, no stain, m-f, poorly graded trace silt, tan caliche
						3		TD @ 2'
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

ATTACHMENT 3: PHOTOGRAPHIC LOG



PHOTOGRAPHIC LOG



Photograph 1: Western view of spill area.



Photograph 2: Northwestern view of spill and pad.



Photograph 3: Northwestern view of spill area.



Photograph 4: Northeastern view of spill and pad.

Hat Mesa 32 State #2
Incident Number NRM1935430604
Photographs Taken: October 19, 2019 – July 28

PHOTOGRAPHIC LOG



Photograph 5: Western view of spill area.



Photograph 6: PH01 area.



Photograph 7: PH02 area.



Photograph 8: PH02 area.

PHOTOGRAPHIC LOG



Photograph 9: Northern view of excavation area.



Photograph 10: Southern view of excavation area.



Photograph 11: Western view of excavation near FS02-FS05.



Photograph 12: Replace with backfill photo.

ATTACHMENT 4: LABORATORY ANALYTICAL RESULTS



Analytical Report 646264

for
LT Environmental, Inc.

Project Manager: Dan Moir

Hat Mesa 32 State #2

012919296

17-DEC-19

Collected By: Client



**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



17-DEC-19

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **646264**

Hat Mesa 32 State #2

Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 646264. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 646264 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

**Sample Cross Reference 646264****LT Environmental, Inc., Arvada, CO**

Hat Mesa 32 State #2

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	12-12-19 10:35	0.5 ft	646264-001
SS02	S	12-12-19 10:40	0.5 ft	646264-002
SS03	S	12-12-19 10:45	0.5 ft	646264-003
SS04	S	12-12-19 10:50	0.5 ft	646264-004
SS05	S	12-12-19 10:55	0.5 ft	646264-005
SS06	S	12-12-19 11:00	0.5 ft	646264-006



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *Hat Mesa 32 State #2*

Project ID: 012919296

Work Order Number(s): 646264

Report Date: 17-DEC-19

Date Received: 12/13/2019

Sample receipt non conformance and comments:

None

Sample receipt non conformance and comments per sample:

None

Analytical non conformance and comments:

Batch: LBA-3110528 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3110553 Chloride by EPA 300

Lab Sample ID 646373-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 646264-001, -002, -003, -004, -005, -006.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analysis Summary 646264



LT Environmental, Inc., Arvada, CO

Project Name: Hat Mesa 32 State #2

Project Id: 012919296

Contact: Dan Moir

Project Location:

Date Received in Lab: Fri Dec-13-19 09:05 am

Report Date: 17-DEC-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	646264-001	646264-002	646264-003	646264-004	646264-005	646264-006
	<i>Field Id:</i>	SS01	SS02	SS03	SS04	SS05	SS06
	<i>Depth:</i>	0.5- ft	0.5- ft	0.5- ft	0.5- ft	0.5- ft	0.5- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Dec-12-19 10:35	Dec-12-19 10:40	Dec-12-19 10:45	Dec-12-19 10:50	Dec-12-19 10:55	Dec-12-19 11:00
BTEX by EPA 8021B	<i>Extracted:</i>	Dec-13-19 11:51	Dec-13-19 11:51	Dec-13-19 11:51	Dec-13-19 11:51	Dec-13-19 11:51	Dec-13-19 11:51
	<i>Analyzed:</i>	Dec-13-19 14:39	Dec-13-19 14:56	Dec-13-19 15:14	Dec-13-19 15:31	Dec-13-19 15:48	Dec-13-19 16:06
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
m,p-Xylenes		<0.00399 0.00399	<0.00399 0.00399	<0.00397 0.00397	<0.00399 0.00399	<0.00401 0.00401	<0.00398 0.00398
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Chloride by EPA 300	<i>Extracted:</i>	Dec-13-19 11:55	Dec-13-19 11:55	Dec-13-19 11:55	Dec-13-19 11:55	Dec-13-19 11:55	Dec-13-19 11:55
	<i>Analyzed:</i>	Dec-13-19 16:50	Dec-13-19 17:07	Dec-13-19 17:13	Dec-13-19 17:19	Dec-13-19 17:25	Dec-13-19 17:30
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		209 9.94	6490 D 199	1950 D 99.2	8790 D 200	1460 9.98	790 9.92
TPH by SW8015 Mod	<i>Extracted:</i>	Dec-13-19 13:00	Dec-13-19 11:30	Dec-13-19 13:00	Dec-13-19 13:00	Dec-13-19 13:00	Dec-13-19 13:00
	<i>Analyzed:</i>	Dec-13-19 16:33	Dec-13-19 15:31	Dec-13-19 17:13	Dec-13-19 17:13	Dec-13-19 17:33	Dec-13-19 17:33
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.1 50.1	<50.2 50.2	<49.8 49.8	<49.9 49.9	<49.9 49.9	<50.2 50.2
Diesel Range Organics (DRO)		<50.1 50.1	<50.2 50.2	94.0 49.8	<49.9 49.9	<49.9 49.9	<50.2 50.2
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1	<50.2 50.2	<49.8 49.8	<49.9 49.9	<49.9 49.9	<50.2 50.2
Total GRO-DRO		<50.1 50.1	<50.2 50.2	94.0 49.8	<49.9 49.9	<49.9 49.9	<50.2 50.2
Total TPH		<50.1 50.1	<50.2 50.2	94.0 49.8	<49.9 49.9	<49.9 49.9	<50.2 50.2

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer
Project Assistant



Certificate of Analytical Results 646264

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #2

Sample Id: **SS01**
Lab Sample Id: 646264-001

Matrix: Soil
Date Collected: 12.12.19 10.35

Date Received: 12.13.19 09.05
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3110553

Date Prep: 12.13.19 11.55

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	209	9.94	mg/kg	12.13.19 16.50		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3110565

Date Prep: 12.13.19 13.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.13.19 16.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.13.19 16.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.13.19 16.33	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	12.13.19 16.33	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.13.19 16.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	12.13.19 16.33	
o-Terphenyl	84-15-1	111	%	70-135	12.13.19 16.33	



Certificate of Analytical Results 646264

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #2

Sample Id: **SS01**
Lab Sample Id: 646264-001

Matrix: Soil
Date Collected: 12.12.19 10.35

Date Received: 12.13.19 09.05
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAA

Date Prep: 12.13.19 11.51

Basis: Wet Weight

Seq Number: 3110528

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.13.19 14.39	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.13.19 14.39	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.13.19 14.39	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.13.19 14.39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.13.19 14.39	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.13.19 14.39	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.13.19 14.39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.13.19 14.39		
4-Bromofluorobenzene	460-00-4	98	%	70-130	12.13.19 14.39		



Certificate of Analytical Results 646264

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #2

Sample Id: **SS02**
Lab Sample Id: 646264-002

Matrix: Soil
Date Collected: 12.12.19 10.40

Date Received: 12.13.19 09.05
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3110553

Date Prep: 12.13.19 11.55

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6490	199	mg/kg	12.16.19 10.45	D	20

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3110481

Date Prep: 12.13.19 11.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	12.13.19 15.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	12.13.19 15.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	12.13.19 15.31	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	12.13.19 15.31	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	12.13.19 15.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	12.13.19 15.31	
o-Terphenyl	84-15-1	115	%	70-135	12.13.19 15.31	



Certificate of Analytical Results 646264

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #2

Sample Id: **SS02**
Lab Sample Id: 646264-002

Matrix: Soil
Date Collected: 12.12.19 10.40

Date Received: 12.13.19 09.05
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAA

Date Prep: 12.13.19 11.51

Basis: Wet Weight

Seq Number: 3110528

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.13.19 14.56	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.13.19 14.56	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.13.19 14.56	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.13.19 14.56	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.13.19 14.56	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.13.19 14.56	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.13.19 14.56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.13.19 14.56		
4-Bromofluorobenzene	460-00-4	101	%	70-130	12.13.19 14.56		



Certificate of Analytical Results 646264

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #2

Sample Id: **SS03**
Lab Sample Id: 646264-003

Matrix: Soil
Date Collected: 12.12.19 10.45

Date Received: 12.13.19 09.05
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3110553

Date Prep: 12.13.19 11.55

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1950	99.2	mg/kg	12.16.19 10.51	D	10

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3110565

Date Prep: 12.13.19 13.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.13.19 17.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	94.0	49.8	mg/kg	12.13.19 17.13		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.13.19 17.13	U	1
Total GRO-DRO	PHC628	94.0	49.8	mg/kg	12.13.19 17.13		1
Total TPH	PHC635	94.0	49.8	mg/kg	12.13.19 17.13		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	12.13.19 17.13	
o-Terphenyl	84-15-1	121	%	70-135	12.13.19 17.13	



Certificate of Analytical Results 646264

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #2

Sample Id: **SS03**
Lab Sample Id: 646264-003

Matrix: Soil
Date Collected: 12.12.19 10.45

Date Received: 12.13.19 09.05
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAA

Date Prep: 12.13.19 11.51

Basis: Wet Weight

Seq Number: 3110528

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.13.19 15.14	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.13.19 15.14	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.13.19 15.14	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	12.13.19 15.14	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.13.19 15.14	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.13.19 15.14	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.13.19 15.14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	12.13.19 15.14		
4-Bromofluorobenzene	460-00-4	96	%	70-130	12.13.19 15.14		



Certificate of Analytical Results 646264

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #2

Sample Id: **SS04**
Lab Sample Id: 646264-004

Matrix: Soil
Date Collected: 12.12.19 10.50

Date Received: 12.13.19 09.05
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3110553

Date Prep: 12.13.19 11.55

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8790	200	mg/kg	12.16.19 10.56	D	20

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3110565

Date Prep: 12.13.19 13.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.13.19 17.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.13.19 17.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.13.19 17.13	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	12.13.19 17.13	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.13.19 17.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	12.13.19 17.13	
o-Terphenyl	84-15-1	115	%	70-135	12.13.19 17.13	



Certificate of Analytical Results 646264

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #2

Sample Id: **SS04**
Lab Sample Id: 646264-004

Matrix: Soil
Date Collected: 12.12.19 10.50

Date Received: 12.13.19 09.05
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAA

Date Prep: 12.13.19 11.51

Basis: Wet Weight

Seq Number: 3110528

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.13.19 15.31	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.13.19 15.31	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.13.19 15.31	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.13.19 15.31	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.13.19 15.31	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.13.19 15.31	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.13.19 15.31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	12.13.19 15.31		
4-Bromofluorobenzene	460-00-4	107	%	70-130	12.13.19 15.31		



Certificate of Analytical Results 646264

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #2

Sample Id: **SS05**
Lab Sample Id: 646264-005

Matrix: Soil
Date Collected: 12.12.19 10.55

Date Received: 12.13.19 09.05
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3110553

Date Prep: 12.13.19 11.55

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1460	9.98	mg/kg	12.13.19 17.25		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3110565

Date Prep: 12.13.19 13.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.13.19 17.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.13.19 17.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.13.19 17.33	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	12.13.19 17.33	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.13.19 17.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	12.13.19 17.33	
o-Terphenyl	84-15-1	121	%	70-135	12.13.19 17.33	



Certificate of Analytical Results 646264

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #2

Sample Id: **SS05**
Lab Sample Id: 646264-005

Matrix: Soil
Date Collected: 12.12.19 10.55

Date Received: 12.13.19 09.05
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAA

Date Prep: 12.13.19 11.51

Basis: Wet Weight

Seq Number: 3110528

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.13.19 15.48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.13.19 15.48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.13.19 15.48	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.13.19 15.48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.13.19 15.48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.13.19 15.48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.13.19 15.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.13.19 15.48		
4-Bromofluorobenzene	460-00-4	102	%	70-130	12.13.19 15.48		



Certificate of Analytical Results 646264

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #2

Sample Id: **SS06**
Lab Sample Id: 646264-006

Matrix: Soil
Date Collected: 12.12.19 11.00

Date Received: 12.13.19 09.05
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3110553

Date Prep: 12.13.19 11.55

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	790	9.92	mg/kg	12.13.19 17.30		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3110565

Date Prep: 12.13.19 13.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	12.13.19 17.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	12.13.19 17.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	12.13.19 17.33	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	12.13.19 17.33	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	12.13.19 17.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	12.13.19 17.33	
o-Terphenyl	84-15-1	114	%	70-135	12.13.19 17.33	



Certificate of Analytical Results 646264

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #2

Sample Id: **SS06**
Lab Sample Id: 646264-006

Matrix: Soil
Date Collected: 12.12.19 11.00

Date Received: 12.13.19 09.05
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAA

Date Prep: 12.13.19 11.51

Basis: Wet Weight

Seq Number: 3110528

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.13.19 16.06	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.13.19 16.06	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.13.19 16.06	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.13.19 16.06	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.13.19 16.06	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.13.19 16.06	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.13.19 16.06	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	12.13.19 16.06		
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.13.19 16.06		



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



LT Environmental, Inc.

Hat Mesa 32 State #2

Analytical Method: Chloride by EPA 300

Seq Number: 3110553

MB Sample Id: 7692404-1-BLK

Matrix: Solid

LCS Sample Id: 7692404-1-BKS

Prep Method: E300P

Date Prep: 12.13.19

LCSD Sample Id: 7692404-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	276	110	272	109	90-110	1	20	mg/kg	12.13.19 16:38	

Analytical Method: Chloride by EPA 300

Seq Number: 3110553

Parent Sample Id: 646264-001

Matrix: Soil

MS Sample Id: 646264-001 S

Prep Method: E300P

Date Prep: 12.13.19

MSD Sample Id: 646264-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	209	198	436	115	437	114	90-110	0	20	mg/kg	12.13.19 16:56	X

Analytical Method: Chloride by EPA 300

Seq Number: 3110553

Parent Sample Id: 646373-001

Matrix: Soil

MS Sample Id: 646373-001 S

Prep Method: E300P

Date Prep: 12.13.19

MSD Sample Id: 646373-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2960	200	3460	250	3460	250	90-110	0	20	mg/kg	12.13.19 20:17	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3110481

MB Sample Id: 7692406-1-BLK

Matrix: Solid

LCS Sample Id: 7692406-1-BKS

Prep Method: SW8015P

Date Prep: 12.13.19

LCSD Sample Id: 7692406-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1210	121	1010	101	70-135	18	35	mg/kg	12.13.19 11:30	
Diesel Range Organics (DRO)	<50.0	1000	1240	124	1050	105	70-135	17	35	mg/kg	12.13.19 11:30	

Surrogate

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		132		123		70-135	%	12.13.19 11:30
o-Terphenyl	107		133		122		70-135	%	12.13.19 11:30

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



LT Environmental, Inc.

Hat Mesa 32 State #2

Analytical Method: TPH by SW8015 Mod

Seq Number: 3110565

MB Sample Id: 7692472-1-BLK

Matrix: Solid

LCS Sample Id: 7692472-1-BKS

Prep Method: SW8015P

Date Prep: 12.13.19

LCSD Sample Id: 7692472-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1080	108	971	97	70-135	11	35	mg/kg	12.13.19 15:51	
Diesel Range Organics (DRO)	<50.0	1000	915	92	967	97	70-135	6	35	mg/kg	12.13.19 15:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		106		115		70-135	%	12.13.19 15:51
o-Terphenyl	111		101		113		70-135	%	12.13.19 15:51

Analytical Method: TPH by SW8015 Mod

Seq Number: 3110481

Matrix: Solid

MB Sample Id: 7692406-1-BLK

Prep Method: SW8015P

Date Prep: 12.13.19

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.13.19 11:10	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3110565

Matrix: Solid

MB Sample Id: 7692472-1-BLK

Prep Method: SW8015P

Date Prep: 12.13.19

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.13.19 15:51	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3110481

Matrix: Soil

Parent Sample Id: 646243-001

MS Sample Id: 646243-001 S

Prep Method: SW8015P

Date Prep: 12.13.19

MSD Sample Id: 646243-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	996	1090	109	1080	108	70-135	1	35	mg/kg	12.13.19 11:50	
Diesel Range Organics (DRO)	<49.8	996	1120	112	1100	110	70-135	2	35	mg/kg	12.13.19 11:50	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	128		129		70-135	%	12.13.19 11:50
o-Terphenyl	123		124		70-135	%	12.13.19 11:50

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



LT Environmental, Inc.

Hat Mesa 32 State #2

Analytical Method: TPH by SW8015 Mod

Seq Number: 3110565

Parent Sample Id: 646264-001

Matrix: Soil

MS Sample Id: 646264-001 S

Prep Method: SW8015P

Date Prep: 12.13.19

MSD Sample Id: 646264-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	995	1090	110	1080	108	70-135	1	35	mg/kg	12.13.19 16:53	
Diesel Range Organics (DRO)	<49.8	995	1120	113	1130	113	70-135	1	35	mg/kg	12.13.19 16:53	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	133		134		70-135	%	12.13.19 16:53
o-Terphenyl	128		129		70-135	%	12.13.19 16:53

Analytical Method: BTEX by EPA 8021B

Seq Number: 3110528

MB Sample Id: 7692402-1-BLK

Matrix: Solid

LCS Sample Id: 7692402-1-BKS

Prep Method: SW5030B

Date Prep: 12.13.19

LCSD Sample Id: 7692402-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0986	99	0.101	101	70-130	2	35	mg/kg	12.13.19 12:55	
Toluene	<0.00200	0.100	0.0989	99	0.101	101	70-130	2	35	mg/kg	12.13.19 12:55	
Ethylbenzene	<0.00200	0.100	0.0975	98	0.0994	99	71-129	2	35	mg/kg	12.13.19 12:55	
m,p-Xylenes	<0.00400	0.200	0.202	101	0.206	103	70-135	2	35	mg/kg	12.13.19 12:55	
o-Xylene	<0.00200	0.100	0.0980	98	0.101	101	71-133	3	35	mg/kg	12.13.19 12:55	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		100		101		70-130	%	12.13.19 12:55
4-Bromofluorobenzene	97		98		101		70-130	%	12.13.19 12:55

Analytical Method: BTEX by EPA 8021B

Seq Number: 3110528

Parent Sample Id: 646264-001

Matrix: Soil

MS Sample Id: 646264-001 S

Prep Method: SW5030B

Date Prep: 12.13.19

MSD Sample Id: 646264-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.108	109	0.0917	92	70-130	16	35	mg/kg	12.13.19 13:30	
Toluene	<0.00199	0.0994	0.105	106	0.0896	90	70-130	16	35	mg/kg	12.13.19 13:30	
Ethylbenzene	<0.00199	0.0994	0.100	101	0.0850	85	71-129	16	35	mg/kg	12.13.19 13:30	
m,p-Xylenes	<0.000749	0.199	0.207	104	0.175	88	70-135	17	35	mg/kg	12.13.19 13:30	
o-Xylene	<0.00199	0.0994	0.101	102	0.0865	87	71-133	15	35	mg/kg	12.13.19 13:30	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		100		70-130	%	12.13.19 13:30
4-Bromofluorobenzene	102		98		70-130	%	12.13.19 13:30

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Chain of Custody

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
Midland, TX (432) 704-5440 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296

Work Order No:

6046204

Hobbs, NM (575) 392-7550 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000

www.xenco.com

Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Litrel
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO-Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	432.704.5178	Email:	dmair@xenco.com kmlitrel@xenco.com
Project Name:	Hat Mex 33 State #3	Turn Around	
Project Number:	012919296	Routine	<input checked="" type="checkbox"/>
P.O. Number:	10/21/2019	Rush:	
Sampler's Name:	Robert McAttee	Due Date:	

Work Order Comments	
Program: UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RC <input type="checkbox"/> Superfund <input type="checkbox"/>	
State of Project:	
Reporting Level: I <input type="checkbox"/> Level II <input type="checkbox"/> Level III <input type="checkbox"/> ST/UST <input type="checkbox"/> RRP <input type="checkbox"/> Level IV <input type="checkbox"/>	
Deliverables: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:	

SAMPLE RECEIPT				ANALYSIS REQUEST				Work Order Notes	
Temperature (°C):	Temp Blank:	Yes	No	Wet Ice:	Yes	No			
Received Intact:	Yes	No	Thermometer ID						
Cooler Custody Seals:	Yes	No	Correction Factor:						
Sample Custody Seals:	Yes	No	Total Containers:						
Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers				
SS01	S	10/12/19	1035	0.5'	1	TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)	
SS02	S		1040			X	X	X	
SS03	S		1045			X	X	X	
SS04	S		1050			X	X	X	
SS05	S		1055			X	X	X	
SS06	S		1100			X	X	X	
<div style="border: 1px solid black; padding: 5px;"> <p>TAT starts the day received by the lab, if received by 4:30pm</p> <p>Sample Comments</p> <p>Discrete</p> </div>									

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471: Hg

Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	0850 12/13/19	<i>[Signature]</i>	<i>[Signature]</i>	12/13/19 0901



Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 12/13/2019 09:05:00 AM

Work Order #: 646264

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	2.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:

Checklist completed by:

Elizabeth McClellan

Date: 12/13/2019

Checklist reviewed by:

Jessica Kramer

Date: 12/13/2019































Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
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Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813) 281-3333
Hobbs, NM (575-382-7550)

Chain of Custody

Work Order No.:

124750

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 East Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	slog@ltenv.com , dmoir@ltenv.com

Work Order Comments	
Program: UST/PST	<input type="checkbox"/> RP <input type="checkbox"/> Brownfields <input type="checkbox"/> RC <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project:	
Reporting: Level II	<input type="checkbox"/> Level III <input type="checkbox"/> ST/UST <input type="checkbox"/> RP <input type="checkbox"/> Level IV <input type="checkbox"/>
Deliverables: EDD	<input type="checkbox"/> ADAPT <input type="checkbox"/> Other:

Project Name:	Hal Mesa 32 State #2	Turn Around	ANALYSIS REQUEST							Work Order Notes
Project Number:	012919296	Routine <input checked="" type="checkbox"/>								
P.O. Number:		Rush:								
Sampler's Name:	Spencer Lo	Due Date:								

SAMPLE RECEIPT		Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	1.2/1.0				Thermometer ID		
Received Intact:	Yes	No			THM007		
Cooler Custody Seals:	Yes	No			Correction Factor:	-0.2	
Sample Custody Seals:	Yes	No			Total Containers:	3	

Number of Containers

PA 8015)

EPA 0=8021)

de (EPA 300.0)

TAT starts the day received by the lab, if received by 4:30pm

[illegible]

Circle Method(s) and Metal(s) to be analyzed	Total 200.7 / 6010	200.8 / 6020:
8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr Ti Sn U V Zn	8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr Ti Sn U V Zn	8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr Ti Sn U V Zn
TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U
	1631 / 245.1 / 7470 / 7471 : Hg	1631 / 245.1 / 7470 / 7471 : Hg

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7-17-2017 3:30 PM			7/17/20 08:15
		4			
		6			



































































































































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Hobbs, NM (575) 392-7550 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000

Chain of Custody

Work Order No:

1667508

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Page 1 of 3

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 East Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	slao@ltenv.com, dmoir@ltenv.com

Project Name:	Hat Mesa 32 State #2	Turn Around	
Project Number:	012919296	Routine	<input checked="" type="checkbox"/>
P.O. Number:		Rush:	
Sampler's Name:	Spencer Lo	Due Date:	

Temp Blank:	Yes	No	Well Ice:	Yes	No
Temperature (°C):	1.3/1.0	Thermometer ID			
Received Intact:	Yes	No	Correction Factor:	+1.007	
Cooler Custody Seals:	Yes	No	Total Containers:	25	
Sample Custody Seals:	Yes	No			

ANALYSIS REQUEST													Work Order Notes		
Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)												

SAMPLE RECEIPT		Temp Blank:	Yes	No	Wet Ice:	Yes	No																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 : Hg

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		7-17-2017 3:30pm			7/17/20 08:15



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Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-575-382-7550)

Chain of Custody

Work Order No:

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Page ____ of ____

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 East Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	slo@ltenv.com , dmoir@ltenv.com

Work Order Comments	
Program: UST/PST	<input checked="" type="checkbox"/> RP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project:	
Reporting Level II	<input type="checkbox"/> Level III <input type="checkbox"/> ST/UST <input type="checkbox"/> RRP <input type="checkbox"/> Level IV <input type="checkbox"/>
Deliverables: EDD	<input type="checkbox"/> Adapt <input type="checkbox"/> Other:

[illegible][illegible]

Total	200.7 / 6010	200.8 / 6020:	
8RCRA	13PPM	Texas 11	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed			
TCLP / SPLP	6010:	8RCRA	Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U
			1631 / 245.1 / 7470 / 7471 : Hg

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	7-17-20 / 7:32 AM	<i>[Signature]</i>	<i>[Signature]</i>	7/17/20 08:15



Chain of Custody

Work Order No: 1631-245.1

Page 3 of 3

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Page 3 of 3

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 East Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	slg@ltenv.com, dmoir@ltenv.com

Program: UST/PST	<input type="checkbox"/> PRP	<input type="checkbox"/> Brownfields	<input type="checkbox"/> RRC	<input type="checkbox"/> Superfund
State of Project:				
Reporting Level II	<input type="checkbox"/> Level III	<input type="checkbox"/> ST/UST	<input type="checkbox"/> RRP	<input type="checkbox"/> Level IV
Deliverables: EDD	<input type="checkbox"/>	ADAPT	<input type="checkbox"/>	Other:

Project Name:	Hat Mesa 32 State #2	Turn Around	
Project Number:	012919296	Routine	<input checked="" type="checkbox"/>
P.O. Number:		Rush:	
Sampler's Name:	Spencer Lo	Due Date:	

Temp Blank:	Yes	No	Wet Ice:	Yes	No
Received Intact:	Yes	No	Thermometer ID		
Cooler Custody Seals:	Yes	No	Correction Factor:		
Sample Custody Seals:	Yes	No	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	ANALYSIS REQUEST											Work Order Notes
					Number of Containers	TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)								
FS21	S	7-15-2020	1530	1'	1	X	X	X								
FS22	S	7-15-2020	1540	1'	1	X	X	X								
FS23	S	7-15-2020	1550	1'	1	X	X	X								
FS24	S	7-15-2020	1600	1'	1	X	X	X								
FS25	S	7-15-2020	1610	1'	1	X	X	X								

TAT starts the day received by the lab, if received by 4:30pm

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 : Hg

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7-17-20 7:30am			7/17/20 08:15



































Chain of Custody

Work Order No:

4484160

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 Hobbs, NM (575) 392-7550 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000

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Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littlell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 East Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	slc@ltenv.com, dmoir@ltenv.com

Program: UST/PST	<input type="checkbox"/> PRP	<input type="checkbox"/> Brownfields	<input type="checkbox"/> RRC	<input type="checkbox"/> Superfund
State of Project:				
Reporting Level:	<input type="checkbox"/> Level II	<input type="checkbox"/> Level III	<input type="checkbox"/> ST/UST	<input type="checkbox"/> RRP
Deliverables:	<input type="checkbox"/> EDD	<input type="checkbox"/> ADAPT	Other:	

Project Name:	Hgt Mesa 32 State #12	Turn Around	
Project Number:	012919296	Routine	<input checked="" type="checkbox"/>
P.O. Number:		Rush:	
Sampler's Name:	Spencer Lo	Due Date:	

SAMPLE RECEIPT	Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	2.6124	Thermometer ID				
Received Intact:	Yes	No	T-111-007			
Cooler Custody Seals:	Yes	No	N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes	No	N/A	Total Containers:	4	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	ANALYSIS REQUEST										Work Order Notes
					Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)							
F502A	S	7.28.20	1000	2'	1	X	X	X							
F503A	S	7.28.20	1005	2'	1	X	X	X							
F505A	S	7.28.20	1015	2'	1	X	X	X							
F520A	S	7.28.20	1045	2.5'	1	X	X	X							

Total 200.7 / 6010 200.8 / 6020:

8RCRA

13PPM

Texas 11

Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn

Hg

1631 / 245.1 / 7470 / 7471

Circle Method(s) and Metal(s) to be analyzed

TCLP / SPLP 6010: 8RCRA

Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U

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Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Date/Time

Incident ID	NRM1935430604
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 OCD 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: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 10/15/2020

email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: Robert Hamlet Date: 3/23/2021

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: Robert Hamlet Date: 3/23/2021

Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

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 10816

CONDITIONS OF APPROVAL

Operator:	OGRID:	Action Number:	Action Type:
XTO ENERGY, INC 6401 Holiday Hill Road Building #5 Midland, TX79707	5380	10816	C-141

OCD Reviewer	Condition
rhamlet	We have received your closure report and final C-141 for Incident #NRM1935430604 HAT MESA 32 STATE #002, thank you. This closure is approved.