



January 17, 2018

Ms. Olivia Yu  
New Mexico Oil Conservation Division  
1625 N French Drive  
Hobbs, New Mexico 88240

**RE: Proposed Work Plan - Revised  
Sharp Nose Federal #1  
1RP-4815  
XTO Energy, Inc.  
Eddy County, New Mexico**

Dear Ms. Yu:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), proposes the following work plan to investigate impacted soil at the Sharp Nose Federal #1 (Site) in response to a release of approximately 11.25 barrels (bbls) of produced water and 0.79 barrels (bbls) of crude oil from a failed gauge on September 3, 2017. XTO recovered all standing fluids as reported to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 dated September 18, 2017. This work plan addresses residual impact to soil and is being submitted in response to the conditions of approval from the NMOCD documented on the C-141 and assigned Remediation Permit Number 1RP-4815.

## BACKGROUND

The Site is located in northwest quarter of the southeast quarter of Section 13 within Township 20 South and Range 33 East in Lea County, New Mexico. Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data and known aquifer properties. The nearest permitted water well is CP 00798, located approximately 3,551 feet southwest of the Site with a total depth of 850 feet. Depth to water is not listed for CP 00798; however, the groundwater potentiometric map used by NMOCD for Lea County indicates groundwater is greater than 100 feet deep at the Site. The closest surface water to the Site is a seasonal playa lake located approximately 4.47 miles to the west of the Site. Based on these criteria, the New Mexico Oil Conservation Division (NMOCD) site ranking for remediation action levels is a 0 and the following remediation action levels apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg benzene, toluene, ethylbenzene, and total xylenes (BTEX); and 5,000 mg/kg total petroleum hydrocarbons (TPH). Based on depth to groundwater greater than 100 feet, LTE proposes a site-specific chloride action level of 600 mg/kg or within range ( $\pm 10\%$ ) of background concentrations.

## PROPOSED SAMPLING AND DELINEATION

Based on existing aerial photos, LTE has depicted the extent of the release on Figure 1. During a site visit, XTO will confirm the release footprint based on actual visual observations of soil

**APPROVED****By Olivia Yu at 2:37 pm, Jan 29, 2018**

NMOCD approves of the proposed delineation plan for 1RP-4815 with these conditions:

- 1) Each sample location must have at least 2 depths demonstrating permissible levels of BTEX, TPH extended, and chlorides: depth obtained and depth maintained at least 2 ft. further.
- 2) Submit soil bore logs.



staining. To investigate soil impact, XTO will collect soil samples at the surface of the release to define lateral extent, then advance a borehole as necessary in the center of the impacted area to delineate the total depth of impact. Proposed borehole locations are provided on Figure 1. Additional boreholes may be advanced to the north, east, west, and south until subsurface lateral extent is defined. Continuous soil samples will be logged and described using the Unified Soil Classification System (USCS) to delineate potential hydrocarbon and saltwater impacts. The intervals from immediately beneath the ground surface and every 1 foot through the first five feet will be screened for volatile aromatic hydrocarbons as well as any soil that is stained or has a hydrocarbon odor using a photo-ionization detector (PID). After the first five feet, samples will be screened every five feet. The soil borings will be advanced until one of three conditions are met: groundwater is encountered, auger refusal, or field screening indicates the extent of hydrocarbon soil impact is below NMOCD standards based on site ranking. All surface soil samples will be submitted to a certified laboratory for analysis of BTEX by United States Environmental Protection Agency (EPA) Method 8021, TPH – gasoline range organics (GRO), diesel range organics (DRO), and motor oil range organics (MRO) by EPA Method 8015, and chloride by EPA Method 300.1. In boreholes, soil samples with the highest PID result and a bottom hole sample will be submitted for laboratory analysis. XTO will collect at least one background soil sample for analysis of chloride by EPA Method 300.1.

## **REPORTING**

XTO will prepare a report documenting all field activities and describing results for submittal to the NMOCD. The report will include site maps and a table of laboratory analytical results. Based on the results of the investigation, XTO will propose an appropriate remediation strategy, if necessary.

## **SCHEDULE**

XTO will complete the investigation within four weeks of the date of approval of this work plan by NMOCD. The report will be submitted to the NMOCD within two weeks of receipt of laboratory analytical results.

LTE appreciates the opportunity to provide this proposed work plan to the NMOCD. If you have any questions or comments regarding this plan, do not hesitate to contact me at (970) 385-1096 or via email at [aager@ltenv.com](mailto:aager@ltenv.com) or Kyle Littrell at XTO at (970) 317-1867 or [Kyle\\_Littrell@xtoenergy.com](mailto:Kyle_Littrell@xtoenergy.com).

Sincerely,  
LT ENVIRONMENTAL, INC.

A handwritten signature in black ink that reads "Ashley L. Ager". The signature is written in a cursive, flowing style.

Ashley L. Ager, M.S., P.G.  
Senior Geologist



Cc: Kyle Littrell, XTO

Attachments (1)

**FIGURE**

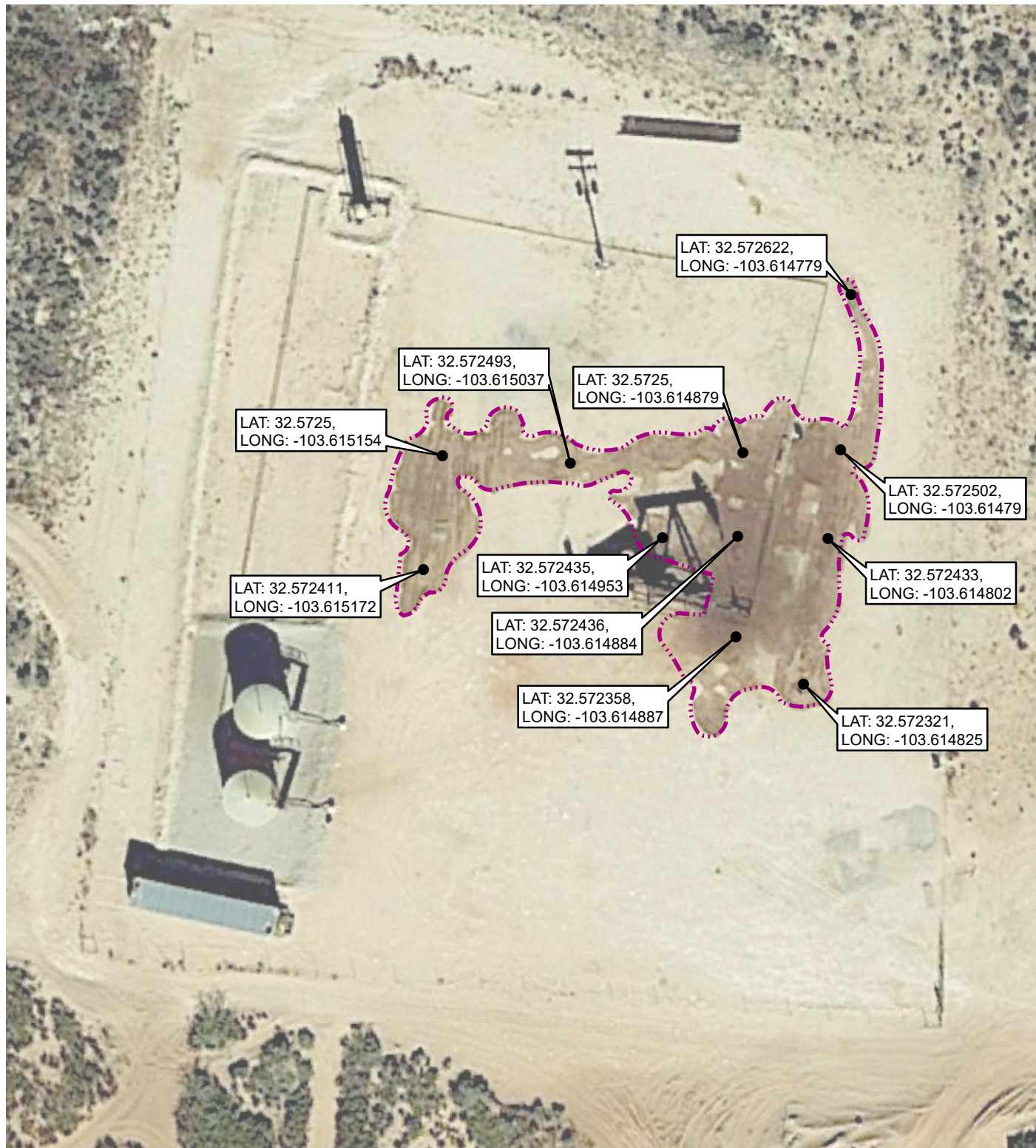
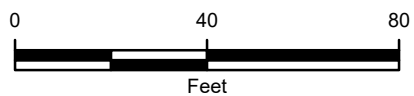


IMAGE COURTESY OF GOOGLE EARTH 2017

## LEGEND

- PROPOSED SAMPLE LOCATION
- ESTIMATED RELEASE EXTENT



**FIGURE 2**  
**PROPOSED BORING LOCATIONS**  
**SHARP NOSE FEDERAL #1**  
**NWSE SEC 13T20S R33E**  
**LEA COUNTY, NEW MEXICO**  
**XTO ENERGY, INC.**

