February 6, 2017

State Engineer's Office – Division 6
PO Box 773450
Steamboat Springs, CO 80487

Attention: Dana Miller – Dam Safety Engineer

Subject: 2016 Annual Monitoring Report
Love Ranch Evaporation Pond Dam
Construction File Number: C-1881
Water Division 6, DAMID: 430220

Reference: Instrumentation and Monitoring Plan; Love Ranch Evaporation Pond
ExxonMobil Production – U.S. Production
Dated: July 15, 2005
Piceance Tight Gas Initial Development Project
Rio Blanco County, Colorado

Dear Ms. Miller,

On behalf of XTO Energy, a fully owned subsidiary of ExxonMobil, please find attached the 2016 Annual Monitoring Report for the subject site. This report includes the required monthly and quarterly Instrumentation Records. The February 2017 report serves as the 2016 Annual Report with the monthly and quarterly reports starting with January 2016 thru December 2016. The completion of these reports was in compliance with the referenced Instrumentation and Monitoring Plan.

If you have any questions regarding these reports or the overall status of the subject dam, please do not hesitate to contact me.

Regards,

Jessica Dooling

Piceance EH&S Supervisor
Office: 970-675-4122
Cell: 970-2769-6048

Attachment: 2016 Annual Monitoring Report

2016 ANNUAL REPORT

LOVE RANCH 8 EVAPORATION POND (SWD POND)
RIO BLANCO COUNTY, COLORADO

JANUARY 2017

Prepared for:

XTO ENERGY, INC.
Rifle, Colorado

2016 ANNUAL REPORT

LOVE RANCH 8 EVAPORATION POND (SWD POND)
RIO BLANCO COUNTY, COLORADO

JANUARY 2017

Prepared for:

XTO ENERGY, INC.
21459 County Road 5
Rifle, Colorado 81650

Prepared by:

LT ENVIRONMENTAL, INC.
820 Megan Avenue, Unit B
Rifle, Colorado 81650
(970) 285-9985

2016 ANNUAL REPORT
LOVE RANCH 8 EVAPORATION POND (SWD POND)
LTE Project Number: 012916016

Prepared by: Brittany Cocina — February 3, 2017

Brittany Cocina
LTE Project Geologist

Date

Reviewed by: — February 3, 2017

Chris McKisson
LTE Western Slope Manager

Date

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EXECUTIVE SUMMARY

LT Environmental, Inc. (LTE) has been retained by XTO Energy, Inc. (XTO) to conduct compliance monitoring at the Love Ranch 8 Evaporation Pond (SWD Pond). The project area is southwest of Meeker, Colorado, in Rio Blanco County and is located in the northeast quarter of the southwest quarter of Section 9, Township 2 South and Range 97 West.

The purpose of the 2016 site activities was to conduct compliance monitoring of the Love Ranch 8 Evaporation Pond according the *Instrumentation and Monitoring Plan* (Monitoring Plan) prepared by ExxonMobile Production, dated July 15, 2005. The scope of work included collecting data from installed monitoring instrumentation devices and conducting visual inspections to ensure the pond is functioning as designed.

In October 2016, LTE was retained by XTO to conduct the remaining annual inspections. LTE obtained the previous inspection reports conducted by SMA (previously KRW) from XTO and conducted the required remaining inspections. Inspections were conducted on a weekly basis for seepage and visual inspections. LTE inspected the piezometers for water during the fourth quarter of 2016. In addition, LTE surveyed the settlement monument points on October 28, 2016, to evaluate potential displacement.

During the first three quarterly inspections, the toe drain along the east side of the pond was continuing to produce minor silt/gravel and approximately 0.25 feet (3 inches) of clean water. During the fourth quarter 2016 inspections, the toe drain along the east side of the pond had approximately 0.61 feet (7 inches) of clean water in the bottom of the monitoring manhole.

Quarterly monitoring in 2016 of the piezometers (PZ-1 through PZ-10) indicated trace amounts to no presence of water.

In addition, it was noted in the 2016 inspections conducted by the previous consultant that rodent holes and minor rill erosion were addressed during 2016. Rill erosion as well as rodent holes that develop will be scheduled for repair on an ongoing basis, typically in the spring and fall of each year.

During the annual survey of the settlement monument points, measurements indicated a slight horizontal and vertical shift of the 11 monument points. No significant changes were observed in the 11 monument points between October 28, 2016, and the previous survey conducted on October 13, 2015.

LTE will continue to conduct compliance monitoring and visual inspections to ensure the pond is functioning as designed and in accordance with the Monitoring Plan.

1.0 INTRODUCTION

LT Environmental, Inc. (LTE) has been retained by XTO Energy, Inc. (XTO) to conduct compliance monitoring at the Love Ranch 8 Evaporation Pond (SWD Pond) in Rio Blanco County, Colorado.

1.1 OBJECTIVE

The purpose of the 2016 site activities was to conduct compliance monitoring at the Love Ranch 8 Evaporation Pond (SWD Pond) according the *Instrumentation and Monitoring Plan* (Monitoring Plan) prepared by ExxonMobile Production, dated July 15, 2005. The scope of work included collecting data from installed monitoring instrumentation and conducting visual inspections to ensure the pond is functioning as designed.

1.2 PROJECT LOCATION

The project area is southwest of Meeker, Colorado, in Rio Blanco County and is located in water division 6 and water district 43 within the northeast quarter of the southwest quarter of Section 9, Township 2 South, and Range 97 West, as depicted on Figure 1.

1.3 SCOPE OF WORK

The following data were collected in 2016 at the frequencies specified in the Monitoring Plan:

- *Seepage Inspections*: Seepage inspections were conducted weekly when the pond was greater than 50 percent (%) full. Seepage inspections included investigating a monitoring manhole through which any seepage through the toe drain system is routed. If seepage is routinely observed, the seepage rate of flowing water will be measured.

- *Piezometers*: LTE inspected 10 existing piezometers quarterly for the presence of water using a water-level indicator. If water sourced from the pond was identified, samples would be collected for analysis to determine water quality. LTE would communicate with XTO to determine if sampling was necessary and what analyses would be conducted to investigate the origin of the water.

- *Visual Inspections*: LTE conducted visual inspections quarterly to monitor the condition and performance of the dam. Items that were documented are included on the Dam Inspection Report Forms provided in Appendix A.

- *Settlement Monitoring Survey*: LTE conducted an annual survey of 11 established settlement monument points (SMK-1 through SMK-11) during 2016 site visit using a registered land surveyor to measure northings, eastings, and elevations. The survey data was compared to historical data to evaluate potential displacement.

- *Reservoir Level*: During the 2016 site visits, LTE recorded the water level of the pond using the existing previously installed staff gage.
- *Reporting*: LTE has compiled all the data collected into the annual report required by the Colorado Division of Water Resources State Engineer's Office.

2.0 INSPECTION ACTIVITIES AND RESULTS

2.1 PROPERTY ACCESS

The pond and the associated inspection locations are located southwest of Meeker in Rio Blanco County, Colorado, and are located in Section 9, Township 2 South, and Range 97 West. LTE personnel were granted permission to access the property when needed by XTO during 2016 inspection activities.

2.2 SEEPAGE INSPECTIONS

Per the 2005 Monitoring Plan for the pond site, seepage detection and toe drain monitoring inspections were conducted on a weekly basis during 2016 due to the pond being greater than 50% full by height. The seepage and toe drain inspections were conducted by visual observation and using an interface probe to measure any flowing water.

During the first 3 quarterly inspections, the toe drain along the east side of the pond was continuing to produce minor silt/gravel and approximately 0.25 feet (3 inches) of clean water. During the 2016 fourth quarter inspections, the toe drain along the east side of the pond had approximately 0.61 feet (7 inches) of clean water in the bottom of the monitoring manhole. The water present in the bottom of the monitoring manhole was most likely the result of surface runoff and/or groundwater.

There has been no observable water flowing from the pipes entering the monitoring manhole during any of the 2016 weekly inspections. No pond seepage was detected below the dam during the 2016 weekly inspections.

2.3 PIZEOMETERS

On December 9, 2016, LTE conducted a quarterly inspection of 10 existing piezometers for the presence of water using a water-level indicator.

The quarterly 2016 field monitoring of the piezometers (PZ-1 through PZ-10) indicated trace to no presence of water. Figure 1 depicts the locations of the 10 piezometers and the attached Table 1 presents the piezometer 2016 and historical inspection data.

LTE will continue to monitor the piezometers on a quarterly basis in 2017. Any measurable changes in the piezometer water levels will be noted. Should water sourced from the pond be identified, LTE will collect samples to determine water quality and communicate with XTO to determine if sampling is necessary and what analyses will be conducted to investigate the origin of the water.

2.4 VISUAL INSPECTIONS

During the fourth quarter of 2016, LTE conducted a visual inspection to monitor the condition and performance of the dam. Rodent holes and some minor rill erosion where observed during

the 2016 fourth quarter inspection; however, no significant erosion rills were noted during the inspections. The Dam Inspection Report Forms are included as Appendix A.

Rill erosion as well as rodent holes that develop will be scheduled for repair on an ongoing basis – typically in the spring and fall of each year.

2.5 SETTLEMENT MONITORING SURVEY

On October 28, 2016, LTE personnel escorted TriState Survey personnel to conduct the annual survey of 11 established settlement monument points (SMK-1 through SMK-11) to measure northings, eastings, and elevations using a Trimble R6-2 GPS receiver.

Initial monitoring began in July 2005. No significant changes were observed in the 11 monument points between October 28, 2016, and the previous survey conducted on October 13, 2015. The following summary of survey measurements represent the total movement of the monuments since the embankment was completed. Historical and 2016 settlement data are presented in Table 1.

In general, survey measurements indicated a slight horizontal and vertical shift of the 11 monument points. A horizontal shift in an easterly/ northeasterly direction was noted in monument points SMK-1 (8+00), SMK-2 (9+00), SMK-5 (11+50), SMK-6 (12+00), SMK-7 (13+00), and SMK-8 (14+00). A horizontal shift in an easterly/ southeasterly direction was noted in monument point SMK-9 (15+00). No significant movements (greater than 0.04 feet (0.48 inches)) were measured in monument points SMK-3 (10+00), SMK-4 (10+50), SMK-10 (16+00), and SMK-11 (17+50).

The monument points located on the east side of the pond (SMK-1 through SMK-8) in areas of the deepest embankment fill had total measured shift ranging between -0.11 feet in SMK-6 to -0.02 feet in SMK-1 (a maximum of 1.08 inches) in northing (movement toward the north); and ranges between -0.13 feet in SMK-8 to -0.02 feet in SMK-3 and SMK-4 (a maximum of 1.32 inches) in easting (movement toward the east). The elevation changes in the 11 monument points ranged from a slight rise in monument point SMK-5 of 0.03 feet (0.36 inches) to a maximum settlement in monument point SMK-8 of 0.37 feet (4.4 inches).

In monument points located on the north side of the pond (SMK-9 through SMK-11) had a total measured shift ranging between 0.00 feet in SMK-10 to 0.08 feet in SMK-9 (a maximum of 0.96 inches) in northing; and ranges between -0.04 feet in SMK-10 and SMK-11 to 0.28feet in SMK-9 (a maximum of 1.44 inches) in easting. The elevation changes in the 11 monument points ranged from 0.08 feet in SMK-10 to 0.23 feet in SMK-9 (a maximum of 1.80 inches).

2.6 RESERVOIR LEVEL

During the 2016 site visits, LTE recorded the water level of the pond using the existing previously installed staff gage.

The pond level during the December 2016 inspection indicated approximately 12 feet of water (reservoir elevation of 6,160 feet). Water levels in the pond during 2016 ranged from 12 feet (reservoir elevation of 6,160 feet) to 13 feet (reservoir elevation of 6,161 feet). The maximum

gage height for the pond is 17 feet. The pond was half full or more for all the site visits in 2016 based the gage height measurements.

3.0 CONCLUSIONS

In October 2016, LTE was retained by XTO to conduct the remaining annual inspections. LTE obtained the previous inspection reports from XTO and conducted the remaining required inspections. Inspections were conducted on a weekly basis for seepage and visual inspections. LTE inspected the piezometers for water during the fourth quarter of 2016. Additionally, LTE contracted TriState Survey on October 28, 2016, to survey the settlement monument points to evaluate potential displacement.

During the first 3 quarterly inspections, the toe drain along the east side of the pond was continuing to produce minor silt/gravel and approximately 0.25 feet (3 inches) of clean water. During the 2016 fourth quarter inspections, the toe drain along the east side of the pond had approximately 0.61 feet (7 inches) of clean water in the bottom of the monitoring manhole. The water present in the bottom of the monitoring manhole was most likely the result of surface runoff and/or groundwater.

Quarterly monitoring in 2016 of the piezometers (PZ-1 through PZ-10) indicated trace amounts to no presence of water.

In addition, it was noted in the 2016 inspections conducted by the previous consultant that rodent holes and minor rill erosion were addressed during 2016. Rill erosion as well as rodent holes that develop will be scheduled for repair on an ongoing basis, typically in the spring and fall of each year.

During the annual survey of the settlement monument points, measurements indicated a slight horizontal and vertical shift of the 11 monument points. No significant changes were observed in the 11 monument points between October 28, 2016, and the previous survey conducted on October 13, 2015.

LTE will continue to conduct compliance monitoring from installed monitoring instrumentation and conducting visual inspections to ensure the pond is functioning as designed according the Monitoring Plan prepared by ExxonMobile Production, dated July 15, 2005.

FIGURES

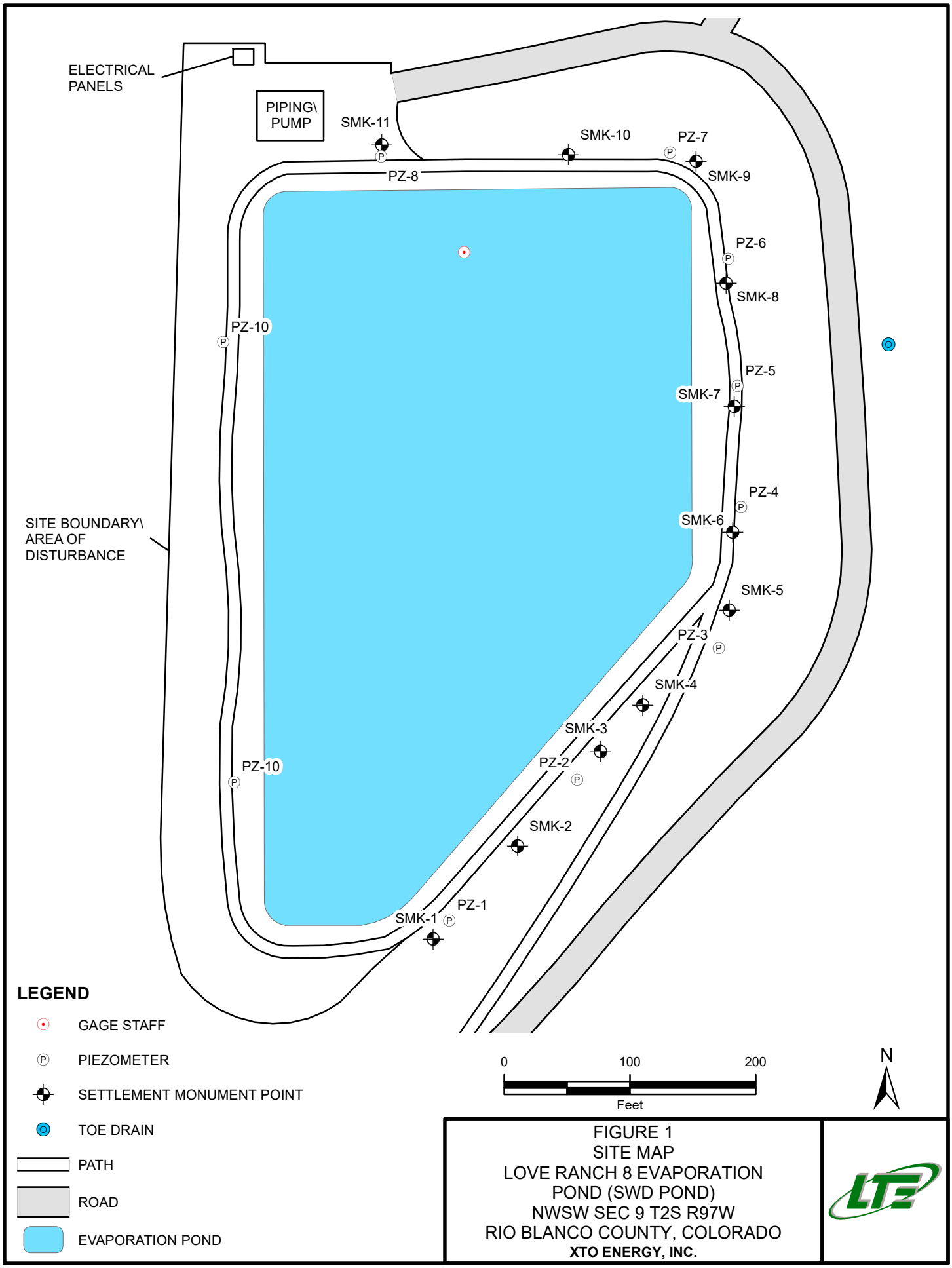

FIGURE 1
SITE MAP
LOVE RANCH 8 EVAPORATION POND (SWD POND)
NWSW SEC 9 T2S R97W
RIO BLANCO COUNTY, COLORADO
XTO ENERGY, INC.

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TABLES