OIL CONS. DIV DIST. 3

APR 06 2016

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

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: XTO Energy, Inc.	Contact: James McDaniel
Address: 382 Road 3100, Aztec, New Mexico 87410	Telephone No.: (505) 333-3100
Facility Name: OH Randell #5	Facility Type: Gas Well (Basin Dakota)

Surface Owner: Tribal	Mineral Owner	API No.: 30-045-05964

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	10	26N	11W	990	FNL	990	FWL	San Juan

Latitude 36.5065753 **Longitude** -107.996552

NATURE OF RELEASE

Type of Release: Produced Oil / Produced Water	Volume of Release: 32.5 BBL's	Volume Recovered: 0 BBL's
Source of Release: 2" Drain Valve on Production Tank	Date and Hour of Occurrence: Unknown Time: Unknown	Date and Hour of Discovery: 1/18/2016 2:56pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Cory Smith (NMOCD)	
By Whom? Rex Farnsworth (EH&S Technician)	Date and Hour: 1/19/2016 @ 7:53am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
On Monday, 1-18-2016 an XTO Lease Operator discovered a spill at the OH Randel #5. The 2" drain valve on the 100 bbl production tank froze, splitting the valve body and releasing fluid on the ground. An estimated 27 bbls of produced oil and 5.5 bbls of produced water leaked onto the ground with no fluids being recovered. The 2" drain valve has been replaced. The site was then ranked according to the NMOCD Guidelines for the Remediation of Leaks, Spills and Releases. The site was ranked a 0 due to an estimated depth to groundwater is greater than 100 feet and an arroyo over 1000 feet. This set the closure standard to 5000 ppm TPH, 10 ppm benzene, and 50 ppm total BTEX.

Describe Area Affected and Cleanup Action Taken. *
On 1/19/2016, XTO was on-site to perform spill assessment activities. Results of the spill assessment are outlined in the attached *Remediation Plan*. Please see the attached *Remediation Plan* for proposed 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 NMOCD 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 NMOCD marked as "Initial Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature:	OIL CONSERVATION DIVISION
Printed Name: James McDaniel	Approved by Environmental Specialist:
Title: EH&S Supervisor	Approval Date: 5/31/16 Expiration Date:
E-mail Address: james_mcdaniel@xtoenergy.com	Conditions of Approval: Attached ☐
Date: 4-1-2016 Phone: 505-333-3701	Attached

* Attach Additional Sheets If Necessary

#nDF1602039091

26

Smith, Cory, EMNRD

From: Smith, Cory, EMNRD
Sent: Tuesday, May 31, 2016 3:58 PM
To: 'McDaniel, James'
Cc: Powell, Brandon, EMNRD; Fields, Vanessa, EMNRD
Subject: RE: O H Randel #5

James,

OCD has reviewed the submitted remediation plan for the OH Randel #5 30-045-05964 submitted on May 24,2016 the remediation plan has been approved with the following Conditions of Approval:

- Field Screening results will indicate if possible impacted soil is present if field screening OVM is greater than 100 ppm
- XTO will fully delineate the release both horizontally and vertically to a field OVM of less than 100 ppm or XTO may submit confirmation laboratory samples for field OVM greater than 100ppm.
- If needed XTO will submit an updated report in 6 months if additional time is required for remediation.

If you have any further questions please give me a call.

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

From: McDaniel, James [mailto:James_McDaniel@xtoenergy.com]
Sent: Friday, May 27, 2016 10:04 AM
To: Smith, Cory, EMNRD; Powell, Brandon, EMNRD
Subject: O H Randel #5

Cory,
Any thoughts on the most current revision of the O H Randel #5 remediation plan?

James McDaniel
EH&S Supervisor
CHMM #15676
CSP #30009
XTO Energy Inc.
382 Road 3100
Aztec, New Mexico 87410
Phone: 505.333.3701 | Mobile: 505.787.0519
james_mcdaniel@xtoenergy.com

An ExxonMobil Subsidiary

COMPLIANCE / ENGINEERING / REMEDIATION

LT Environmental, Inc.
848 2nd Avenue
Durango, Colorado 81301
T 970.385.1096 / F 970.385.1873

May 17, 2016

Mr. Brandon Powell
New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, NM 87410

RE: Remediation Work Plan
XTO Energy, Inc.
OH Randel #5, API # 30-045-05964
San Juan County, New Mexico

Dear Mr. Powell:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following remediation work plan to address petroleum hydrocarbon impacted soil at the OH Randel #5 natural gas production well (Site). The Site is located west of Highway 550 near Huerfano, New Mexico in Unit D of Section 10 of Township 26 North and Range 11 West (Figure 1).

Background

On January 18, 2016, XTO discovered a frozen valve on a 100 barrel (bbl) production tank that resulted in approximately 27 bbl of condensate and 5.5 bbl of produced water draining onto the ground and infiltrating into the subsurface. The release was contained within the bermed area and no liquids were recovered. The Site was ranked a zero pursuant to the New Mexico Oil Conservation Division's (NMOCD) 1993 *Guidelines for Remediation of Leaks, Spills and Releases*. As such, the remediation action levels applied to the Site are 5,000 parts per million (ppm) total petroleum hydrocarbons (TPH), 10 ppm benzene, and 50 ppm total for the sum of benzene, toluene, ethylbenzene, and total xylenes (BTEX).

On January 19, 2016, XTO conducted a subsurface assessment using a hand auger (Figure 3). During the assessment, a photo-ionization detector (PID) was utilized to field screen for volatile organic compounds (VOCs) in soil samples collected from within the release footprint. Samples were collected at the surface and intermittently to 9.5 feet below ground surface (bgs). Samples were collected from four different borehole locations and field screened. Samples from two boreholes were submitted for laboratory analysis of BTEX according to United States Environmental Protection Agency (USEPA) Method 8021 and TPH according to USEPA Method 8015. Field screening and laboratory analytical results indicate that impacted soil at the release point extends from the ground surface to 9.5 feet bgs, and to 2 feet bgs towards the south of the release point (Table 1). XTO described the subsurface soil type as sandy.

REMEDIATION WORK PLAN

Based on the sandy nature of the lithology and source of the release, LTE recommends soil vapor extraction (SVE) to remediate impacted soil. Natural gas condensate is comprised mostly of light, readily volatilized petroleum hydrocarbon compounds. SVE will promote volatilization of the hydrocarbon impact distributed within the vadose zone. The SVE system will be designed to optimize extraction in areas where the impact has been observed.

Using operational data from successful SVE systems in similar lithology, SVE is estimated to provide a radius of influence of approximately 20 feet. LTE will advance four delineation boreholes to 10 feet bgs: one borehole in each cardinal direction at the edge of the SVE radius of influence (Figure 4). The soil from the delineation boreholes will be described and field screened with a PID at one-foot intervals to confirm that the subsurface impact is within the SVE radius of influence. When field screening results indicate impacted soil is present (>500ppm), soil samples will be collected from the bottom of the borehole to confirm the vertical impact to the soil has been delineated. Soil samples will be analyzed for BTEX using EPA Method 8021 and TPH using EPA Method 8015. If field screening results indicate that no impacted soil is present, no laboratory analysis will be conducted. If necessary LTE will step out and complete additional boreholes in order to delineate the impact to the soil.

Based on the preliminary field screening and laboratory analytical results obtained by XTO, LTE plans to use a hand auger to install two 2-inch diameter SVE wells within the impacted area (Figure 2). The deep well will be installed on the north side of the impacted area to a total depth of 10 feet bgs to address impact observed in BH-1. The deep well will be screened from 10 feet bgs to 5 feet bgs. The shallow well will be installed to the south to address shallow impact observed in BH-3 and BH-4. The screened interval on the shallow well will be from 5 feet bgs to 3 feet bgs. A clean 10-20 grade silica sand gravel pack will be placed from the bottom of the borings to one foot above the top of the screen. A concrete grout will be set above the gravel pack to the surface. During installation of the SVE wells, LTE will field screen soils with a PID and collect a sample from the bottom of the boring to confirm no impact migrated vertically within the release footprint. Should field screening suggest impact is present deeper than expected, LTE will adjust the depth of the SVE wells.

LTE will adjust the location, depth, and number of SVE wells based on the additional field data collected from the delineation boreholes and the SVE wells. Additional wells will be installed should field screening and laboratory analytical results indicate the extent of the impact is outside of the presumed SVE radius of influence.

A 10-mil plastic liner will be placed on top of the ground surface above the affected area to minimize ambient air intake at the ground surface and promote greater VOC recovery via improved air flow in the subsurface.

A customized SVE skid will be installed with a Class I/Division 1 compliant 1-horsepower (HP) blower motor capable of operating at approximately 100 cubic feet per minute (cfm) and an applied vacuum of 30 inches water column (IWC). The blower will operate on 240 volt (V), single phase

power and include a fluid recovery knockout tank with high level shutdown switch. LTE will use high-density polyethylene (HDPE) surface piping to connect the blower to the SVE wells.

Operations and maintenance (O&M) of the system will be conducted weekly for the first 2 months, then be reduced based on system performance. O&M will consist of adjusting the SVE air flow distribution, field screening recovered hydrocarbon vapors, and disposing of any recovered fluids.

Air samples of recovered vapors will be collected and analyzed for total volatile petroleum hydrocarbons (TVPH) and BTEX by modified USEPA Method TO-15M to calculate the hydrocarbon recovery rate during system operation. The recovery rate will be compared to New Mexico Air Quality Bureau (NMAQB) air emissions regulations. The system can be adjusted to reduce emissions as necessary to remain within regulated limits.

Reporting

Once the installation of the SVE system is completed, XTO will provide the NMOCD with an installation summary that will include the field screening and laboratory analytical results from the delineation boreholes and SVE wells. When SVE O&M field screening results indicate soil has been remediated, XTO will submit a closure plan to the NMOCD that will include a strategy, based on delineation results and remediation efforts, for confirming that impacted soil has been remediated. SVE remediation activities will continue until the NMOCD approves the closure plan.

LTE appreciates the opportunity to provide this remediation work plan to the NMOCD. If you have any questions or comments regarding this work plan, do not hesitate to contact me at (970) 385-1096 or via email at dhencmann@ltenv.com or James McDaniel at (505) 419-0915 or at james_mcdaniel@xtoenergy.com.

Sincerely,

LT ENVIRONMENTAL, INC.

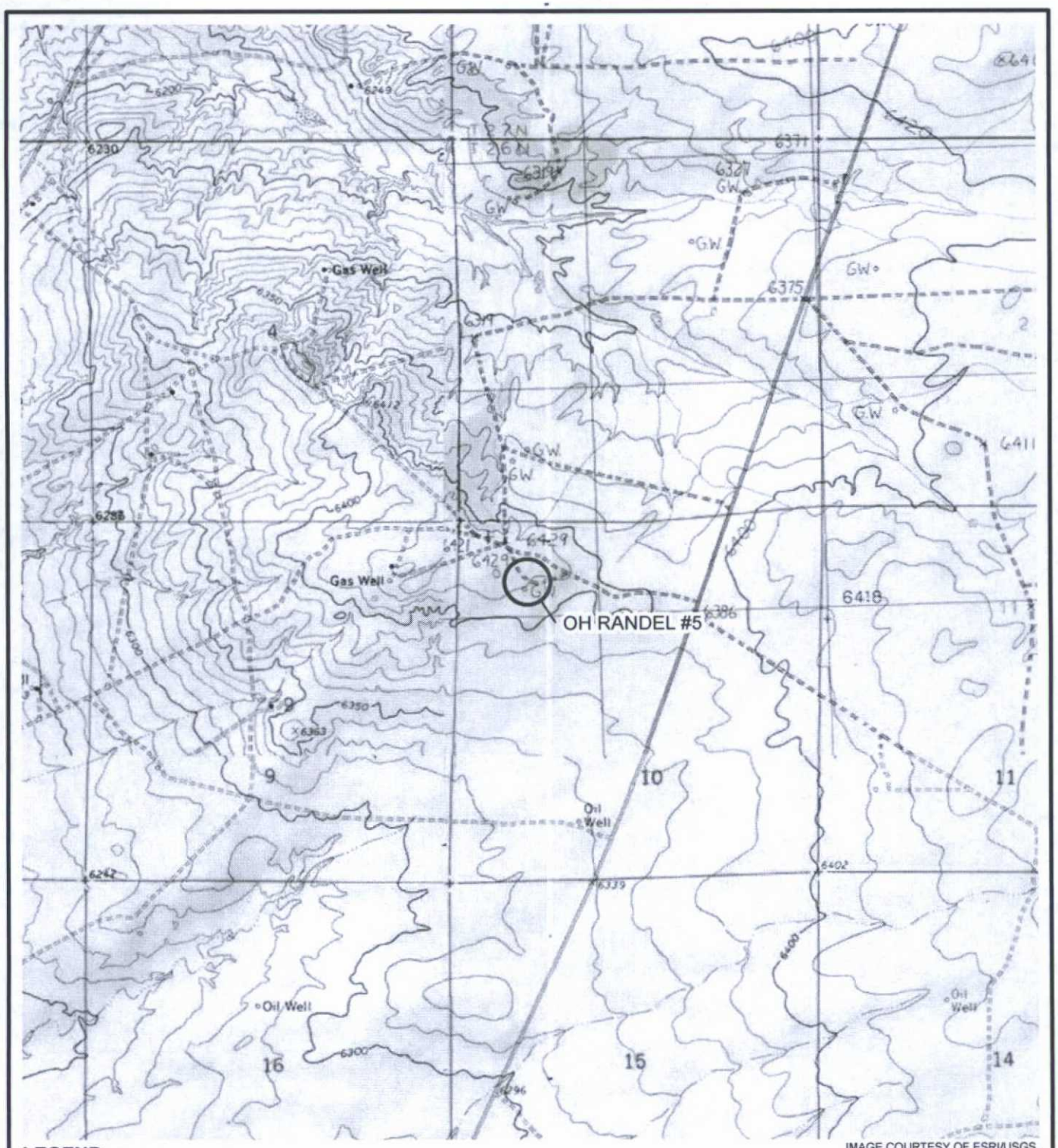
Devin Hencmann
Project Geologist

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

Attachments:

Figure 1 – Site Location Map
Figure 2 – Site Map
Figure 3 – Borehole Diagram
Figure 4 – Soil Boring Locations
Table 1 – XTO Subsurface Assessment Results

FIGURES



LEGEND

○ SITE LOCATION

0 2,000 4,000

Feet

N

FIGURE 1
SITE LOCATION MAP
OH RANDEL #5
NWNW SEC 10 T26N R11W
SAN JUAN COUNTY, NEW MEXICO
XTO ENERGY, INC.

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IMAGE COURTESY OF ESRI

LEGEND

- SOIL VAPOR EXTRACTION (SVE) WELL - DEEP
- SOIL VAPOR EXTRACTION (SVE) WELL - SHALLOW
- 20-FOOT RADIUS OF influence
- RELEASE AREA

0 40 80

Feet

N

FIGURE 2
SITE MAP
OH RANDEL #5
NWNW SEC 10 T26N R11W
SAN JUAN COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012916007\012916007_005_OH_RANDEL_FIG02_SITE.mxd

Figure 3

Borehole Diagram

Well Name:	Randel O H # 5
Field:	San Juan County NM
Serial Number:	Lease # NMSF-03153
API #	30-045-05964
Section:	NW/NW Sec. 10 (D), T-26N, R-11W

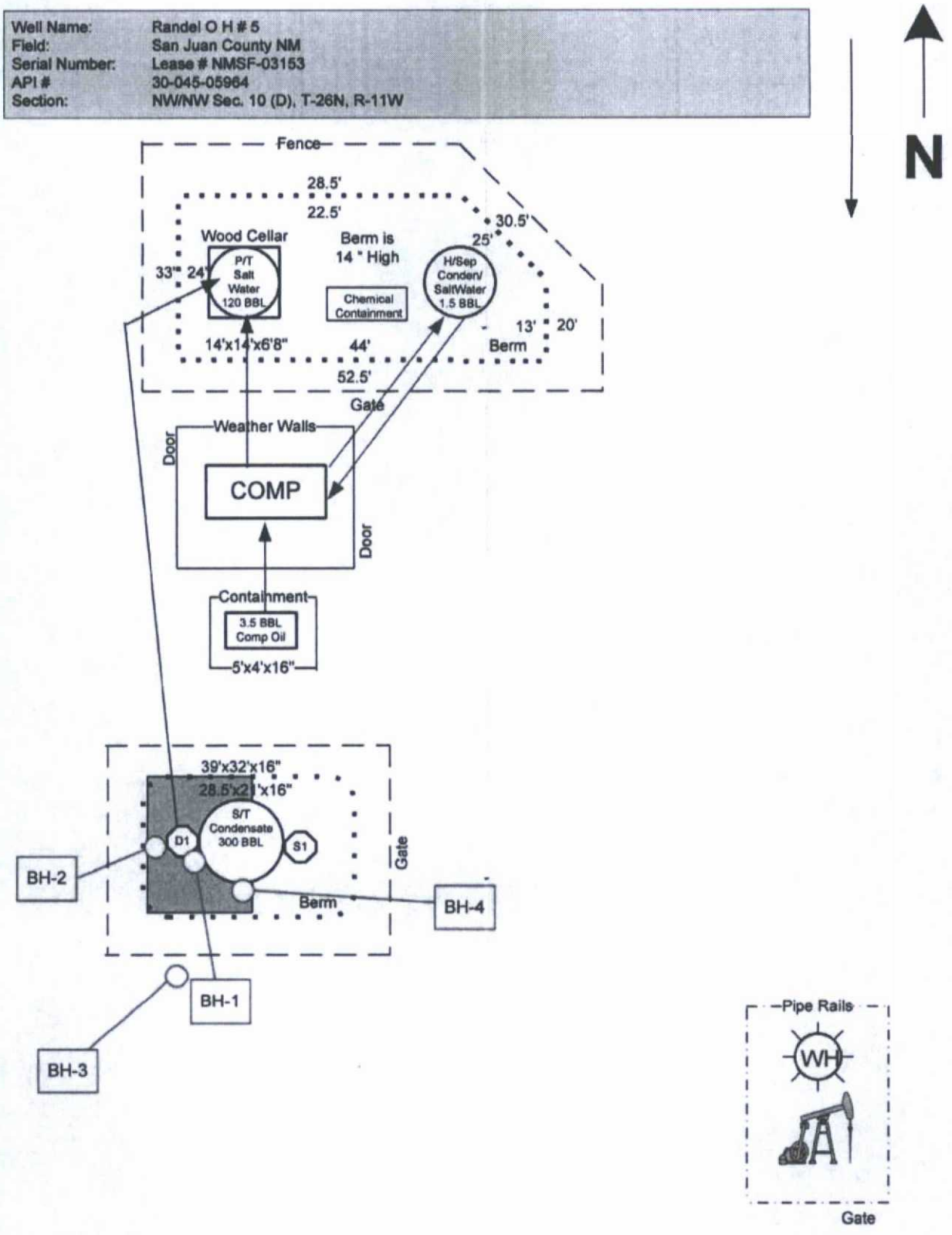

IMAGE COURTESY OF GOOGLE EARTH 2015

LEGEND

- PROPOSED DELINEATION BOREHOLE
- SOIL VAPOR EXTRACTION (SVE) WELL - DEEP
- SOIL VAPOR EXTRACTION (SVE) WELL - SHALLOW
- 20-FOOT RADIUS OF INFLUENCE
- RELEASE AREA

0 40 80

Feet

N

FIGURE 4
SOIL BORING LOCATIONS
OH RANDEL #5
NWNW SEC 10 T26N R11W
SAN JUAN COUNTY, NEW MEXICO
XTO ENERGY, INC.

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TABLES

Table 1
XTO SUBSURFACE ASSESMENT RESULTS

SAMPLE RESULTS

Sample Name	Date	PID (ppm)	Benzene (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	Total TPH (mg/kg)
STANDARDS	**NA**	**100**	**10**	**50**	**NA**	**NA**	**5,000**
BH-1 - Surface	1/19/2016	**> 9999**	**68.5**	**2388.5**	21,800	5,060	**26,860**
BH-1 - 24" - 30"	1/19/2016	**> 9999**	NS	NS	NS	NS	NS
BH-1 - 48" - 52"	1/19/2016	**> 9999**	NS	NS	NS	NS	NS
BH-1 - 5.5'	1/19/2016	**> 9999**	NS	NS	NS	NS	NS
BH-1 - 6.6'	1/19/2016	**> 9999**	NS	NS	NS	NS	NS
BH-1 - 8'	1/19/2016	**> 9999**	NS	NS	NS	NS	NS
BH-1 - 9.5'	1/19/2016	**3774**	< 0.0588	8.72	242	306	548
BH-2 - 2'	1/19/2016	5.4	NS	NS	NS	NS	NS
BH-2 - 4'	1/19/2016	3.0	NS	NS	NS	NS	NS
BH-2 - 6.5'	1/19/2016	0.5	NS	NS	NS	NS	NS
BH-3 - 2'	1/19/2016	**506**	> 0.000284	> 0.04259	> 0.567	> 4.54	> 5.107
BH-3 - 3.5'	1/19/2016	54.8	NS	NS	NS	NS	NS
BH-4 - 4'	1/19/2016	51.3	NS	NS	NS	NS	NS
BH-4 - 7.5'	1/19/2016	7.6	NS	NS	NS	NS	NS

OIL CONS. DIV DIST. 3

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State of New Mexico
Energy Minerals and Natural Resources

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

MAR 14 2016

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: XTO Energy, Inc.	Contact: Rex Farnsworth
Address: 382 Road 3100, Aztec, New Mexico 87410	Telephone No.: (505) 333-3100
Facility Name: OH Randell #5	Facility Type: Gas Well (Basin Dakota)

Surface Owner: Tribal	Mineral Owner	API No.: 30-045-05964

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	10	26N	11W	990	FNL	990	FWL	San Juan

Latitude 36.5065753 Longitude -107.996552

NATURE OF RELEASE

Type of Release: Produced Oil / Produced Water	Volume of Release: 32.5 BBL's	Volume Recovered: 0 BBL's
Source of Release: 2" Drain Valve on Production Tank	Date and Hour of Occurrence: Unknown Time: Unknown	Date and Hour of Discovery: 1/18/2016 2:56pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Cory Smith (NMOCD)	
By Whom? Rex Farnsworth (EH&S Technician)	Date and Hour: 1/19/2016 @ 7:53am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

OIL CONS. DIV DIST. 3

FEB 04 2016

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

On Monday, 1-18-2016 an XTO Lease Operator discovered a spill at the OH Randel #5. The 2" drain valve on the 100 bbl production tank froze, splitting the valve body and releasing fluid on the ground. An estimated 27 bbls of produced oil and 5.5 bbls of produced water leaked onto the ground with no fluids being recovered. The 2" drain valve has been replaced. The site was then ranked according to the NMOCD Guidelines for the Remediation of Leaks, Spills and Releases. The site was ranked a 0 due to an estimated depth to groundwater is greater than 100 feet and an arroyo over 1000 feet. This set the closure standard to 5000 ppm TPH, 10 ppm benzene, and 50 ppm total BTEX.

Describe Area Affected and Cleanup Action Taken. *

On 1/19/2016, XTO was on-site to perform spill assessment activities. Results of the spill assessment are outlined in the attached *Remediation Plan*. Please see the attached *Remediation Plan* for proposed 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 NMOCD 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 NMOCD marked as "Initial Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature:	OIL CONSERVATION DIVISION
Printed Name: James McDaniel	Approved by Environmental Specialist:
Title: EH&S Supervisor	Approval Date: 2/8/2016 Expiration Date:
E-mail Address: james_mcdaniel@xtoenergy.com	Conditions of Approval: See attached NUF1602039091 Attached ☐
Date: 2-2-2016 Phone: 505-333-3701	

* Attach Additional Sheets If Necessary

O H Randel #5

API # 30-045-05964
Unit D, Section 10, Township 26N, Range 11W
San Juan County, New Mexico
Lat: 36.50657 Long: -107.99655

Remediation Plan

Submitted By:
James McDaniel
EH&S Supervisor
XTO Energy Inc.
505-333-3701

O H Randel #5
Remediation Plan
February, 2016

Introduction

On January 18, 2016, a production tank release event was discovered at the O H Randel #5 well site. Approximately 27 barrels of condensate and 5.5 bbls of water were lost when a valve froze on the production tank. All fluids were contained within the bermed area with none being recovered. The site was then ranked a zero (0) pursuant to the NMOCD Guidelines for the Remediation of Leaks, Spills and Releases, setting the closure standard to 5,000 ppm total petroleum hydrocarbons (TPH), 10 ppm Benzene, and 50 ppm total BTEX. The required 24 hour notice was made to Cory Smith with the NMOCD on January 19, 2016. On January 19, 2016, an assessment of the spill area was performed using a hand auger. During the assessment, samples were collected from the spill area at the surface, and intermittently from a soil boring down (BH #1) to approximately 9.5 feet. Samples were analyzed using a photo-ionization detector (PID) for organic vapors. Samples were collected from four (4) different boreholes and analyzed using a PID; see the attached *Borehole Diagram*. Samples from Borehole (BH) #1 at the surface, BH #1 at 9.5' below ground surface (BGS), and from BH #3 at 2' BGS were taken to the laboratory to be analyzed for benzene and BTEX via USEPA Method 8021, and for total petroleum hydrocarbons (TPH) via USEPA Method 8015. The results of these analysis and PID results of all samples can be referenced in the attached *Sample Results* table.

Proposed Remediation Activity

Due to the volatile nature of the hydrocarbons present, and the sandy nature of the soil at this location, XTO believes that vent wells with forced air circulation will work well removing hydrocarbon impacts from the soil through active air circulation. XTO proposes to install two (2) vent wells in the spill area to 10 feet below ground surface. The vent wells will be completed with slotted PVC to allow airflow into the subsurface. Air circulation will be forced using solar powered fans to move air from the subsurface to be vented to atmosphere. As outlined in the attached *Sample Results* table, impacts are confined to an area inside the berm, approximately 10' deep. The estimated impacted area is approximately 20' x 20' x 10' deep. XTO proposed to utilize solar powered air circulation fans on each of the SVE vent wells for a time frame of six (6) months, with subsurface soil samples being collected after the six (6) month remediation time period. One (1) hand auger boring will be completed to a depth of 10 feet BGS with samples being collected every two (2) feet to be analyzed for organic vapors using a PID. Two (2) samples will be submitted for laboratory analysis from the boring, the sample from the bottom of the boring (10 foot BGS) and the sample from the boring with the highest PID reading in the field. Both samples will be submitted for benzene, BTEX and TPH analysis via USEPA Method 8015 and 8021. Should the sample analysis return results below the regulatory limits of 5,000 ppm TPH, 10 ppm benzene and 50 ppm total BTEX, XTO will remove the vent wells and consider the spill closed. If either of the two (2) samples collected after the six (6) month remediation time is above the regulatory limits determined for this location, additional evaluation will be completed at that time.

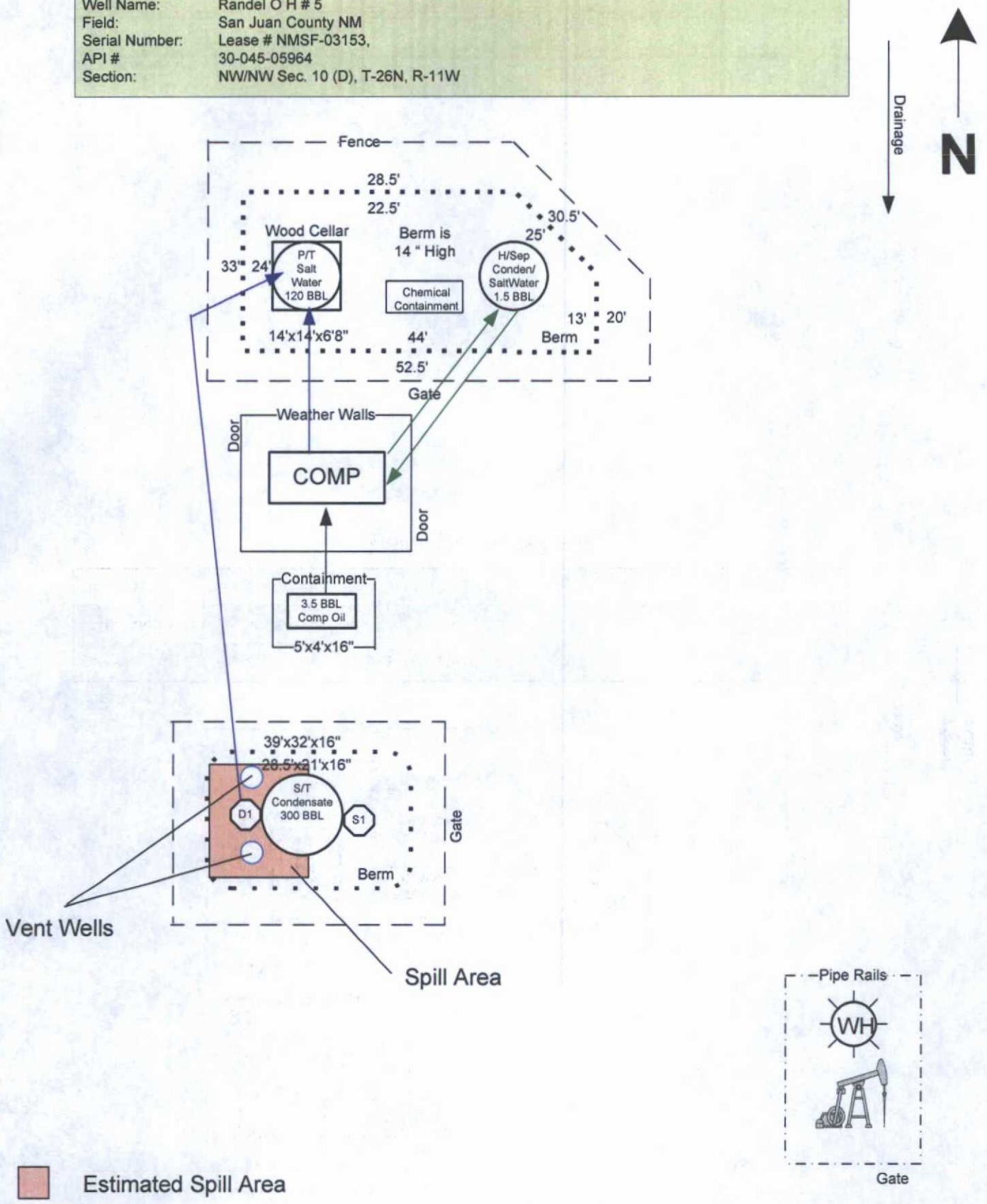
O H Randel #5
Remediation Plan
February, 2016

Please consider this remediation plan the proposal for remediation activities for the release at the O H Randle #5 well site. With your approval, XTO is prepared to being implementation of this remediation plan immediately.

James McDaniel
EH&S Supervisor
XTO Energy, Inc.
Western Division

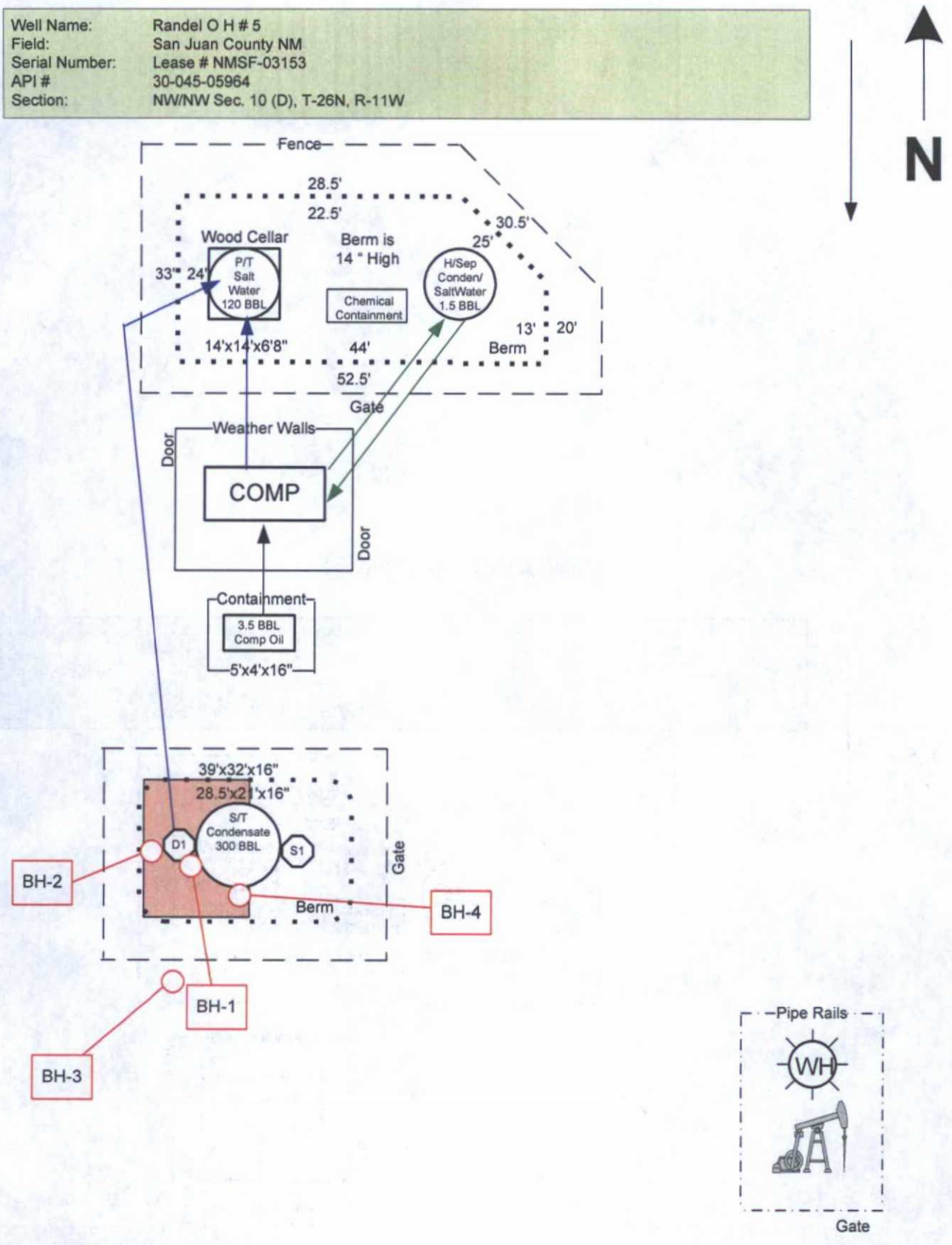
Remediation Diagram

Well Name:	Randel O H # 5
Field:	San Juan County NM
Serial Number:	Lease # NMSF-03153,
API #	30-045-05964
Section:	NW/NW Sec. 10 (D), T-26N, R-11W



Borehole Diagram

Well Name:	Randel O H # 5
Field:	San Juan County NM
Serial Number:	Lease # NMSF-03153
API #	30-045-05964
Section:	NW/NW Sec. 10 (D), T-26N, R-11W



SAMPLE RESULTS

Sample Name	Date	PID (ppm)	Benzene (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	Total TPH (mg/kg)
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BH-1 - 5.5'	1/19/2016	**> 9999**	NS	NS	NS	NS	NS
BH-1 - 6.6'	1/19/2016	**> 9999**	NS	NS	NS	NS	NS
BH-1 - 8'	1/19/2016	**> 9999**	NS	NS	NS	NS	NS
BH-1 - 9.5'	1/19/2016	**3774**	< 0.0588	8.72	242	306	548
BH-2 - 2'	1/19/2016	5.4	NS	NS	NS	NS	NS
BH-2 - 4'	1/19/2016	3.0	NS	NS	NS	NS	NS
BH-2 - 6.5'	1/19/2016	0.5	NS	NS	NS	NS	NS
BH-3 - 2'	1/19/2016	**506**	> 0.000284	> 0.04259	> 0.567	> 4.54	> 5.107
BH-3 - 3.5'	1/19/2016	54.8	NS	NS	NS	NS	NS
BH-4 - 4'	1/19/2016	51.3	NS	NS	NS	NS	NS
BH-4 - 7.5'	1/19/2016	7.6	NS	NS	NS	NS	NS

* Following plan Removed
At operators Request.

O H Randel #5

API # 30-045-05964
Unit D, Section 10, Township 26N, Range 11W
San Juan County, New Mexico
Lat: 36.50657 Long: -107.99655

Remediation Plan

Submitted By:
James McDaniel
EH&S Supervisor
XTO Energy Inc.
505-333-3701

O H Randel #5
Remediation Plan
February, 2016

Introduction

On January 18, 2016, a production tank release event was discovered at the O H Randel #5 well site. Approximately 27 barrels of condensate and 5.5 bbls of water were lost when a valve froze on the production tank. All fluids were contained within the bermed area with none being recovered. The site was then ranked a zero (0) pursuant to the NMOCD Guidelines for the Remediation of Leaks, Spills and Releases, setting the closure standard to 5,000 ppm total petroleum hydrocarbons (TPH), 10 ppm Benzene, and 50 ppm total BTEX. The required 24 hour notice was made to Cory Smith with the NMOCD on January 19, 2016. On January 19, 2016, an assessment of the spill area was performed using a hand auger. During the assessment, samples were collected from the spill area at the surface, and intermittently from a soil boring down (BH #1) to approximately 9.5 feet. Samples were analyzed using a photo-ionization detector (PID) for organic vapors. Samples were collected from four (4) different boreholes and analyzed using a PID; see the attached *Borehole Diagram*. Samples from Borehole (BH) #1 at the surface, BH #1 at 9.5' below ground surface (BGS), and from BH #3 at 2' BGS were taken to the laboratory to be analyzed for benzene and BTEX via USEPA Method 8021, and for total petroleum hydrocarbons (TPH) via USEPA Method 8015. The results of these analysis and PID results of all samples can be referenced in the attached *Sample Results* table.

Proposed Remediation Activity

Due to the volatile nature of the hydrocarbons present, and the sandy nature of the soil at this location, XTO believes that vent wells with forced air circulation will work well removing hydrocarbon impacts from the soil through active air circulation. XTO proposes to install two (2) vent wells in the spill area to 10 feet below ground surface. The vent wells will be completed with slotted PVC to allow airflow into the subsurface. Air circulation will be forced using solar powered fans to move air from the subsurface to be vented to atmosphere. As outlined in the attached *Sample Results* table, impacts are confined to an area inside the berm, approximately 10' deep. The estimated impacted area is approximately 20' x 20' x 10' deep. XTO proposed to utilize solar powered air circulation fans on each of the SVE vent wells for a time frame of six (6) months, with subsurface soil samples being collected after the six (6) month remediation time period. Eight (8) hand auger boring will be completed to a depth of 10 feet BGS with samples being collected every two (2) feet to be analyzed for organic vapors using a PID. Two (2) samples will be submitted for laboratory analysis from each boring, the sample from the bottom of the boring (10 foot BGS) and the sample from the boring with the highest PID reading in the field. Two (2) of the borings will be completed diagonally beneath the on-site AST. All boring locations can be referenced on the attached *Proposed Closure Sample Locations Diagram*. All samples will be submitted for benzene, BTEX and TPH analysis via USEPA Method 8015 and 8021. Should the sample analysis return results below the regulatory limits of 5,000 ppm TPH, 10 ppm benzene and 50 ppm total BTEX, XTO will remove the vent wells and consider the spill closed. If any of the 16 samples collected after the six (6) month remediation time are above the regulatory limits determined for this location, additional evaluation will be completed at that time. The NMOCD will be notified 48 hours prior to the collection of the final closure samples.

O H Randel #5
Remediation Plan
February, 2016

Please consider this remediation plan the proposal for remediation activities for the release at the O H Randle #5 well site. With your approval, XTO is prepared to being implementation of this remediation plan immediately.

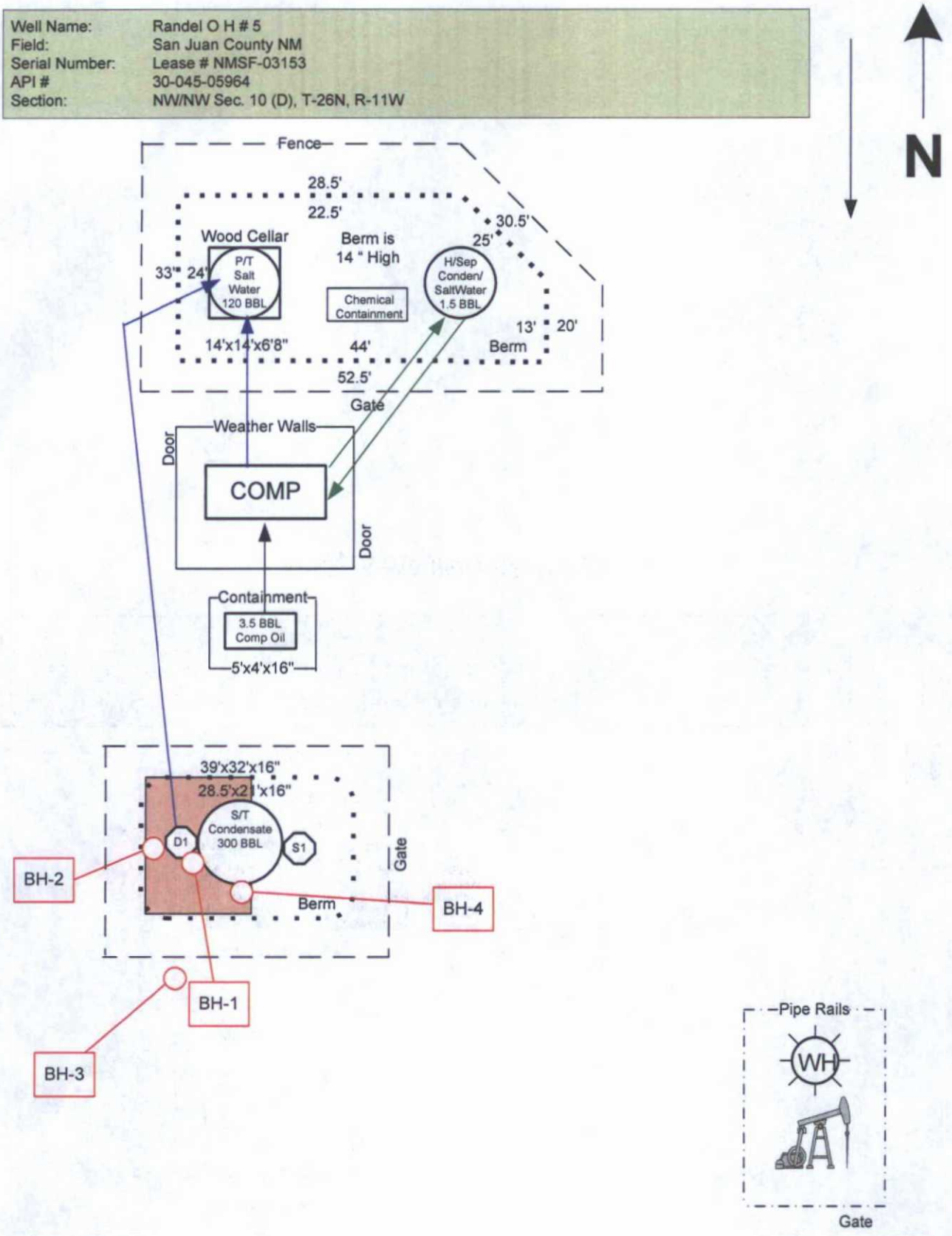
James McDaniel
EH&S Supervisor
XTO Energy, Inc.
Western Division

SAMPLE RESULTS

Sample Name	Date	PID (ppm)	Benzene (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	Total TPH (mg/kg)
STANDARDS	**NA**	**100**	**10**	**50**	**NA**	**NA**	**5,000**
BH-1 - Surface	1/19/2016	**> 9999**	**68.5**	**2388.5**	21,800	5,060	**26,860**
BH-1 - 24" - 30"	1/19/2016	**> 9999**	NS	NS	NS	NS	NS
BH-1 - 48" - 52"	1/19/2016	**> 9999**	NS	NS	NS	NS	NS
BH-1 - 5.5'	1/19/2016	**> 9999**	NS	NS	NS	NS	NS
BH-1 - 6.6'	1/19/2016	**> 9999**	NS	NS	NS	NS	NS
BH-1 - 8'	1/19/2016	**> 9999**	NS	NS	NS	NS	NS
BH-1 - 9.5'	1/19/2016	**3774**	< 0.0588	8.72	242	306	548
BH-2 - 2'	1/19/2016	5.4	NS	NS	NS	NS	NS
BH-2 - 4'	1/19/2016	3.0	NS	NS	NS	NS	NS
BH-2 - 6.5'	1/19/2016	0.5	NS	NS	NS	NS	NS
BH-3 - 2'	1/19/2016	**506**	> 0.000284	> 0.04259	> 0.567	> 4.54	> 5.107
BH-3 - 3.5'	1/19/2016	54.8	NS	NS	NS	NS	NS
BH-4 - 4'	1/19/2016	51.3	NS	NS	NS	NS	NS
BH-4 - 7.5'	1/19/2016	7.6	NS	NS	NS	NS	NS

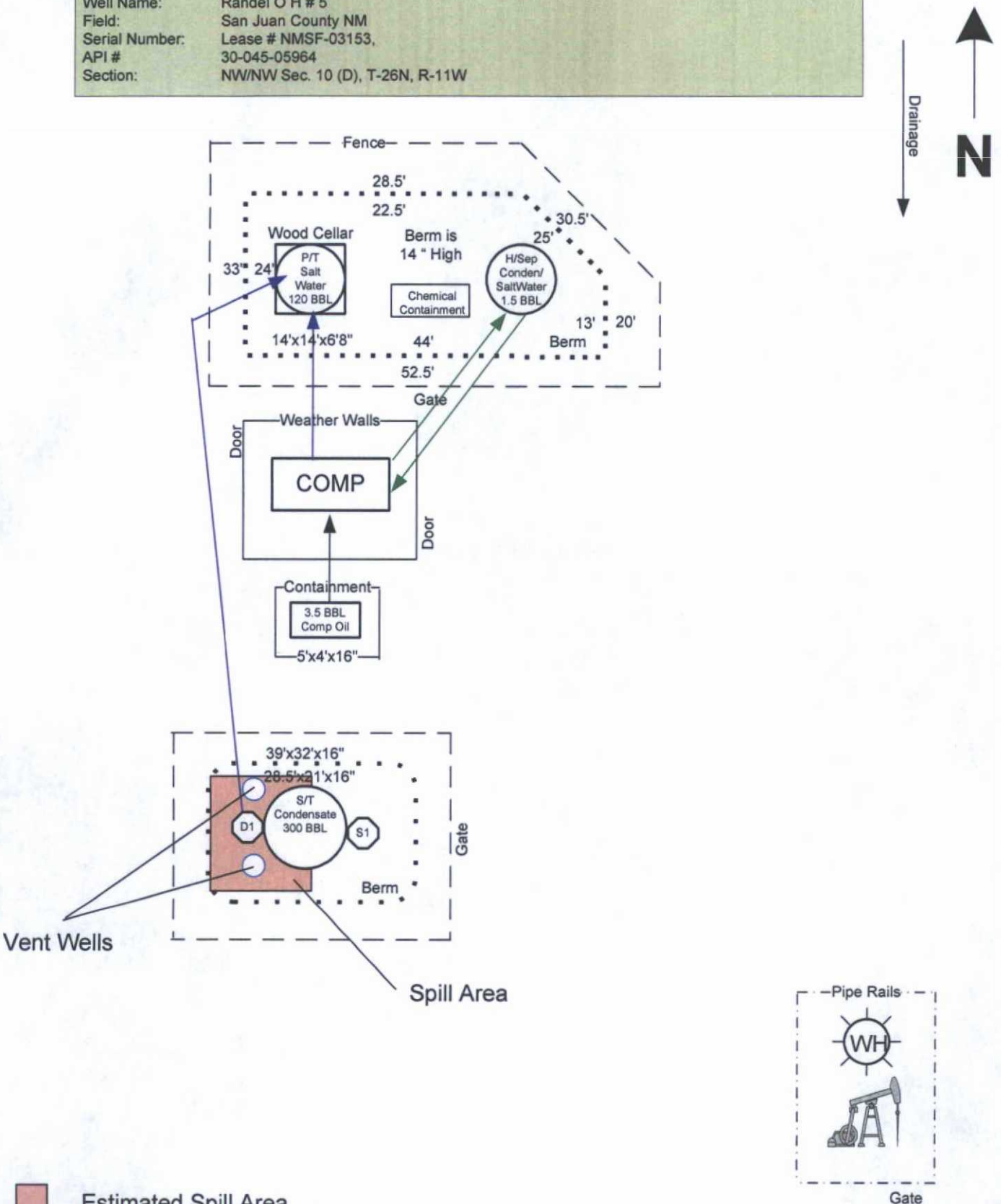
Borehole Diagram

Well Name:	Randel O H # 5
Field:	San Juan County NM
Serial Number:	Lease # NMSF-03153
API #	30-045-05964
Section:	NW/NW Sec. 10 (D), T-26N, R-11W



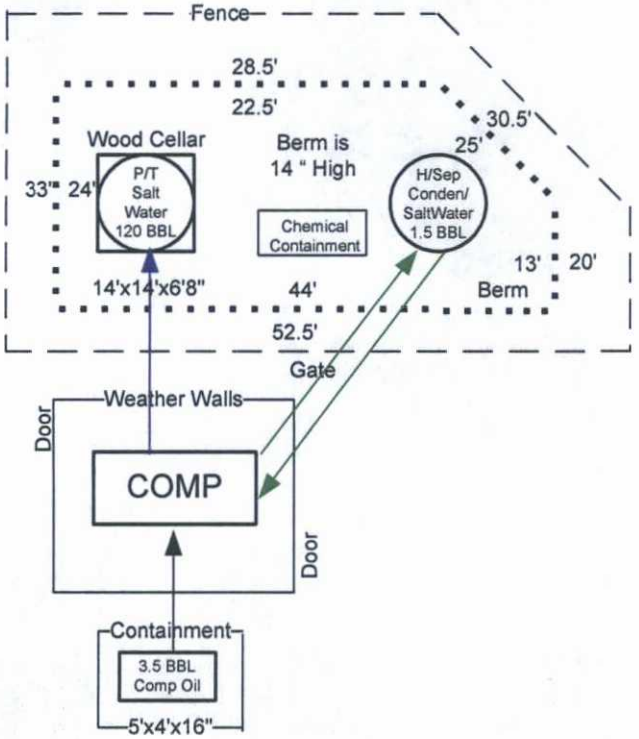
Remediation Diagram

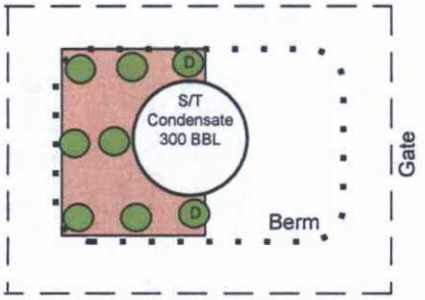
Well Name:	Randel O H # 5
Field:	San Juan County NM
Serial Number:	Lease # NMSF-03153,
API #	30-045-05964
Section:	NW/NW Sec. 10 (D), T-26N, R-11W

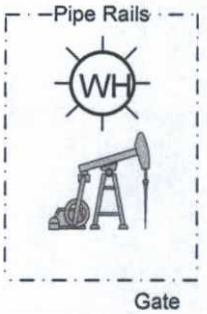


Proposed Closure Sample Locations

Well Name:	Randel O H # 5
Field:	San Juan County NM
Serial Number:	Lease # NMSF-03153
API #	30-045-05964
Section:	NW/NW Sec. 10 (D), T-26N, R-11W







D Diagonal Closure Sample Boring Location

Closure Sample Boring Location

Estimated Spill Area