

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Bruzos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-101
May 27, 2004

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

Submit to appropriate District Office

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

¹ Operator Name and Address XTO Energy Inc. 200 N. Lorraine St. Ste 800 Midland, TX 79701		² OGRID Number 5380
³ Property Code 301587	⁴ Property Name North Vacuum ABO Unit	⁵ Well No. 222
⁶ Proposed Pool 1 North Vacuum ABO		⁷ Proposed Pool 2

⁷ Surface Location

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
I	24	17S	34E		2100	South	660	East	lea

⁸ Proposed Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
J	24	17S	34E		1330	South	2133	East	lea

Additional Well Information

¹¹ Work Type Code Horizontal	¹² Well Type Code D	¹³ Cable/Rotary Rotary	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 4000'
¹⁶ Multiple	¹⁷ Proposed Depth 12,800' 8700'	¹⁸ Formation ABD	¹⁹ Contractor Key Energy	²⁰ Spud Date ASAP
Depth to Groundwater 300'		Distance from nearest fresh water well +1000'		Distance from nearest surface water +1000'
Pit: Liner: Synthetic <input checked="" type="checkbox"/> 12 mils thick Clay <input type="checkbox"/> Pit Volume: 2000 bbls Drilling Method: Closed-Loop System <input type="checkbox"/> Fresh Water <input checked="" type="checkbox"/> Brine <input type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/>				

²¹ Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17-1/2"	13-3/8"	34# H40	250'	400x	Circ to Surf.
12-1/4"	8-5/8"	20,24,28#	3072'	1765x	Circ to Surf.
7-7/8"	5-1/2"	17,15.5# K-55	8650'	1600x	Circ to Surf.

²² Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

* See Attached procedure for adding lateral

* MUD PROGRAM 8.4 - 8.9 fresh water from Kick off point 8338' - 44' to 8350'.

* CIBP will be set at 8350' with whipstock for Kickoff and directional drilling.

* BOP case III 7-1/16" 3000# w/ hydril single pipe ram, blind ram and manifold.

*** HORIZONTAL

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOC guidelines ☒ a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Printed name: **Sorina Flores** *Sorina Flores*

Title: **Drilling Tech**

E-mail Address: **Sorina.flores@xenergy.com**

Date: **9/14/07**

Phone: **432-620-6744**

OIL CONSERVATION DIVISION

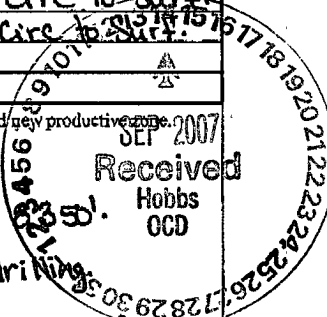
Approved by:

Chris Williams

THE DISTRICT SUPERVISOR/GENERAL MANAGER

Approval Date: **SEP 20 2007** Expiration Date:

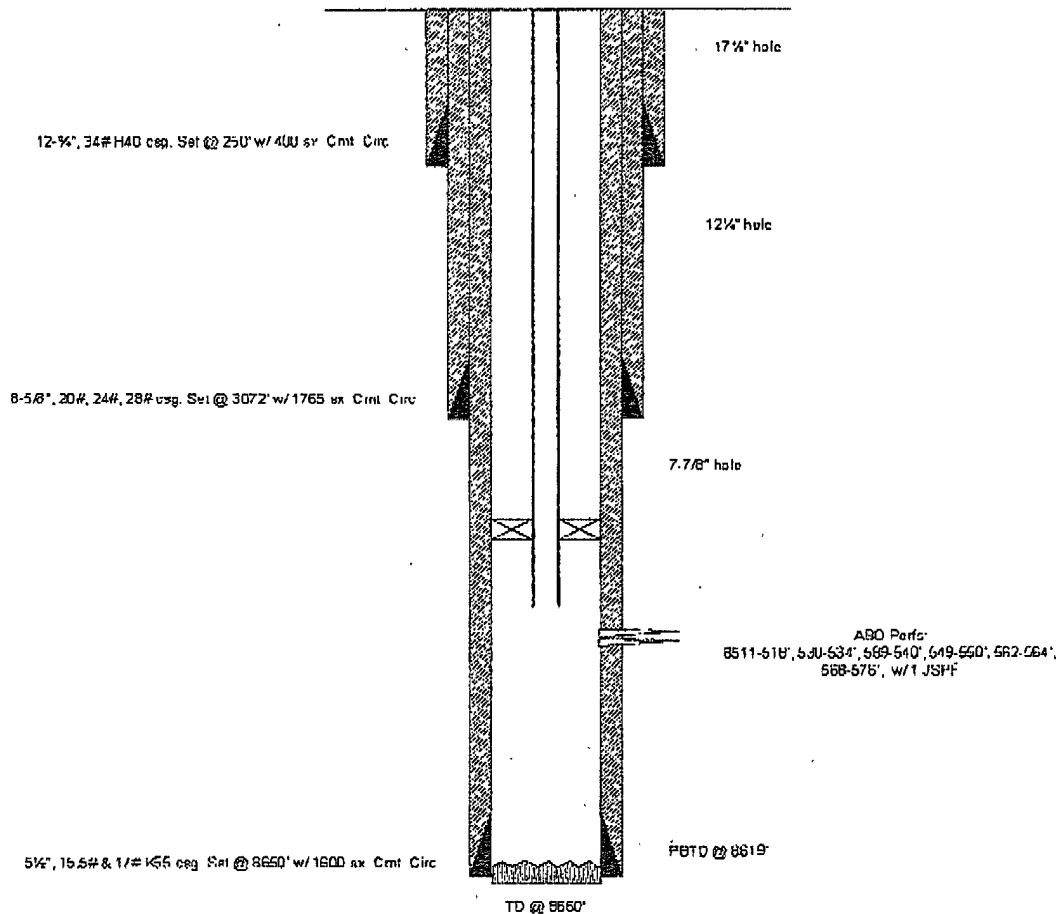
Conditions of Approval Attached ☐



Vacuum ABO Unit #222

N. Vacuum ABO Field
Lea County, NM

Elevation
NA



NVAC #222H
Horizontal Sidetrack Procedure
North Vacuum Abo Field
Lea County, New Mexico
AFE #714257
XTO WELL ID #61492

TD: 8660'
PBSD: 8619' +/-
8-5/8" Casing: 3072'
5-1/2" Casing: 5-1/2" 15.5# & 17# K-55 @ 8650'
see wellbore diagram for all details

Surface Location: 2100' FSL & 660' FEL, Sec 24, T17S, R34E
Target BHL: 1330' FSL & 2133' FEL, Sec 24, T17S, R34E
Drilled Date:
Abo Perfs: 8511-8576' OA
Ground Elev: 4034'
Original KB Elev: 4051'
Key Energy #36: 4046' (12'AGL)

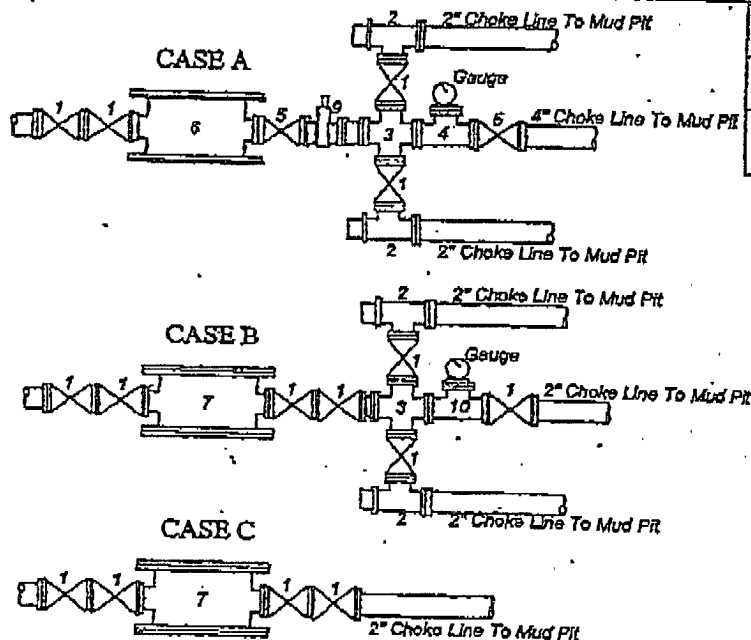
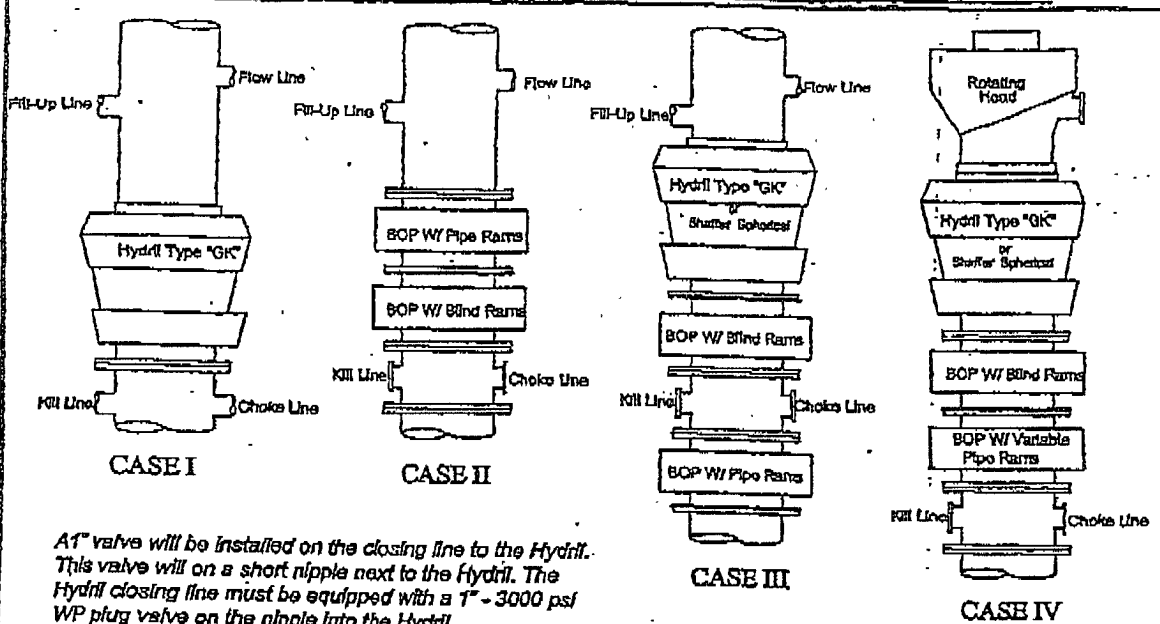
1. MIRU Key Rig #36. Install BOP. Test to 250# & 1000#. Notify NMOGB – permit attached.
2. Unload and tally $\pm 10,300'$ 2-7/8" 10.40# AOH workstring.
3. R/U WSI WL. Run gauge ring and junk basket for 5-1/2" 17# (drift ID – 4.767") to 8500'. Log up and tie into csg collars @ 8531', 8492', 8452', 8412', 8373' (see attached log). P/U Weatherford Oil Tools wireline set 5-1/2" 17# RBP. Set RBP so that the top will be at 8350' RD WL.
4. PU 4-3/4" dummy milling assbly or 4-3/4" flat bottom mill with the 2-7/8" AOH & 3-1/2" IF drill pipe and TIH. Tag up on the RBP @ 8350', set down 20,000# of weight on the RBP. Circulate the hole with fresh water. TOOH with assbly.
5. PU Knight Oil Tools Whipstock System (3° face) with metal muncher mills. **Note: Make sure all mills will gauge to 4.75". Minimum DD is 4.767".** Total length of the whipstock assembly in the set position is approximately 12'. Orient the UBHO sub and whipstock face on the surface. Insert the gyro stinger (Scientific Drilling) to ensure compatibility and to check orientation.
6. TIH with the whipstock assembly slowly, being careful when picking the string up off of the slips and when setting the slips. Fill DP every 2000'. Tag the RBP at 8350' with 2000# of weight. PU to first tool joint and RU Scientific Drilling gyro truck. Orient the whipstock to the desired azimuth and work the torque out of the drill string.
7. When desired orientation is achieved, tag the RBP with 2000# of weight, take a final check shot with gyro, then apply weight and set the anchor with 20,000# compression to shear the running bolt. RD WL truck.
8. Obtain values for free torque, PU & SO weights. Install ditch magnets at the surface. Lower milling assembly and make the starting cut through the casing wall at approximately 8338'.

NVAC #222H
Horizontal Sidetrack Procedure
Page 2

9. Mill the remainder of the window, 8338-44', making the necessary rat hole (8350') to ensure that the string mill has fully opened the window, and that the window exit is smooth. Work the mills through the window. When the window is "clean", circulate the hole clean, TOOH and LD the window mills.
10. PU 4-3/4" bit ("47-type" – the Abo 'has and has not' had 'chert' in it – watch drilling samples while landing the curve), PU 3-1/2" dir assbly w Non-Mag DC & GammaRay, run surface tests, and TIH. ***Mud loggers should be rigged up after cutting the window and prior to commencing the curve.*** Use Gyro for first few surveys. Follow well plan from Baker. Open hole lateral length is +/- 2100'. Be prepared to drill with an XCD/Xanthum fluid system to keep 'YP' higher for hole cleaning in the 8-5/8" area. **For trips out of the hole, circ hole clean with sweep(s). TOH slowly in the curve and lateral, if necessary consider pumping out.**
11. At TD, circulate the hole clean with polymer sweeps.
12. TOOH and LD directional tools.
13. TIH with 4-3/4" (4-1/2") swaging tool, single reamer about 7-8 jts behind swaging tool, wash and ream to TD. POH and place 2nd reamer 1 jt behind 1st, wash and ream to TD, pull back up through the window, RIH for push pull test to btm, circ hole clean.
14. TOOH & LDDP. RD Re-entry Rig. Prepare to move to the next location.

Chip
9/5/07

MINIMUM BLOWOUT PREVENTER REQUIREMENTS



BOP SIZE	BOP CASE	WORKING PRESSURE	CHOKE CASE
13-5/8"	IV	5000	A

**Rotating head required*

Gardenhead furnished by Conoco will be:
 Mfr: Wood Group
 Description: 13-3/8" x 13-5/8" 3M
 Type: SQW

Legend

- 2" flanged all steel valve must be either Cameron "F", Halliburton Low Torque or Shaffer Flo-Seal.
- 2" flanged adjustable chokes, min. 1" full opening & equipped with hand trim.
- 4" x 2" flanged steel cross.
- 4" flanged steel tee.
- 4" flanged all steel valve (Type as in no. 1).
- Drilling Spool with 2" x 4" flanged outlet.
- Drilling Spool with 2" x 2" flanged outlet.
- 2" x 2" flanged steel cross.
- 4" pressure operated gate valve.
- 2" flanged steel tee.

Notes

Choke manifold may be located in any convenient position. Use all steel fittings throughout. Make 90° turns with bull plugged tees only. No field welding will be permitted on any of the components of the choke manifold and related equipment upstream of the chokes. The choke spool and all lines and fittings must be at least equivalent to the test pressure of the preventers required. Independent closing control unit with clearly marked controls to be located on derrick floor near driller's position.

DISTRICT I
1625 N. FRENCH DR., ROADS, NM 86840

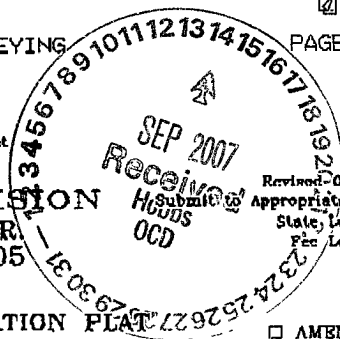
DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 86210

DISTRICT III
1000 Rio Branson Rd., Aztec, NM 87410

DISTRICT IV
1020 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, New Mexico 87505



Form C-102
Revised October 12, 2005
Appropriate District Office
State Lease - 4 Copies
Fee Lease - 2 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-24851	Pool Code 6176D	Pool Name North Vacuum ABO
Property Code 30687	Property Name NORTH VACUUM ABO UNIT	Well Number 222 H
UGRID No. 5380	Operator Name XTO ENERGY	Elevation 4000'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	24	17-S	34-E		2100	SOUTH	660	EAST	LEA

Bottom Hole Location if Different From Surface

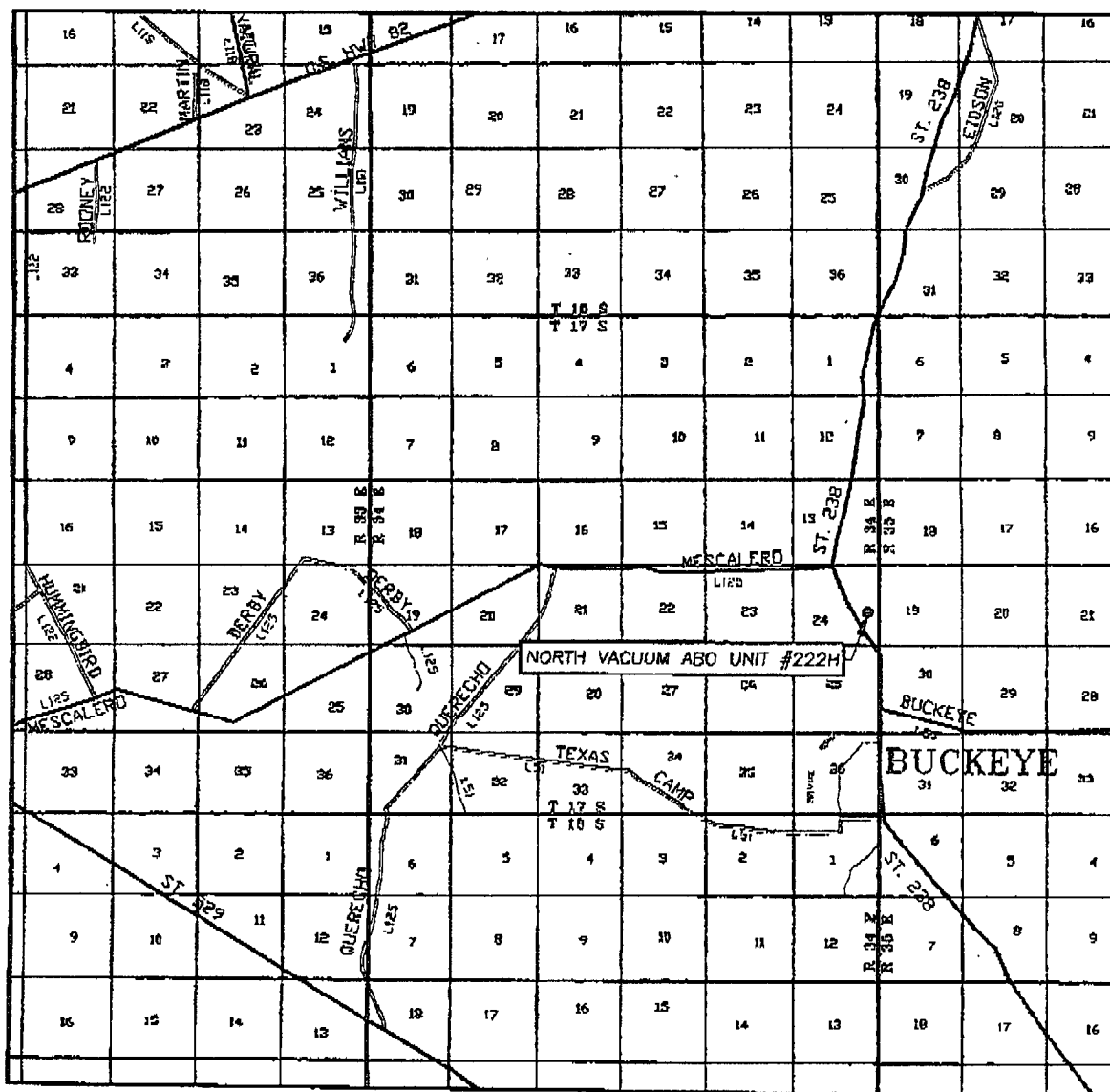
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	24	17-S	34-E		1330	SOUTH	2133	EAST	LEA

Dedicated Acres 160	Joint or Infill	Consolidation Code	Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<p>GEODEIC COORDINATES NAD 27 NME SURFACE LOCATION Y=662655.3 N X=753820.5 E LAT.=32.819000' N LONG.=103.507127' W</p> <p>BOTTOM HOLE LOCATION Y=661863.0 N X=752355.1 E</p>	<p>GRID AZ. = 241°38'04" HORIZ. DIST. = 1666'</p> <p>B.H.</p> <p>S.L.</p> <p>2133'</p> <p>2100'</p> <p>1330'</p>	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the Division.</p> <p><i>Spring L. Flores</i> 9/14/07 Signature Date Spring L. Flores Printed Name</p> <p>SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>DATE: 9/13/07 Signature of Professional Surveyor 3239 GARY EIDSON 7/13/07 PROFESSIONAL SURVEYOR</p> <p>Certificate No. GARY EIDSON 12841 RONALD J. EIDSON 3239</p>
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VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 24 TWP. 17-S RGE. 34-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

DESCRIPTION 2100' FNL & 660' FEL

ELEVATION 4000'

OPERATOR XTO ENERGY

LEASE NORTH VACUUM ABO UNIT

