

State of Colorado  
Oil and Gas Conservation Commission



received 02/01/2011  
Facility 421405  
document 200294019

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303) 894-2100 Fax: (303) 894-2109

**EARTHEN PIT REPORT/PERMIT**

This form is to be used for both reporting and permitting pits. Rule 903 describes when a Permit with prior approval, or a Report within 30 days, is required for pits. Submit required attachments and forms.

**FORM SUBMITTED FOR:**

Pit Report  Pit Permit

**Complete the Attachment Checklist**

<b>OGCC Operator Number:</b> 100264 <b>Name of Operator:</b> XTO Energy Inc. <b>Address:</b> 382 Road 3100 <b>City:</b> Aztec <b>State:</b> NM <b>Zip:</b> 87410		<b>Contact Name and Telephone:</b> Sam Montoya <b>No:</b> 719-846-0272 <b>Fax:</b> 719-845-0108 <b>Email:</b> sam_montoya@xtoenergy.com	<table border="1"> <tr><td>Detailed Site Plan</td><td>X</td></tr> <tr><td>Topo Map with Pit Location</td><td>X</td></tr> <tr><td>Water Analysis (Form 25)</td><td>X</td></tr> <tr><td>Source Wells (Form 26)</td><td></td></tr> <tr><td>Pit Design/Plan &amp; Cross Sect.</td><td>X</td></tr> <tr><td>Design Calculations</td><td>X</td></tr> <tr><td>Sensitive Area Determination</td><td>X</td></tr> <tr><td>Mud Program</td><td></td></tr> <tr><td>Form 2A</td><td>X</td></tr> </table>	Detailed Site Plan	X	Topo Map with Pit Location	X	Water Analysis (Form 25)	X	Source Wells (Form 26)		Pit Design/Plan & Cross Sect.	X	Design Calculations	X	Sensitive Area Determination	X	Mud Program		Form 2A	X
Detailed Site Plan	X																				
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Design Calculations	X																				
Sensitive Area Determination	X																				
Mud Program																					
Form 2A	X																				
<b>API Number (of associated well):</b> 05-071-09235-00 <b>OGCC Facility ID (of other associated facility):</b> _____ <b>Pit Location (QtrQtr, Sec, Twp, Rng, Meridian):</b> SW NE Sec.36-33S-68W, 6th PM <b>Latitude:</b> 37.128309 <b>Longitude:</b> 104.944317 <b>County:</b> Las Animas <b>Pit Use:</b> <input checked="" type="checkbox"/> Production <input type="checkbox"/> Drilling (Attach mud program) <input type="checkbox"/> Special Purpose (Describe Use): _____ <b>Pit Type:</b> <input type="checkbox"/> Lined <input checked="" type="checkbox"/> Unlined <b>Surface Discharge Permit:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <b>Offsite disposal of pit contents:</b> <input type="checkbox"/> Injection <input type="checkbox"/> Commercial <b>Pit/Facility Name:</b> New Elk <b>Pit Facility No.:</b> 36-07 <b>Attach Form 26 to identify Source Wells and Form 25 to provide Water Analysis results.</b>																					

**Existing Site Conditions**

Is the location in a "Sensitive Area?"  Yes  No **Attach data used for determination.**  
 Distance (in feet) to nearest surface water: 1056 ground water: 281 water wells: >1 MILE  
**LAND USE (or attach copy of form 2A if previously submitted for associated well) Select one which best describes land use:**  
 Crop Land:  Irrigated  Dry Land  Improved Pasture  Hay Meadow  CRP  
 Non-Crop Land:  Rangeland  Timber  Recreational  Other (describe): \_\_\_\_\_  
 Subdivided:  Industrial  Commercial  Residential  
**SOILS (or attach copy of Form 2A if previously submitted for associated well)**  
 Soil map units from USNRCS Survey: Sheet No: WSS Soil Complex/Series No: SR  
 Soils Series Name: SARUCHE Horizon thickness (in inches): A: 0-4" ; B: 4-16" ; C: 16-20"  
 Soils Series Name: ROMBO Horizon thickness (in inches): A: 0-4" ; B: 4-22" ; C: 22-34"  
**Attach detailed site plan and topo map with pit location.**

**Pit Design and Construction**

Size of pit (feet): Length: 52 Width: 40 Depth: 10 **2,080 Sq/ Ft.**  
 Calculated pit capacity (bbls): 3,704 Daily inflow rate (bbls/day): 0  
 Daily disposal rates (attach calculations): Evaporation: 4 bbls/day Percolation: 445 bbls/day  
 Type of liner material: \_\_\_\_\_ Thickness: \_\_\_\_\_  
**Attach description of proposed design and construction (include sketches and calculations).**  
 Method of treatment of produced water prior to discharge into pit (separator, heater treater, other): Separator  
 Is pit fenced?  Yes  No Is pit netted?  Yes  No

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Sam Montoya

Signed: \_\_\_\_\_ Title: Field Environmental Coordinator Date: 12/15/08

OGCC Approved: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

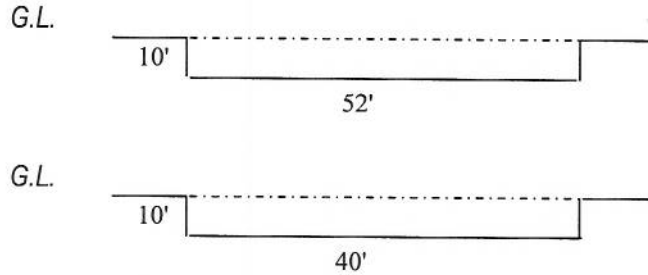
CONDITIONS OF APPROVAL, IF ANY:

Facility Number: 421405

Pit to be closed per Project 5515 Remediation 200294020

New Elk  
 Pit Design Plan & Calculations  
 New Elk 36-07  
 05-071-09235-00

Cross-Section



Calculations

<u>Volume =</u>	$\frac{\text{LENGTH} \quad \text{WIDTH} \quad \text{DEPTH}}{52 \quad 40 \quad 10}$	$\frac{\text{Bbls}}{3704}$
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<u>Evaporation</u> (Based on 45"/yr)	$\frac{\text{LENGTH} \quad \text{WIDTH}}{52 \quad 40}$	$\frac{\text{ft}^2}{2080}$
		$\frac{\text{Bbls/Day}}{3.8}$

Percolation

Per Lee Neve, rates range from 0 to 6" per hour. Disturbed soil, such as in a pit may have increased permeability. A common soil description is .6 to 2" per hour. For these calculations I have used .6" per hour or 1.2 ft/day.

$\frac{\text{ft}^2}{2080}$	$\frac{\text{Bbls/Day}}{445}$
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## SENSITIVE AREA DETERMINATION DATA

Well Name: New Elk 36-07

Water Quality will be provided no later than 60 days after well has delivered.

Box 1. Is discharge water or waste: **Water**

**Total Dissolved Solids (TDS)** greater than 1.25 x background ppm

No Result  mg/L Background 1148 mg/L

**Chloride** greater than 250 ppm

No Result  mg/L

**Sulfate** greater than 250 ppm

No Result  mg/L

**Benzene** greater than 5 ppb

No Result  ppb

**Toluene** greater than 1,000 ppb

No Result  ppb

**Ethylbenzene** greater than 680 ppb

No Result  ppb

**Xylene** greater than 10,000 ppb

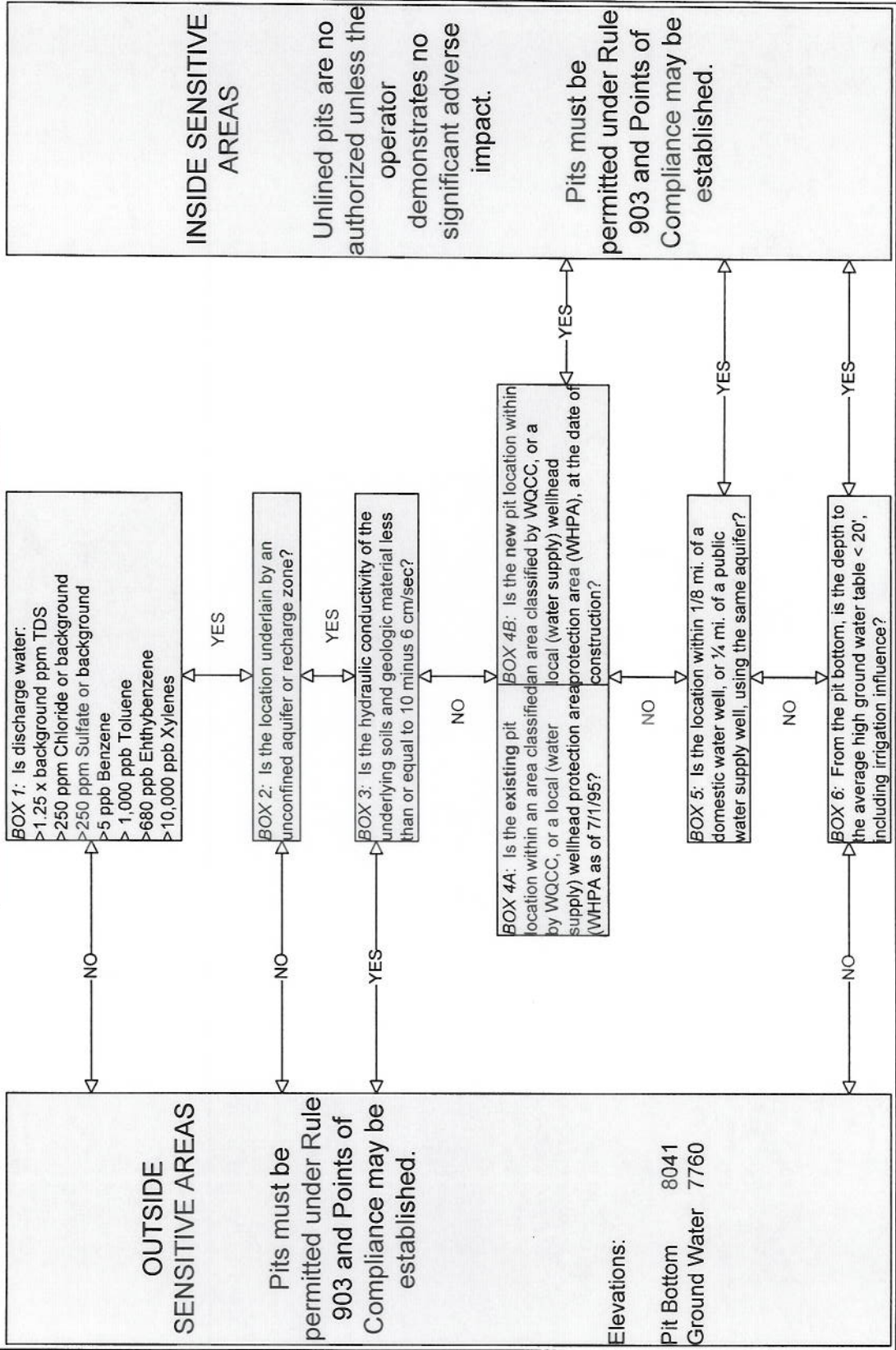
No Result  ppb

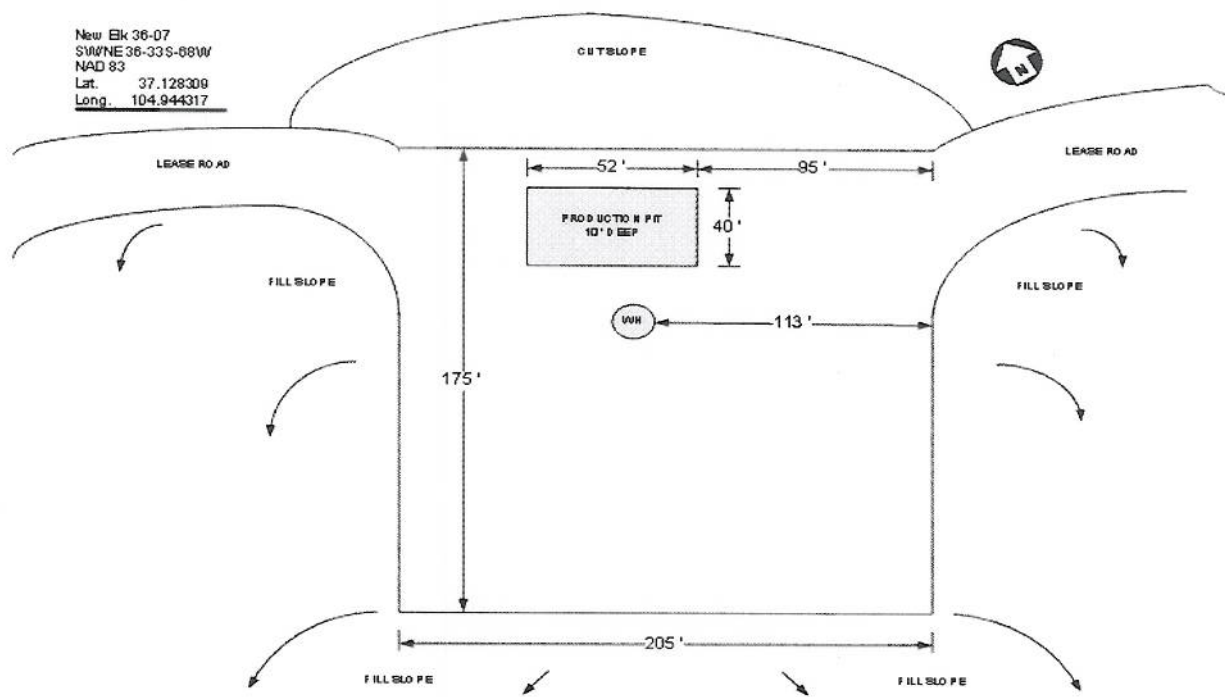
Refer To Sensitive Area Identification Decision Tree

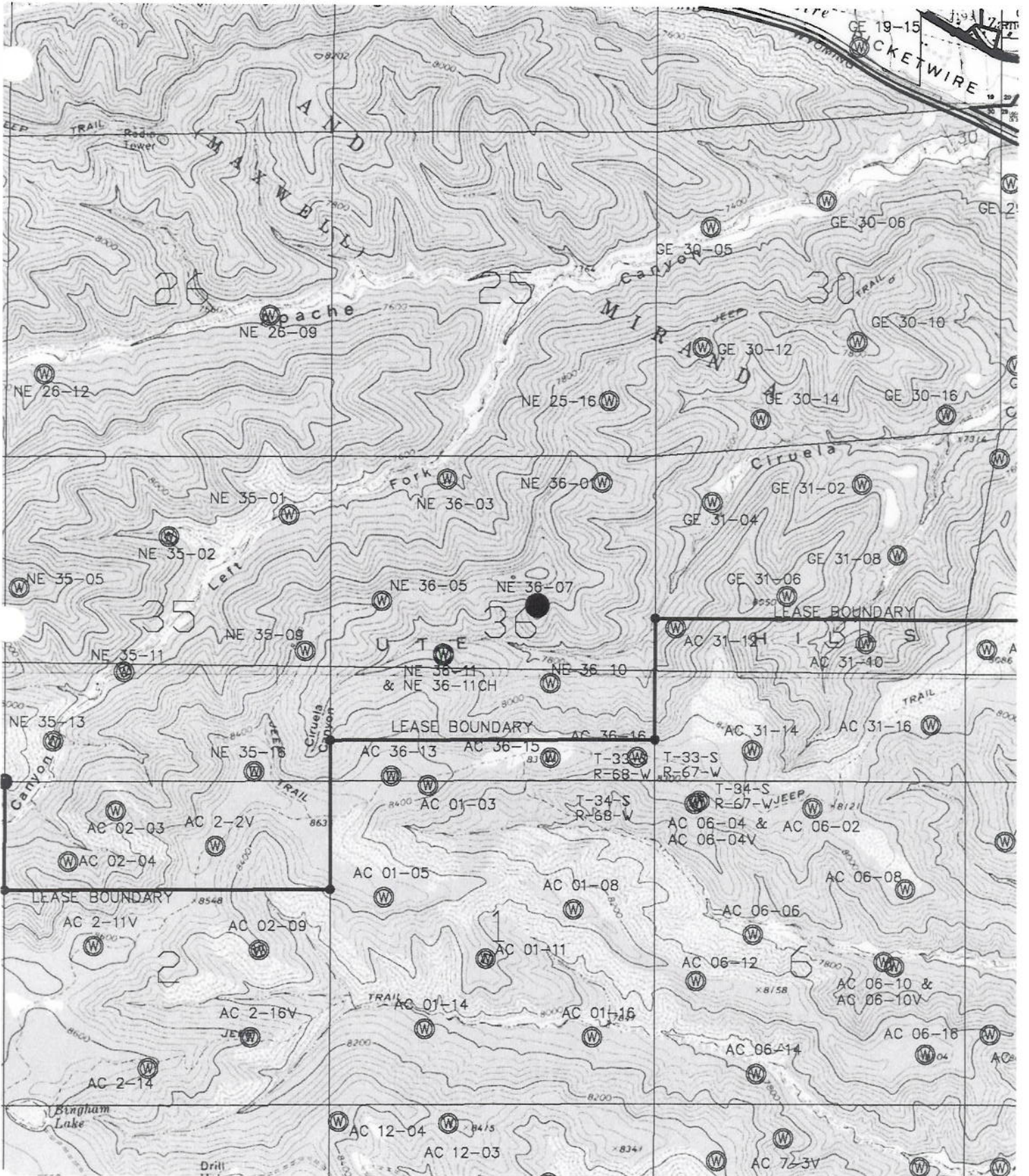
# SENSITIVE AREA IDENTIFICATION

Decision Tree

Well Name: New Elk 36-07







FORM 2 Rev 12/05

State of Colorado Oil and Gas Conservation Commission



Plugging Bond Surety ID#

1.  Drill,  Deepen,  Re-enter,  Recomplete and Operate
2. TYPE OF WELL: OIL  GAS  COALBED  OTHER:
SINGLE ZONE:  MULTIPLE ZONES:  COMMINGLE ZONES:

3. Name of Operator: XTO ENERGY INC. 4. COGCC Operator Number: 100264
5. Address: 2700 FARMINGTON AVE. BLDG K - STE 1
City: FARMINGTON State: NM Zip: 87401
6. Contact Name: Kelly K. Small Phone: (505) 564-6708 Fax: (505) 564-6700
7. Well Name: NEW ELK Well Number: 36-07
8. Unit Name (if appl): Unit Number:
9. Proposed Total Measured Depth: 2,300'

10. Qtr: SWNE Sec: 36 Twp: 33S Rng: 68W Meridian: 6th
Latitude: 37.128309 N Longitude: 104.944317 W
Footage At Surface: 2,427' N 1,920' E
11. Field Name: PURGATOIRE RIVER Field Number: 70830
12. Ground Elevation: 8,051' 13. County: LAS ANIMAS
14. GPS Data: Date of Measurement: 10/19/06 POOP Reading: <= 6 Instrument Operator's Name: Gary Terry

15. If well is:  Directional  Horizontal (highly deviated), submit deviated drilling plan. Bottomhole Sec Twp Rng:
Footage At Top of Prod Zone: At Bottom Hole:
16. Is location in a high density area (Rule 603b)?  Yes  No
17. Distance to the nearest building, public road, above ground utility or railroad: > 150'
18. Distance to Nearest Property Line: > 1 MILE 19. Distance to nearest well permitted/completed in the same formation: +/- 1,292'

20. LEASE, SPACING AND POOLING INFORMATION
Table with columns: Objective Formation(s), Formation Code, Spacing Order Number (s), Unit Acreage Assigned to Well, Unit Configuration (N2, SE/4, etc.)
Rows: RATON, VERMEJO

21. Mineral Ownership:  Fee  State  Federal  Indian
22. Surface Ownership:  Fee  State  Federal  Indian
23. Is the Surface Owner also the Mineral Owner?  Yes  No
23a. If 23 is Yes: Is the Surface Owner(s) signature on the lease?  Yes  No
23b. If 23 is No:  Surface Owners Agreement Attached or  \$25,000 Blanket Surface Bond  \$2,000 Surface Bond  \$5,000 Surface Bond
24. Using standard Qtr, Sec, Twp, Rng format enter entire mineral lease description upon which this proposed wellsite is located (attach separate sheet/map if you prefer):
SEE ATTACHED
25. Distance to Nearest Mineral Lease Line: +/- 1,533' 26. Total Acres in Lease: 7.200

DRILLING PLANS AND PROCEDURES
27. Is H2S anticipated?  Yes  No If Yes, attach contingency plan.
28. Will salt sections be encountered during drilling?  Yes  No
29. Will salt (>15,000 ppm TDS Cl) or oil based muds be used during drilling?  Yes  No
30. If questions 27 or 28 are yes, is this location in a sensitive area (Rule 903)?  Yes  No If 28, 29 or 30 are "Yes" a pit permit may be required.
31. Mud disposal:  Offsite  Onsite
Method:  Land Farming  Land Spreading  Disposal Facility  Other: PIT
NOTE: The use of an earthen pit for Recompletion fluids requires a pit permit (Rule 905b). If air/gas drilling, notify local fire officials.
Table with columns: String, Size of Hole, Size of Casing, Weight Per Foot, Setting Depth, Sacks Cement, Cement Bottom, Cement Top
Rows: SURF, 1st Stage, 2nd Stage
32. BOP Equipment Type:  Annular Preventor  Double Ram  Rotating Head  None
33. Comments: There are no wtr wells located within 1 mile of the proposed location.
34. Initial Rule 306 Consultation took place on (date) was waived or is not required. Provide supporting documentation if consultation has been waived or if good faith effort did not result in consultation.
PERMIT SUBMITTED TO COGCC PRIOR TO COMPLIANCE WITH RULE 306 CONSULTATION SHALL BE RETURNED UNAPPROVED.
I hereby certify that a complete permit package has been sent to the applicable Local Government Designee(s), and all statements made in this form are, to the best of my knowledge, true, correct, and complete.
Signed: Kelly K. Small Print Name: Kelly K. Small
Title: REGULATORY COMPLIANCE TECH Date: 03/05/07 Email: kelly\_small@xtoenergy.com

Based on the information provided herein, this Application for Permit-to-Drill complies with COGCC Rules and applicable orders and is hereby approved.
COGCC Approved: [Signature] Director of COGCC Date: 04-10-07
Permit Number: 20071124 Expiration Date: 04-09-08

API NUMBER 05-071-0933500

1) Provide 48 hour notice of MIRU to John Duran at 719-846-4715 2) Provide cement coverage of production casing from TD to surface casing shoe or above. Verify coverage with cement bond log 3) Immediately cease operations and notify the COGCC in the event of any operational problem that could potentially impact water wells in the area

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FOR OGCC USE ONLY

**DRILL SITE/ACCESS ROAD RECLAMATION FORM**

This form shall be submitted in duplicate with the application for permit-to-drill (OGCC Form 2) unless a Federal 13-point surface plan is included. Also required are a minimum of two photographs (site and access road). Soil and plant community information is from United States Natural Resources Conservation Services (USNRCS).

**Complete the Attachment Checklist**

1. OGCC Operator Number: 100264  
 2. Name of Operator: XTO ENERGY INC.  
 3. Address: 2700 Farmington Ave. Bldg K - Suite 1  
 City: Farmington State: NM Zip: 87401  
 4. Contact Name and Telephone:  
Kelly Small  
 No: (505) 564-6708  
 Fax: (505) 564-6700  
 5. Well Name and No.: NEW ELK #36-07 6. County: Las Animas  
 7. Location (Qtr, Sec, Twp, Rng, Meridian): SWNE 36 - 33S - 68W 6TH

	Oper	OGCC
Drill site and access photographs	✓	
COE Section 404 documentation		

**Pre-Drilling Information**  
**Current Land Use**

8. Crop Land:  Irrigated  Dry Land  Improved Pasture  Hay Meadow  CRP  
 9. Non-Crop Land:  Rangeland  Timber  Recreational  Other (describe): \_\_\_\_\_  
 10. Subdivided:  Industrial  Commercial  Residential  
 Attach color photographs of drill site and access road; identify each photo by date, well name and location.

**Soils**

11. Soil map units from USNRCS survey: Sheet No: WSS Soil Complex/Series No: SR  
 Soils Series Name: SARUCHE Horizon thickness (in inches): A: 0-4" ; B: 4-16" ; C: 16-20"  
 Soils Series Name: ROMBO Horizon thickness (in inches): A: 0-4" ; B: 4-22" ; C: 22-34"

**Plant Community**

Complete this section only if operations are to be conducted upon **non-crop** land.  
 12. Plant species from:  USNRCS or  Field Observation Date of observation: \_\_\_\_\_  
 List individual species: Sideoats Grama, Western Wheatgrass, Gambels Oak, Needleandthread, Mountain Mohogany, Rocky Mountain Juniper  
 13. Check one predominant plant community for the drill site:  
 Disturbed Grassland (Cactus, Yucca, Cheatgrass, Rye, Thistle)  
 Grassland (Bluestem, Grama, Wheatgrass, Buffalograss, Fescue, Oatgrass, Brome).  
 Shrub and Brush Land (Mahogany, Oak, Sage, Serviceberry, Chokecherry)  
 Plains Deciduous Riparian (Cottonwood, Willow, Aspen, Maple, Poplar, Russian Olive, Tamarisk)  
 Mountain Conifer Riparian (Spruce, Fir, Ponderosa Pine)  
 Evergreen Forest Land (Spruce, Fir, Ponderosa Pine, Lodgepole Pine, Juniper, Pinyon)  
 Aquatic (Bullrush, Sedges, Cattail, Arrowhead)  
 Tundra (Alpine, Willow, Currant, Raspberry)  
 Other (describe): \_\_\_\_\_

14. Was an Army Corps of Engineers Section 404 Permit filed?  Yes  No If yes, attach appropriate documentation.

Comments:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access road; that I am familiar with the conditions which presently exist, that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Kelly Small

Signed: \_\_\_\_\_ Title: Regulatory Compliance Date: 03/05/07