

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE\*

(Other instructions on reverse side)

FORM APPROVED  
OMB NO. 1004-0136  
Expires: February 28, 1995

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

070 Farmington, NM

b. TYPE OF WELL

OIL WELL ☐

GAS WELL ☒

OTHER

SINGLE ZONE ☒

MULTIPLE ZONE ☐

2. NAME OF OPERATOR

XTO Energy Inc.

3. ADDRESS AND TELEPHONE NO.

2700 Farmington Ave., Bldg. K. Ste 1 Farmington, NM 87401

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

At surface

660' FSL & 990' FEL in Sec 9, T30N, R12W

At proposed prod. zone

same as above

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*

4 air miles north of the Flora Vista, NM Post Office

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT.

(Also to nearest drlg. unit line, if any) 660'

16. NO. OF ACRES IN LEASE

146.71

17. NO. OF ACRES ASSIGNED TO THIS WELL

306.71 E/2

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.

2,500'

19. PROPOSED DEPTH

2,225'

20. ROTARY OR CABLE TOOLS

0-2,225' with Rotary Tools

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

5,726' Ungraded Ground Level

22. APPROX. DATE WORK WILL START\*

April, 2003

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
8-3/4"	7", J-55	20.0#/ft	+200'	75 sx Type III or CI B cement
6-1/4"	4-1/2", J-55	10.5#/ft	+2,225'	195 sx Premium Lite cement

XTO ENERGY INC. Request approval to drill the above mentioned well as described in the enclosed Surface Use Plan and proposed Drilling Program.

Note: This well will tie into an El Paso Field Services pipeline. A pipeline plat has been included for ROW.

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS".

APD/ROW

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

*JW Patterson*

TITLE Drilling Engineer

DATE 3/6/03

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY

/s/ David J. Markiewicz

TITLE

DATE

MAY -7 2003

\*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

DISTRICT I  
1625 N. French Dr., Hobbs, N.M. 88240

DISTRICT II  
811 South First, Artesia, N.M. 88210

DISTRICT III  
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV  
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

2040 South Pacheco  
Santa Fe, NM 87505

RECEIVED

2003 MAR 10 PM 12:56

Submit to Appropriate District Office

Form C-102  
Revised August 15, 2000

State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-045-31439	<sup>2</sup> Pool Code 71629	<sup>3</sup> Pool Name BASIN FRUITLAND LOCAL
<sup>4</sup> Property Code 27433	<sup>5</sup> Property Name McKENZIE A	<sup>6</sup> Well Number 3
<sup>7</sup> OGRID No. 167067	<sup>8</sup> Operator Name XTO ENERGY INC.	<sup>9</sup> Elevation 5726'

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	9	30-N	12-W		660	SOUTH	990	EAST	SAN JUAN

<sup>11</sup> 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
E/2	306.71	I							

<sup>12</sup> Dedicated Acres E/2 306.71	<sup>13</sup> Joint or Infill I	<sup>14</sup> Consolidation Code	<sup>15</sup> 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

16	LOT 2	LOT 1
LOT 3	LOT 4	LOT 5
LOT 8	LOT 7	LOT 6
LOT 9	LOT 10	LOT 11

QTR. CORNER  
FD 3 1/4" BC  
BLM 1976

N 87-57-15 W  
2443.80' (M)

QTR. CORNER  
FD 3 1/4" BC  
BLM 1976

SEC. CORNER  
FD 3 1/4" BC  
BLM 1975

630'

232'

660'

990'

N 01-30-00 E  
2579.80' (M)

17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief

Signature Jeffrey W. Patton

Printed Name JEFFREY W. PATTON

Title DRILLING ENGINEER

Date 6-5-03

18 SURVEYOR CERTIFICATION

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.

Date of Survey 1-14-02

Signature and Seal of Professional Surveyor: DAVID A. JOHNSON

REGISTERED PROFESSIONAL SURVEYOR  
14827

Certificate Number

# XTO ENERGY INC.

## DRILLING PROCEDURE

McKENZIE "A" #3

Basin Fruitland Coal

March 6, 2003

Location: 660' FSL & 990' FEL, Sec 9, T30N, R12W County: San Juan State: New Mexico

PROJECTED TOTAL DEPTH: 2,225' OBJECTIVE: Fruitland Coal GR ELEV: 5,726'

### 1. MUD PROGRAM:

INTERVAL	0'-200'	200'-TD
HOLE SIZE	8-3/4"	6-1/4"
MUD TYPE	FW/Native	FW/Polymer
MUD WEIGHT, ppg	8.6-9.0	8.6-9.1
VISCOSITY, sec/qt	28-32	28-33
WATER LOSS, cc	NC	NC

Remarks: Drill the surface hole with fresh water. Run and cement 7" surface casing, circulating cement to surface. NU and test BOP equipment, then drill out with fresh water. Use polymer sweeps as needed for hole cleaning. At TD, sweep the hole prior to TOH to log.

### 2. CASING PROGRAM:

Surface Casing: 7" casing to be set at  $\pm 200'$  in 8.8 ppg mud.

Interval	Length	Wt (ppf)	Gr	Cplg	Coll Rating (psi)	Burst Rating (psi)	Jt Str (M-lbs)	ID (in)	DD (in)	SF Coll	SF Burst	SF Tension
0'-200'	200'	20#	J-55	STC	2,270	3,740	234	6.456	6.331	9.99	4.59	58.5

Optimum makeup torque for 7" 20#, J-55, STC casing is **2,340 ft-lbs** (Min - 1,760 ft-lbs, Max - 2,930 ft-lbs).

Production Casing: 4-1/2" casing to be set at  $\pm 2,225'$  in 8.8 ppg mud.

Interval	Length	Wt (ppf)	Gr	Cplg	Coll Rating (psi)	Burst Rating (psi)	Jt Str (M-lbs)	ID (in)	DD (in)	SF Coll	SF Burst	SF Tension
0'-TD	2,225'	10.5#	J-55	STC	4,010	4,790	132	4.052	3.927	3.57	3.33	5.24

Optimum makeup torque for 4-1/2", 10.5#, J-55, casing is **1,320 ft-lbs** (Min - 990 ft-lbs, Max - 1,650 ft-lbs).

Capacity of 7", 20# casing is: 0.04048 bbl/ft

Capacity of 4-1/2", 10.5# casing is: 0.01595 bbl/ft

# EXHIBIT E

3. **WELLHEAD:**

Casinghead: Larkin Fig 92 (or equivalent) 2,000 psig WP (4,000 psig test) with 7", 8rd pin on bottom and 8-5/8" API Modified 8rd thread on top.

Tubinghead: Larkin Model 612 (or equivalent) 2,000 psig WP (4,000 psig test) with 4-1/2", 8rd bottom thread and 8-5/8" 8rd API Modified top body thread, 4.090" minimum bore.

4. **CEMENT PROGRAM:**

A. Surface: 7", 20#, J-55, STC casing at  $\pm 200'$ .

Lead: 75 sx Type III cement (or equivalent) containing 1/4 pps celloflake, 2%  $\text{CaCl}_2$  (mixed at 14.6 ppg, 1.39 ft<sup>3</sup>/sk, 6.67 gal wtr/sk).

Total slurry volume is 104.25 ft<sup>3</sup>, 250% excess of calculated annular volume required to circulate cement to surface. ✓

B. Production: 4-1/2", 10.5#, J-55, STC casing at  $\pm 2,225'$ .

Lead: 125\* sx of Type III cement containing 8% gel, 1/4 pps Celloflake & 2% Phenoseal (mixed at 11.4 ppg, 3.03 ft<sup>3</sup>/sk, 18.51 gal wtr/sk).

Tail: 70 sx Type III cement containing 1%  $\text{CaCl}_2$ , 1/4 pps Celloflake & 2% Phenoseal (mixed at 14.5 ppg, 1.41 ft<sup>3</sup>/sk, 6.72 gal wtr/sx).

Total estimated slurry volume is 477 ft<sup>3</sup>,  $\pm 100\%$  excess of calculated annular volume required to circulate cement to surface. ✓

\* Actual cement volumes will be determined using log caliper volume plus 40% excess.

5. **DRILLING HAZARDS:**

- H<sub>2</sub>S or other Poisonous Gases: No formations known to contain H<sub>2</sub>S or any other poisonous gases will be penetrated with this wellbore.
- Abnormal Pressures: No overpressured zones are known to exist or are anticipated to be encountered during the drilling of this well.
- Lost Circulation: Seepage and/or lost circulation may be encountered below surface casing and can be controlled with conventional lost circulation materials added to the mud system.

6. **LOGGING PROGRAM:**

Array Induction/DFL/GR/SP/Cal  
DSN/Spectral Density/GR/Cal/Pe

TD to bottom of surf csg. ,  
TD to bottom of surf csg.

EXHIBIT E

7. **FORMATION TOPS:**

Formation	Subsea Depth	Well Depth
Ojo Alamo SS	+5,223'	515'
Kirtland Shale	+5,158'	580'
Farmington SS	+5,098'	640'
Fruitland Fm	+4,201'	1,537'
Lower Fruitland Coal	+3,783'	1,955'
Pictured Cliffs SS	+3,749'	1,989'
Lewis Shale	+3,545'	2,193'
T.D.	+3,513'	±2,225'

**Note:** These depths, indicated above, are approximate. Actual depths of the formation tops will be determined from the well logs.

**Maximum anticipated bottomhole pressure encountered during drilling should not exceed 0.35-0.43 psi/ft.**

8. **COMPANY PERSONNEL:**

Name	Title	Office Phone	Home Phone
Dennis Elrod	Drilling Foreman	505-324-1090 505-486-6460 cellular	505-326-2024
Jeff Patton	Drilling Engineer	505-324-1090 505-330-2957 cellular	505-632-7882
Glen Christiansen	Project Geologist	817-885-2352	817-341-8834
Robin Tracy	Reservoir Engineer	817-885-2422	

9. **SPECIAL INSTRUCTIONS:**

- A. Daily drilling reports should be called in to the San Juan District office at (505) 324-1090 or faxed to (505) 564-6700 by 8:00 a.m.
- B. Deviation:  
 Surface Hole: Maximum of 1° and not more than 1° change per 100'.  
 Production Hole: Maximum of 4° and not more than 1° change per 100'.  
**Note: Maximum distance between surveys is 500'.**
- C. NU & Pressure Test BOP, choke manifold & surface casing to 250/800 psig for 30 minutes. Report the pressure test on the IADC form as required.
- D. Drill out below surface casing after WOC 12 hours. Drill cement and float equipment with minimum weight and RPM until drill collars are below the bottom of the surface casing. Keep location clean and water usage to a minimum.
- E. Check BOP blind rams each trip and pipe rams each day. Strap the pipe on the last bit trip prior to reaching TD, or on the TOH to log.

# BOP SCHEMATIC FOR DRILLING OPERATIONS CLASS 1 (2M) NORMAL PRESSURE

## TESTING PROCEDURE

1. Test BOP after installation:

Pressure test BOP to 200-300  
psig (low pressure) for 5 min.

Test BOP to Working Press or  
to 70% internal yield of surf csg  
(10 min).

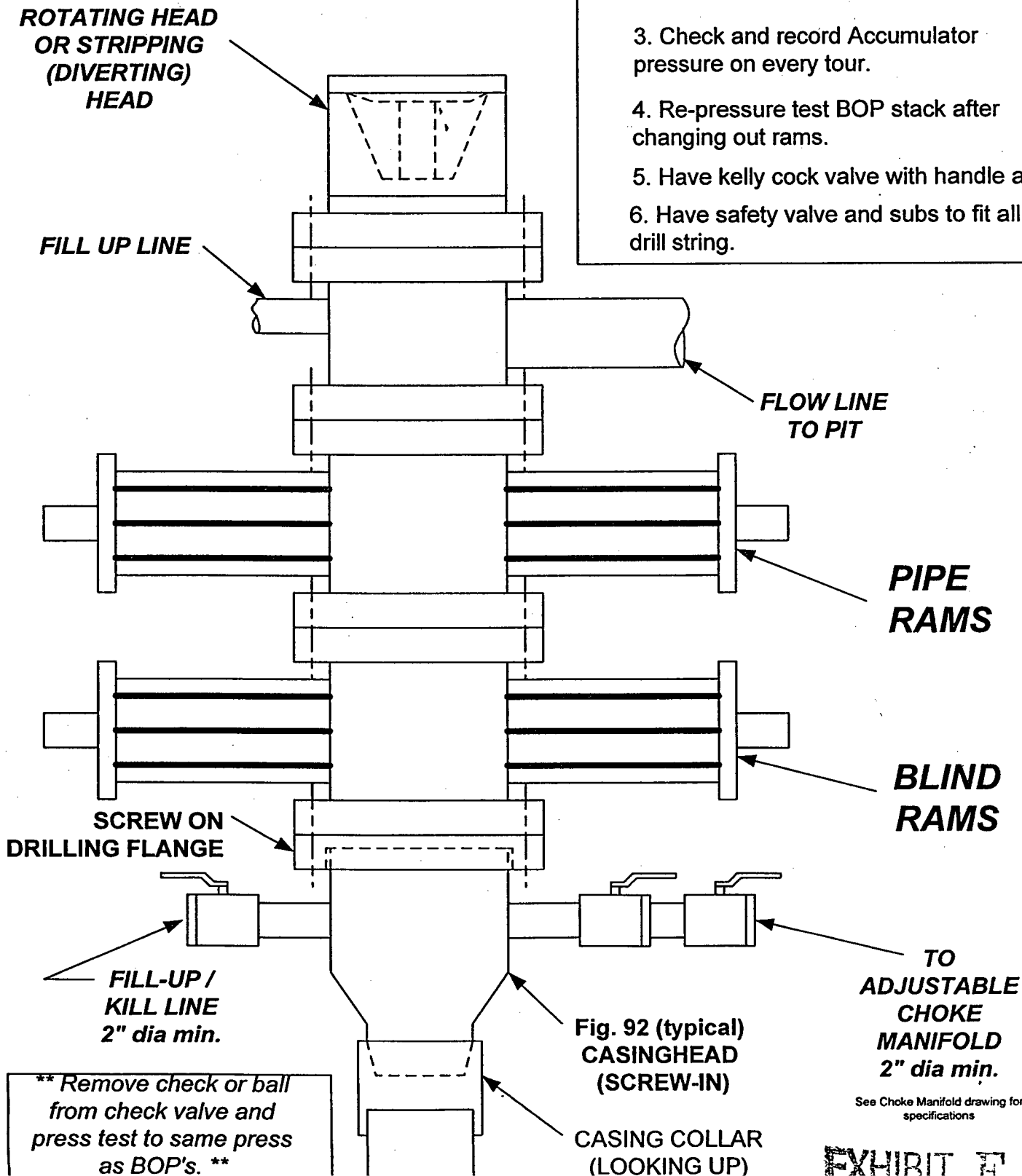
2. Test operation of (both) rams  
on every trip.

3. Check and record Accumulator  
pressure on every tour.

4. Re-pressure test BOP stack after  
changing out rams.

5. Have kelly cock valve with handle available.

6. Have safety valve and subs to fit all sizes of  
drill string.



See Choke Manifold drawing for specifications

EXHIBIT 7