Form 3160-3
(July 1992)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

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

# UNITED STATES
# DEPARTMENT OF THE INTERIOR
## BUREAU OF LAND MANAGEMENT

## APPLICATION FOR PERMIT TO DRILL OR DEEPEN

5. LEASE DESIGNATION AND SERIAL NO.: NM - 14921

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME: 22849

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ]

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [X] OTHER SINGLE ZONE [ ] MULTIPLE ZONE [ ]

8. FARM OR LEASE NAME, WELL NO.: Valencia Canyon Unit #43C

2. NAME OF OPERATOR: XTO ENERGY INC.

9. API WELL NO.: 30-039-26924

3. ADDRESS AND TELEPHONE NO.: 2700 Farmington Ave., Bldg. K, Ste 1 Farmington, NM 87401

10. FIELD AND POOL, OR WILDCAT: Blanco Mesaverde

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 2690' FNL & 1565' FWL Sec 27, T28N, R04W
At proposed prod. zone: 1829' FSL & 2049' FWL Sec 27, T28N, R04W

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec 27, T28N, R04W

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: Approx 49 from the Post Office in Blanco, NM.

12. COUNTY OR PARISH: Rio Arriba

13. STATE: NM

| 15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) | 16. NO. OF ACRES IN LEASE | 17. NO. OF ACRES ASSIGNED TO THIS WELL |
|---|---|---|
| 1,075' | 320 | 320 S/2 |
| **18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.** | **19. PROPOSED DEPTH** | **20. ROTARY OR CABLE TOOLS** |
| 1,000' | 6,925' | 0-6,925' with Rotary Tools |

21. ELEVATIONS (Show whether DF,RT, GR, etc.): 7,249' Ground Level

22. APPROX. DATE WORK WILL START*: Summer of 2002

23. PROPOSED CASING AND CEMENTING PROGRAM

| SIZE OF HOLE | GRADE, SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH | QUANTITY OF CEMENT |
|---|---|---|---|---|
| 12-1/4" | 9-5/8" | 32.3# | +/- ~~80'~~ 320 | ~~50~~ 200 sx type III |
| 8-3/4" | 7" | 20.0# | +/- 3,800' | 300 sx cmt (total) |
| 6-1/4" | 4-1/2" | 10.5# | +/- 6,925' | 240 sx cmt (total) |

**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"

See the attached Surface Use plan and Drilling Program for the above mentioned well.

~~NSL~~ NSD FOR Directional Survey

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposalis to deepen,give dataon presentproductivezone and proposednew productivezone. If proposalis 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 Patton TITLE Drilling Engineer DATE 1/30/02

(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. Mankiewicz TITLE _____ DATE SEP 12

*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.

NMOCD

DISTRICT I
P.O. Box 1980, Hobbs, N.M. 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, N.M. 88211-0719

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

DISTRICT IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 21, 199.
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

# WELL LOCATION AND ACREAGE DEDICATION PLAT

| [1] API Number | [2] Pool Code | [3] Pool Name |
|---|---|---|
| 30-039-26924 | 72319 | BLANCO MESAVERDE |

| [4] Property Code | [5] Property Name | [6] Well Number |
|---|---|---|
| 32849 | VALENCIA CANYON UNIT | 43C |

| [7] OGRID No. | [8] Operator Name | [9] Elevation |
|---|---|---|
| 167067 | XTO ENERGY INC. | 7249' |

## [10] Surface Location

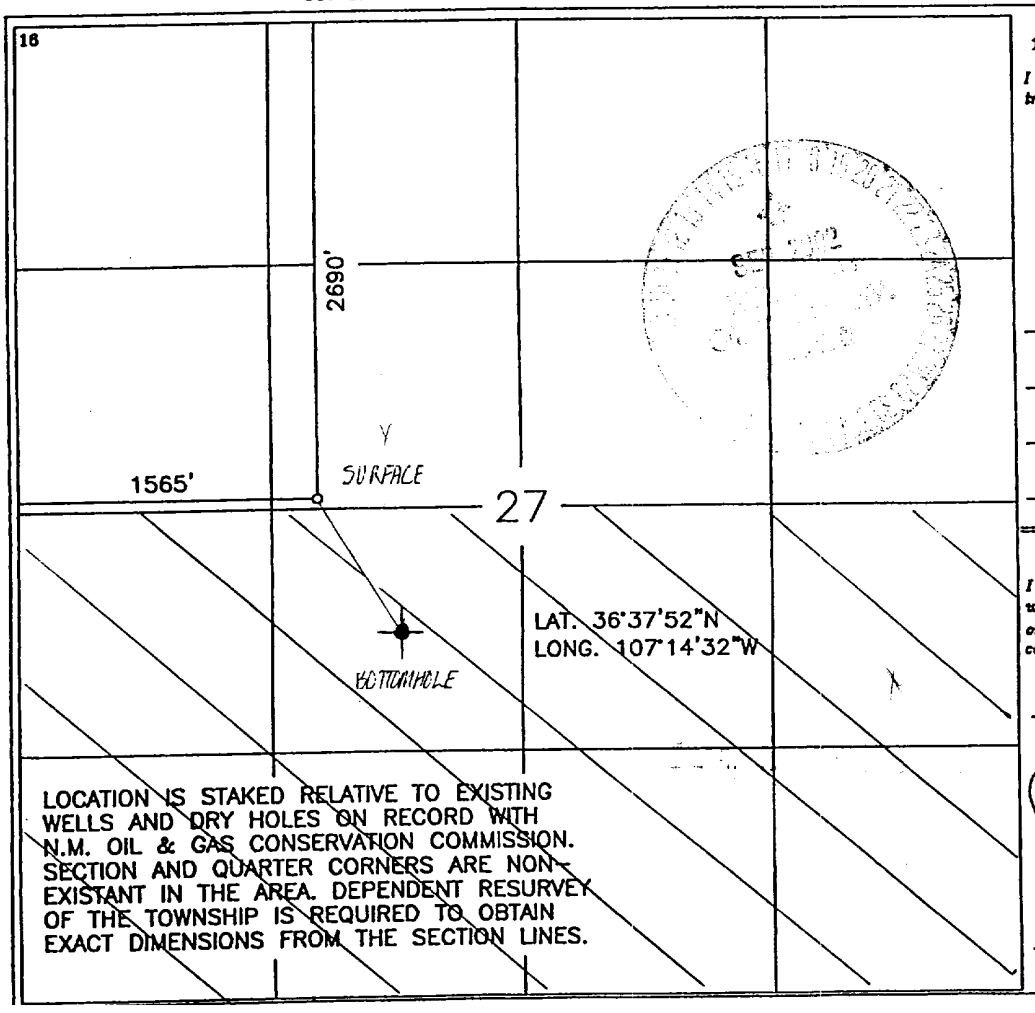
| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| F | 27 | 28-N | 4-W | | 2690' | NORTH | 1565' | WEST | RIO ARRIBA |

## [11] 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 |
|---|---|---|---|---|---|---|---|---|---|
| K | 27 | 28-N | 4-W | | 1829' | SOUTH | 2049' | WEST | RIO ARRIBA |

| [12] Dedicated Acres | [13] Joint or Infill | [14] Consolidation Code | [15] Order No. |
|---|---|---|---|
| 320 S/2 | I | | |

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




## [17] OPERATOR CERTIFICATION

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

JW Patton
Signature

JEFFREY W PATTON
Printed Name

DRILLING ENGINEER
Title

1-31-02
Date

## [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

Signature and Seal of Professional Surveyor:

NEW MEXICO 8894 REGISTERED PROFESSIONAL LAND SURVEYOR

8894
Certificate Number

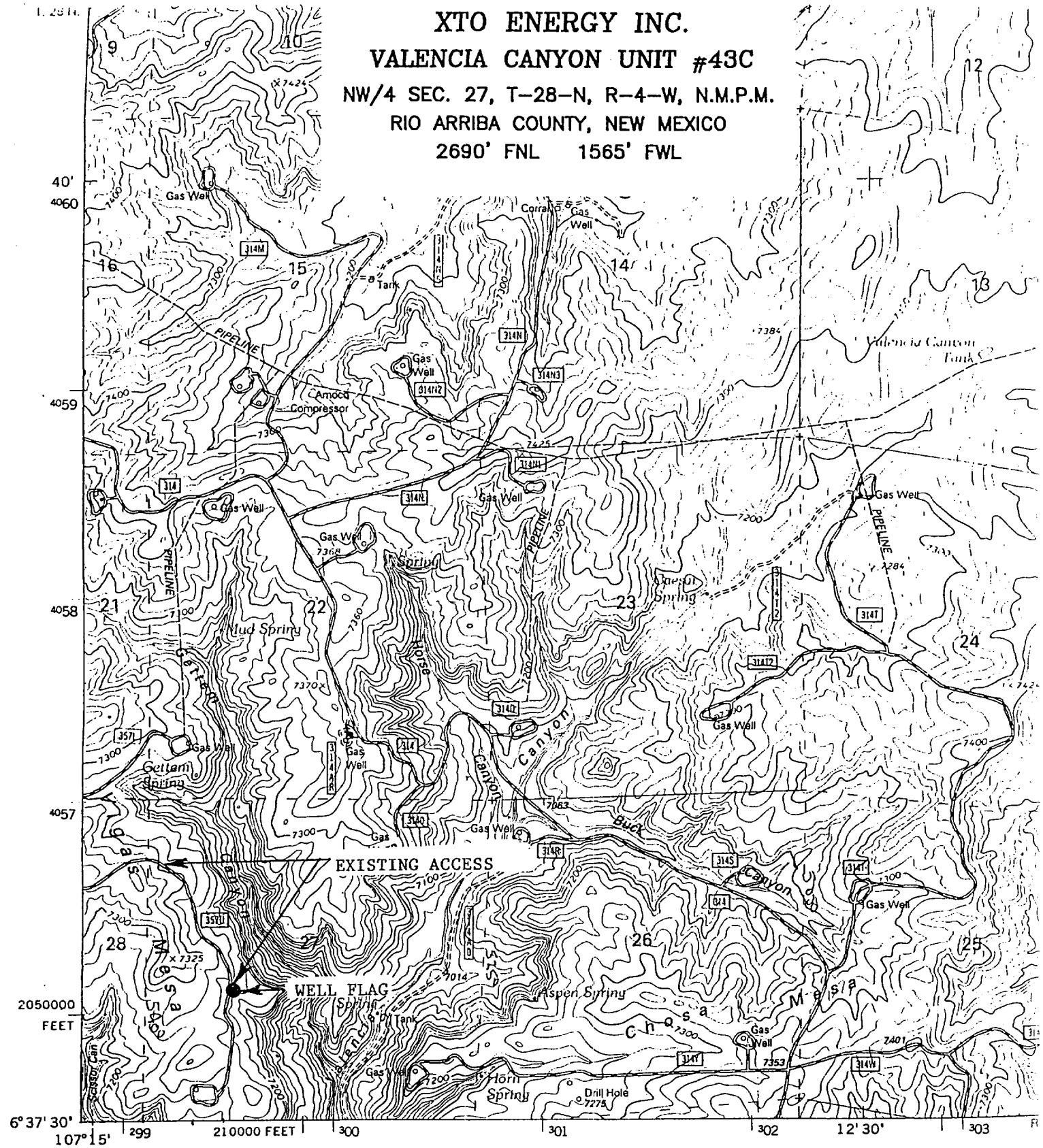
# XTO ENERGY INC.

## VALENCIA CANYON UNIT #43C

NW/4 SEC. 27, T-28-N, R-4-W, N.M.P.M.

RIO ARRIBA COUNTY, NEW MEXICO

2690' FNL 1565' FWL




luced by the U.S. Geological Survey

ised by the U.S. Forest Service

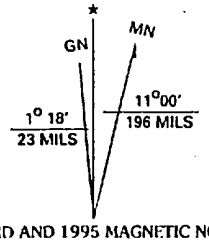
: outside the National Forest System lands may not have been revised

:ol by USGS and NOS/NOAA

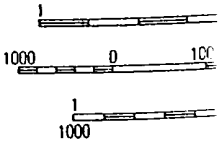
)iled from aerial photographs taken 1958 and 1962. Revised from aerial
)graphs taken 1989. Partial field check by U.S. Forest Service 1995

1 American Datum of 1927 (NAD 27). Projection and 10000-foot ticks:
Mexico coordinate system, central zone (Transverse Mercator)
-meter Universal Transverse Mercator ticks, zone 13 Blue

1 American Datum of 1983 (NAD 83) is shown by dashed corner ticks



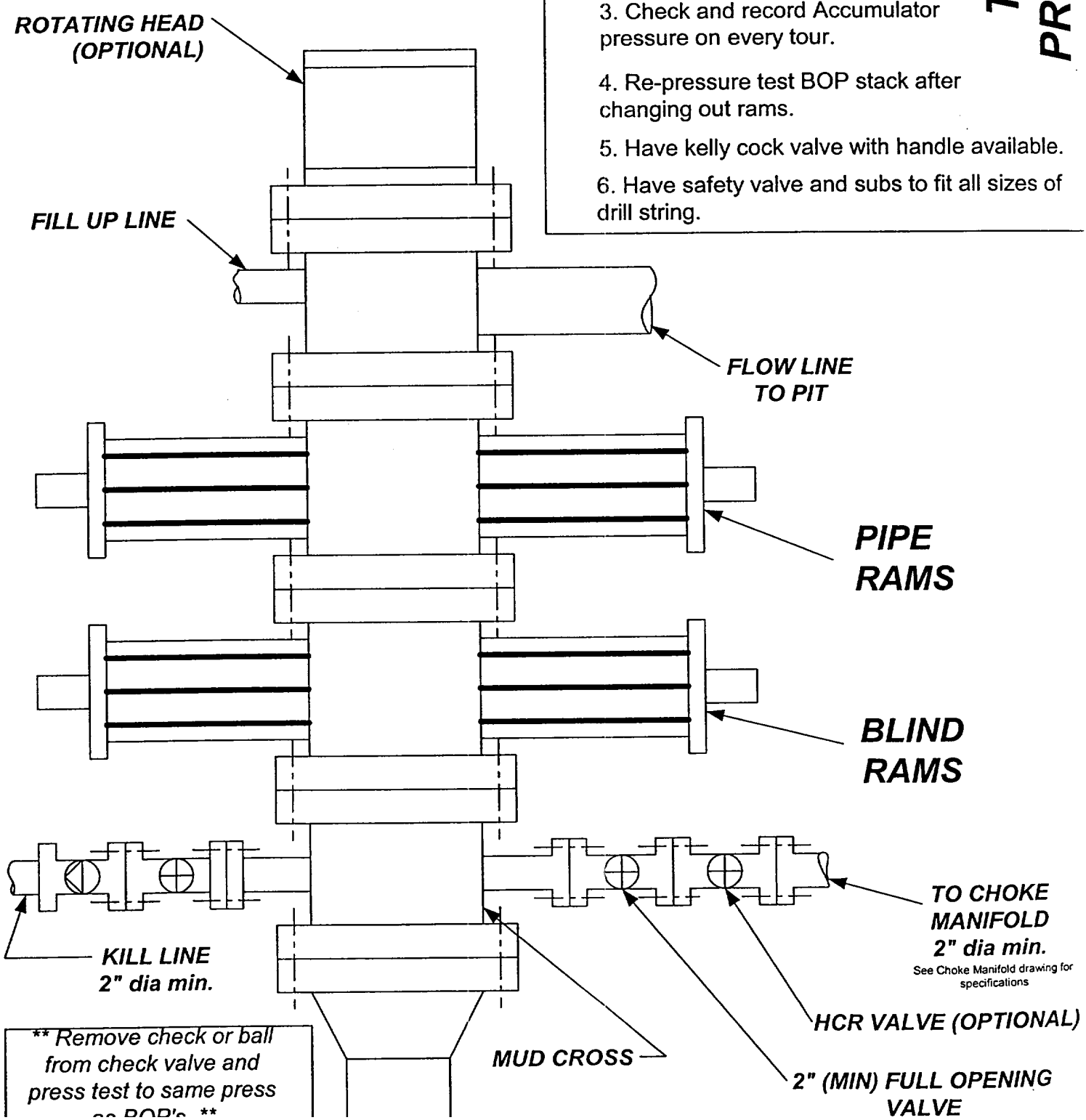

UTM GRID AND 1995 MAGNETIC NORTH



# **BOP** SCEMATIC 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.




** Remove check or ball from check valve and press test to same press

# XTO ENERGY INC.

**Valencia Canyon Unit #43C**
**PROPOSED DRILLING PROGRAM**
**APD Data**
**January 31, 2002**

**Surface Location**: 2,690' FNL & 1,565' FWL, Sec 27, T28N, R04W **County**: Rio Arriba **State**: New Mexico
**Bottomhole location :** 1,829' FSL & 2,049' FWL, Sec 27, T28N, R04W

PROJECTED TOTAL DEPTH: ±6,810' (TVD) ±6,925 (MD) OBJECTIVE: Mesaverde
GR ELEV: 7,249' Est KB ELEV: 7,262' (13' AGL)

## 1. MUD PROGRAM:

| INTERVAL | 0' to 80' | 400' to 3,800' | 3,800' to TD |
|---|---|---|---|
| HOLE SIZE | 12-1/4" | 8-3/4" | 6-1/4" |
| MUD TYPE | FW/Native Mud | FW/Polymer | Air |
| WEIGHT | 8.6-8.8 | 8.6-9.0 | |
| VISCOSITY | 28-32 | 29-34 | |
| WATER LOSS | NC | NC | |

Remarks: Use fibrous materials as needed to control seepage and lost circulation. Pump high viscosity sweeps as needed for hole cleaning. RU air compressors after setting the intermediate csg. Drill with air or foam to TD.

## 2. CASING PROGRAM:

Surface Casing: 9-5/8" casing to be set at ± ~~80'~~ 320' in 8.6 ppg mud

| Interval | Length | Wt | Gr | Cplg | Coll Rating (psi) | Burst Rating (psi) | Jt Str (M-lbs) | ID (in) | Drift (in) | SF Coll | SF Burst | SF Ten |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0'-~~80'~~ 320' | ~~80'~~ | 32.3# | H-40 | STC | 1370 | 2270 | 254 | 9.001 | 8.972 | 5.98 | 5.68 | 15.73 |

Intermediate Casing: 7" casing to be set at ±3,800' (MD) 3,800' (TVD) in 9.0 ppg mud.

| Interval | Length | Wt | Gr | Cplg | Coll Rating (psi) | Burst Rating (psi) | Jt Str (M-lbs) | ID (in) | Drift (in) | SF Coll | SF Burst | SF Ten |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0'-3,800' | 3,800' | 20.0# | J-55 | STC | 2257 | 3740 | 234 | 6.456 | 6.331 | 1.15 | 1.31 | 2.57 |

Production Casing: 4-1/2" casing to be set at 6,810' (MD) 6,925' (TVD) in air.

| Interval | Length | Wt | Gr | Cplg | Coll Rating (psi) | Burst Rating (psi) | Jt Str (M-lbs) | ID (in) | Drift (in) | SF Coll | SF Burst | SF Ten |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0'-6,925' (MD) | 6,925' | 10.5# | J-55 | STC | 4010 | 4790 | 132 | 4.052 | 3.927 | 1.33 | 1.20 | 1.90 |

## 3. WELLHEAD:

A. Braden Head: 9-5/8" x 7" 2,000 psig WP (4,000 psig test).
B. Intermediate Casing Head: 7" x 4-1/2" 3,000 psig WP (6,000 psig test).

## 4. CEMENT PROGRAM (Slurry design may change slightly, but the plan is to circulate cement to surface on both casing strings):

A. Surface: 9-5/8", 32.3#, H-40, STC casing to be set at ± ~~80~~ 320'.

Lead: ~~50~~ 200 sx of "Type III" cement containing 3% $CaCl_2$, ¼ pps celloflake, mixed at 14.5 ppg, 1.39 $ft^3$/sk, & 6.20 gal wtr/sk.

***Total slurry volume is ~~70~~ 278 $ft^3$, 277% excess of calculated annular volume to ~~80'~~.***

B. Intermediate: 7", 20.0#, J-55, STC casing to be set at ± 3,800' (MD).

Lead: 200 sx of Premium Lite (65/35/6)(cement/poz/gel), ¼ pps celloflake and 2% Phenoseal mixed at 11.9 ppg, 2.21 $ft^3$/sk, 10.25 gal wtr/sx.

Tail: 100 sx of "Type III" cement containing ¼ pps celloflake and 2% Phenoseal mixed at 14.5 ppg, 1.41 $ft^3$/sk, 6.30 gal wtr/sx.

***Total slurry volume is 583 $ft^3$, circulated to surface. No excess has been added to the above volume of lead and tail cement. Based on actual drilling conditions an excess (usually 35-50%) will be added.***

C: Production: 4-1/2", 10.5#, J-55, STC casing to be set at ±6,810' (TVD) 6,925' (MD).

Lead: 90 sx of Premium Lite (65/35/6)(cement/poz/gel) containing 2% KCl, ¼ pps celloflake, 4% Phenoseal, 0.2% dispersant, 0.5% fluid loss mixed at 11.9 ppg, 2.21 $ft^3$/sk, 10.25 gal wtr/sx.

Tail: 150 sx of Class "H" cement containing ¼ pps celloflake, 4% Phenoseal and 0.6% Fl-62 mixed at 15.6 ppg, 1.18 $ft^3$/sk, 4.80 gal wtr/sx..

***Total estimated slurry volume for the 4-1/2" production casing is 376 $ft^3$ for 3,665' of fill. Est. TOC should be 200' into the 7" intermediate casing. The above cement volumes for both the lead & tail do not have any excess. Excess cement will be calculated from the caliper log + 40%'.***

***Note: The slurry design may change slightly based upon actual conditions. Final cement volumes will be determined for the caliper logs plus 40%. .***

## 5. LOGGING PROGRAM:

A. Mud Logger: There are no plans to use a mud logger at this time.

B. Open Hole Logs as follows: Run Dual Induction/SFL/GR/CAL/SP/CNL/LDT (lithodensity) from TD to the bottom of the intermediate csg. Run cased hole GR/CCL from TD to surface.