

Form 3160-3
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

2007 JUL -9 AM 11:40

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NOO-C-14-20-3598	
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name NAVAJO ALLOTMENT	
2. Name of Operator XTO ENERGY INC.		7. If Unit or CA Agreement, Name and No. NA NMNM-75913-0K	
3a. Address 2700 FARMINGTON AVE., BLDG. K-1 FARMINGTON, NM 87401		8. Lease Name and Well No. CANYON 5 E	
3b. Phone No. (include area code) (505) 324-1090		9. API Well No. 30-045- 34364	
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 1695' FNL & 670' FEL At proposed prod. zone SAME		10. Field and Pool, or Exploratory BASIN MANC. & BAS. DK.	
11. Sec., T. R. M. or Blk. and Survey or Area H 3-25N-11W NMPM		12. County or Parish SAN JUAN	
12. Distance in miles and direction from nearest town or post office* 18 AIR MILES SOUTH OF BLOOMFIELD		13. State NM	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 670'	16. No. of acres in lease 160.81 (320.81 in CA)	17. Spacing Unit dedicated to this well #008-62320-81 MANCOS: NE & DAKOTA: E2 320.82	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1,348'	19. Proposed Depth 6,150'	20. BLM/BIA Bond No. on file BIA NATIONWIDE 104312789	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6,242' GL	22. Approximate date work will start* 09/01/2007	23. Estimated duration 4 WEEKS	

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

- | | |
|---|--|
| 1. Well plat certified by a registered surveyor. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature <i>Brian Wood</i>	Name (Printed/Typed) BRIAN WOOD	Date 07/07/2007
Title CONSULTANT		
PHONE: (505) 466-8120 FAX: (505) 466-9682		
Approved by (Signature) <i>D. Manke</i>	Name (Printed/Typed) AFM	Date 1/6/09
Title Office FFD		

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, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make 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.

*(Instructions on page 2)

NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT

JAN 14 2009

AW

A COMPLETE C-144 MUST BE SUBMITTED TO AND APPROVED BY THE NMOC FOR: A PIT, CLOSED LOOP SYSTEM, BELOW GRADE TANK, OR PROPOSED ALTERNATIVE METHOD, PURSUANT TO NMOC PART 19.15.17, PRIOR TO THE USE OR CONSTRUCTION OF THE ABOVE APPLICATIONS.

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

NMOC

by

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

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

DISTRICT II
1301 W Grand Ave., Artesia, NM 88210

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

DISTRICT IV
1220 South St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised October 12, 2005

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-04534364		*Pool Code 97232, 71599		*Pool Name Basin Mancos, Basin Dakota	
*Property Code 22669		*Property Name CANYON			*Well Number SE
*OGRD No. 5380		*Operator Name XTO ENERGY INC.			*Elevation 6242

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
H	3	25-N	11-W		1695	NORTH	670	EAST	SAN JUAN

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
*Dedicated Acres E/2 320.81					*Joint or Initl		*Consolidation Code		*Order No.

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		FD. 2 1/2" BC. 1930 C.L.O.		S 89-59-56 W 2655.1' (M)		FD. 2 1/2" BC. 1930 C.L.O.		17	
LOT 4		LOT 3		LOT 2		LOT 1		OPERATOR CERTIFICATION	
		LAT: 36.43263° N. (NAD 83) LONG: 107.98477° W. (NAD 83)						I hereby certify that the information contained 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.	
		LAT: 36°25'57.5" N. (NAD 27) LONG: 107°59'02.9" W. (NAD 27)						Signature Jennifer M. Hembry Date 1/5/08 Printed Name Jennifer M. Hembry	
		3						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.	
								NOVEMBER 8, 2005 Date of Survey Signature ROY A. RUSH Seal REGISTERED PROFESSIONAL LAND SURVEYOR 8894 24-06 Certificate Number	

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Drilling Program

1. ESTIMATED FORMATION TOPS

<u>Formation Name</u>	<u>GL Depth</u>	<u>KB Depth</u>	<u>Elevation</u>
Nacimiento	0'	12'	+6,242'
Fruitland	1,217'	1,229'	+5,025'
Pictured Cliffs	1,392'	1,404'	+4,850'
Cliff House	2,172'	2,184'	+4,070'
Mancos Shale	4,007'	4,019'	+2,235'
Gallup	4,877'	4,889'	+1,365'
Sanostee	5,372'	5,384'	+870'
Graneros	5,787'	5,799'	+455'
Dakota	5,902'	5,914'	+340'
Total Depth (TD)*	6,150'	6,162'	+92'

2. NOTABLE ZONES

<u>Gas & Oil Zones</u>	<u>Water Zones</u>	<u>Coal Zone</u>
Fruitland	Nacimiento	Fruitland
Pictured Cliffs	Ojo Alamo	
Mancos	Fruitland	
Gallup		
Dakota		

Water zones will be protected with casing, cement, and weighted mud. Fresh water found while drilling will be recorded. Oil or gas shows will be tested for commercial potential based on the geologist's recommendations.

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3. PRESSURE CONTROL

The drilling contract has not yet been awarded, thus the exact BOP model to be used is not yet known. (A typical 2,000 psi model is on PAGE 3.) An 8-5/8" x 11" 2,000 pound double ram BOP system with a choke manifold and mud cross will be tested to ≈ 200 psi and then to $\approx 1,000$ psi. Upper and lower Kelly cocks with valve handle and subs to fit all drill string connections which are in use will be available on the rig floor.

Tests will be run when:

- 1) installed
- 2) anytime a pressure seal is broken (test only affected equipment)
- 3) at least every 30 days
- 4) blind & pipe rams will be activated each trip, but no more than daily

BOP systems will be consistent with API RP 53. Blowout preventers will be installed and tested before drilling surface casing plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated daily to ensure good mechanical working order and this inspection recorded on the daily drilling report. Preventers and casing will be pressure tested before drilling casing cement plugs. Maximum expected bottom hole pressure is $\approx 2,800$ psi. BOP and mud system will control pressure.

4. CASING & CEMENT

<u>Hole Size</u>	<u>O. D.</u>	<u>Weight (lb/ft)</u>	<u>Grade</u>	<u>Age</u>	<u>Connections</u>	<u>Setting Depth</u>
12-1/4"	8-5/8"	24	J-55	New	ST & C	360'
7-7/8"	5-1/2"	15.5	J-55	New	ST & C	6,150'

Surface casing will be cemented to the surface with ≈ 375 cubic feet (≈ 270 sacks) Type V cement + 1/4 pound per sack cello-flake + 2% CaCl_2 . Yield = 1.39 cubic feet per sack. Weight = 14.5 pounds per gallon. Excess: >100%.

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Centralizers will be set on the bottom two joints of the surface casing and every fourth joint to the surface.

Production casing will be cemented to the surface with $\approx 50\%$ excess as follows. DV tool will be set @ $\approx 4,250'$.

First stage lead will consist of ≈ 302 cubic feet (≈ 150 sacks) of Type III (or its equivalent) + 2% CaCl_2 + 1/4 pound per sack cello flake + 0.2% dispersant + 0.5% fluid loss control + 2% LCM additives mixed at 12.5 pounds per gallon and 2.01 cubic feet per sack.

First stage tail will consist of ≈ 222 cubic feet (≈ 150 sacks) Type III (or its equivalent) + 5% bonding additive + 1/4 pound per sack cello flake + 0.3% dispersant + 0.2% fluid loss control + 2% LCM additives mixed at 14.2 pounds per gallon and 1.48 cubic feet per sack.

Second stage lead will consist of ≈ 975 cubic feet (≈ 375 sacks) Type III (or its equivalent) + 1/4 pound per sack cello flake + 8% gel + 2% LCM mixed at 11.9 pounds per gallon and 2.6 cubic feet per sack.

Second stage tail will consist of ≈ 139 cubic feet (≈ 100 sacks) Type III Neat mixed at 14.5 pounds per gallon and 1.39 cubic feet per sack.

Centralizers will be set on the bottom two joints, every second joint to $\approx 5,000'$, and every fourth joint from $\approx 2,000'$ to the surface.

5. MUD PROGRAM

<u>RANGE</u>	<u>MUD TYPE</u>	<u>WEIGHT</u>	<u>VISCOSITY</u>	<u>WATER LOSS</u>	<u>ADDITIVES</u>
0' - 360'	Fresh-Spud	8.6-9.0	28-32	NC	Gel, lime
360' - 2,500'	Fresh-Poly	8.4-8.8	28-32	NC	Gel, lime sweeps
2,500' - TD	Fresh Water	8.6-9.2	45-60	8-10 cc	Gel, soda ash, LCM

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6. CORES, TESTS, & LOGS

No cores or drill stem tests are planned. Mud logger will arrive at $\approx 3,000'$ and collect samples every $\approx 10'$ from there to TD. These open hole logs will be run:

Array Induction/SFL/GR/SP from TD to $\approx 360'$
Neutron/Lithodensity/Pe/GR/Cal from TD to $\approx 3,000'$

7. DOWN HOLE CONDITIONS

No abnormal pressures, temperatures, nor hydrogen sulfide are expected. Maximum expected bottom hole pressure will be $\approx 2,460$ psi.

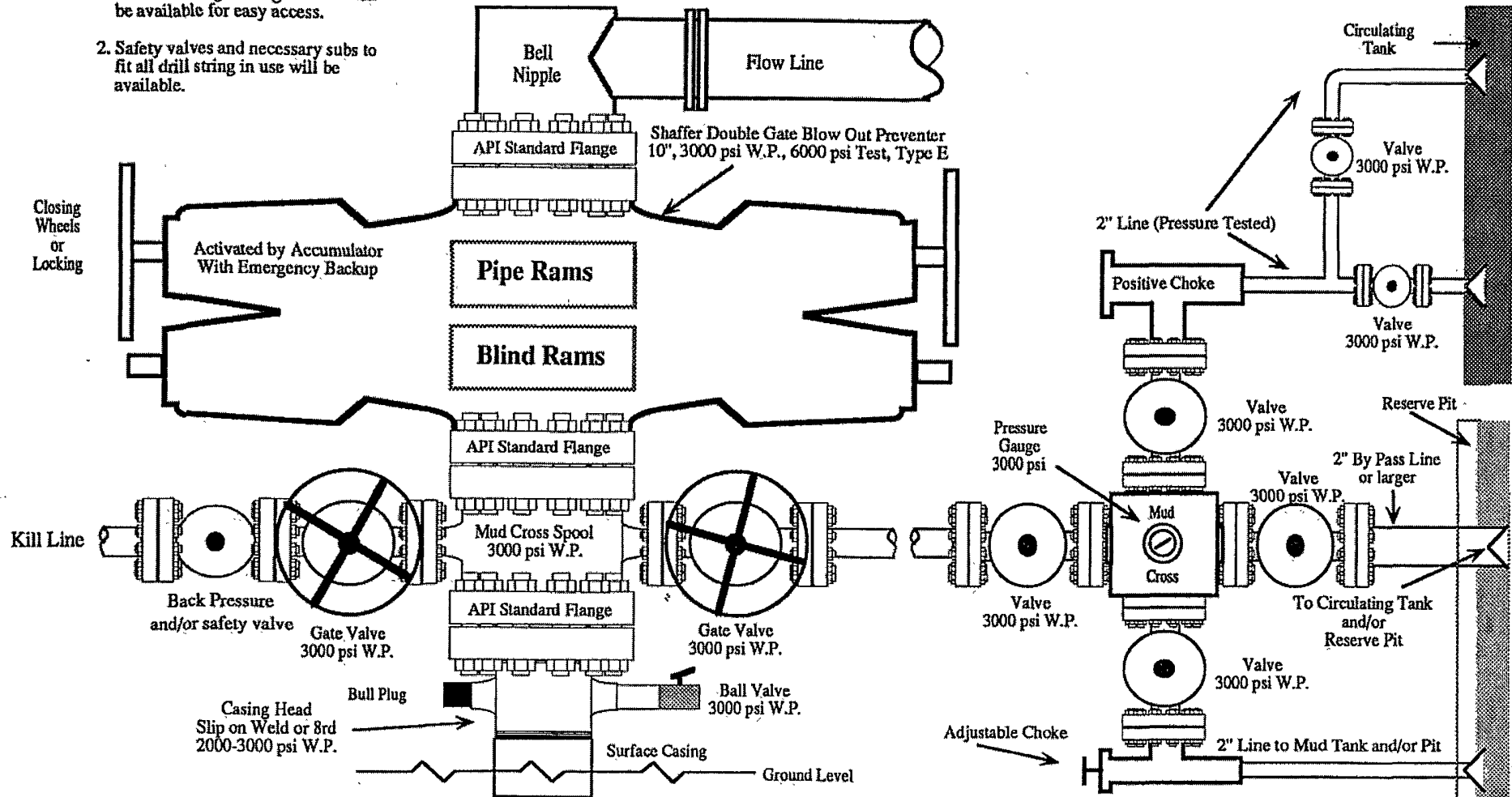
8. OTHER INFORMATION

The anticipated spud date is upon approval. It is expected it will take about four weeks to drill and complete the well.

2,000 PSI BOP SYSTEM

Note: 1. An upper Kelly cock valve will be utilized during drilling. Handle will be available for easy access.

2. Safety valves and necessary subs to fit all drill string in use will be available.



Note: This equipment is designed to meet requirements for a 2-M rating standard per 43 CFR part 3160 (amended). Proper operation and testing of equipment will be carried out per standard. 2,000 psi equipment can be substituted in the drawing to meet minimum requirements per standard.