Form 3160-3 (April 2004)

RECEIVED

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

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT UT LAND MA

FEB 1 3 2009

Lease Serial No. NMNM-035634

APPLICATION FOR PERMIT TO	DRILL OR REENTER F	ield Office	^{MP} 6. If Indian, Allotee or To N/A	ribe Name
la. Type of work:	7. If Unit or CA Agreement, Name and No. N/A			
lb. Type of Well: Oil Well Gas Well Other	8. Lease Name and Well No. H B McGRADY A 1 F			
2. Name of Operator XTO ENERGY INC.			9. API Well No. 349	12
3a. Address 382 ROAD 3100 AZTEC, NM 87410	3b. Phone No. (include area code) (505) 333-3159	10. Field and Pool, or Exploratory WC BASIN MANC. & BAS. DK.		
4. Location of Well (Report location clearly and in accordance with a At surface 1800' FSL & 805' FEL	any State requirements.*)		11. Sec., T. R. M. or Blk. an 14-27N-12W NMP	• •
At proposed prod. zone SAME 14. Distance in miles and direction from nearest town or post office* 9 AIR MILES SOUTHWEST OF BLOOMFIELD			12. County or Parish SAN JUAN	13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 805'	16. No. of acres in lease 1,120	-	ng Unit dedicated to this well S2 ICOS: SP4 & DAKOTA: S2	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 3,415' (A #1)	19. Proposed Depth 6,500'		BIA Bond No. on file いる	1B000138
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6,011' GL	22. Approximate date work will s 07/01/2009	start*	23. Estimated duration 4 WEEKS	
The following, completed in accordance with the requirements of Onsh	24. Attachments	attached to th	io form:	phone Co.
 Well plat certified by a registered surveyor. A Drilling Plan. A Surface Use Plan (if the location is on National Forest System SUPO shall be filed with the appropriate Forest Service Office). 	4. Bond to cover Item 20 above n Lands, the 5. Operator certi	r the operatio). fication te specific info	ns unless covered by an exist	T. 3
25. Signature	Name (Printed/Typed) BRIAN WOOD		Date	02/09/2009
Title CONSULTANT	PHONE: (505) 466-8120	FAX	X: (505) 466-9682	,
Approved by (Signature) Mantiolity	Name (Printed/Typed)		Date	10/8/2
Title AFM	Office FF	<u> </u>		7 - 7
Application approval does not warrant or certify that the applicant hole conduct operations thereon. Conditions of approval, if any, are attached. Test BOPE		ghts in the sub	ject lease which would entitle	the applicant to
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a States any false, fictitious or fraudulent statements or representations as	crime for any person knowingly and	l willfully to n	nake to any department or age	ency of the United

*(Instructions on page 2)

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

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

OCT 2 5 2010

AZTEC OCD 24 HRS PRIOR TO CASING & CEMENT

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER **AUTHORIZATION REQUIRED FOR OPERATIONS** ON FEDERAL AND INDIAN LANDS

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

DISTRICT I 1625 N. Fench Dr., Hobbs, N.M. 88240 State of New Mexico Energy, Minerals & Natural Resources Department

Revised October 12, 2005
Instructions on back
Appropriate District Office
State Lease - 4 0

DISTRICT II 1301 W. Grand Avenue, Artesia, N.M. 88210

DISTRICT III

889 TOPES SIONAL LAND

Form C-102

1000 Rio Brazos R	d., Aztec, N	I.M. 87410			1220 South			AM.	R 1 6 2009		ree Lee	use – 3 Copie
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DISTRICT 1 1625 N. Fench Dr., Hobbs, N.M. 88240 State of New Mexico Energy, Minerals & Natural Resources Department

DISTRICT II 1301 W. Grand Avenue, Artesia, N.M. 88210

DISTRICT III 1000 Rio Brazos Rd., Aztec, N.M. 87410 OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87504-2088 Form C-102 Revised October 12, 2005 Instructions on back Submit to Appropriate District Office

State Lease — 4 Copies Fee Lease — 3 Copies

☐ AMENDED REPORT

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

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Drilling Program

1. ESTIMATED FORMATION TOPS

Formation Name	GL Depth	KB Depth	<u>Elevation</u>
Nacimiento	0'	12'	+6,011'
Ojo Alamo Sandstone	156'	168'	+5,855'
Fruitland Formation	1,161'	1,173'	+4,850'
Pictured Cliffs Sandstone	1,571'	1,583'	+4,440'
Cliff House Sandstone	3,141'	2,419'	+2,870'
Menefee Shale	3,341'	3,353'	+2,670'
Point Lookout Sandstone	4,001'	4,013'	+2,010'
Mancos Shale	4,311'	4,323'	+1,700'
Gallup Sandstone	5,281'	5,293'	+755'
Greenhorn Limestone	6,026'	6,037'	-15'
Dakota Sandstone	6,181'	6,193'	-170'
Total Depth (TD)	6,500'	6,512'	-489'

2. NOTABLE ZONES

Gas & Oil Zones	<u>Water Zones</u>	<u>Coal Zoné</u>
Fruitland	Nacimiento	Fruitland
Pictured Cliffs	Ojo Alamo	
Gallup	Fruitland	
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.



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 will be $\leq 2,600$ psi. BOP and mud system will control pressure.

4. CASING & CEMENT

Hole Size	<u>O. D.</u>	Weight (lb/ft)	<u>Grade</u>	<u>Age</u>	Connections	Setting Depth
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	6.500'



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% CaCl₂. Yield = 1.39 cubic feet per sack. Weight = 14.5 pounds per gallon. Excess: >100%. Centralizers will be set on the bottom two joints of the surface casing and every fourth joint to the surface.

Production casing will cemented to the surface in two stages with $\approx 100\%$ excess. DV tool will be set at $\approx 4,600$ '. Total first stage volume = 663 cubic feet. Second stage volume = 1,595 cubic feet. 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.

Will cement first stage with ≈ 330 sacks (=663 cubic feet) premium light HS cement with 0.2% CD 32 + 0.5% FL 32 + 1/4 pound per sack cello flake + 2% KCl + 2% phenoseal mixed at 12.5 pounds per gallon and 2.01 cubic feet per sack.

Will cement second stage with ≈ 560 sacks (=1,595 cubic feet) premium light HS cement with 8% gel + 1/4 pound per sack cello flake + 2% phenoseal mixed at 11.9 pounds per gallon and 2.60 cubic feet per sack. Will follow with ≈ 100 sacks (= 139 cubic feet) Type III neat cement mixed at 14.5 pounds per gallon and 1.39 cubic feet per sack.

5. MUD PROGRAM

<u>RANGE</u>	MUD TYPE	<u>WEIGHT</u>	VISCOSITY	WATER LOSS	<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



6. CORES, TESTS, & LOGS

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

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

7. DOWN HOLE CONDITIONS

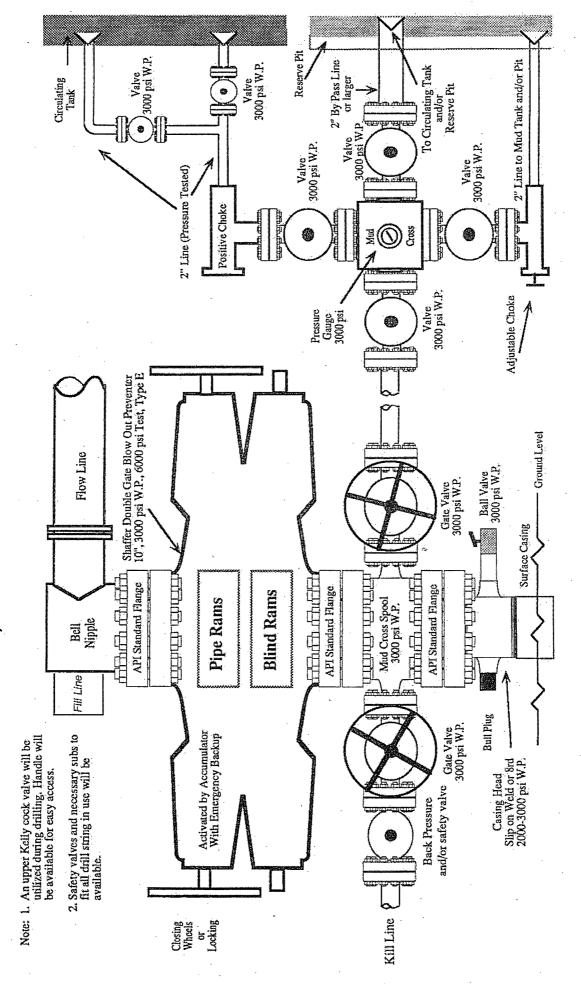
No abnormal pressures, temperatures, nor hydrogen sulfide are expected. Maximum expected bottom hole pressure will be $\leq 2,600$ psi.

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: 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.