

RCVD FEB28'07

OIL CONS. DIV.

DIST. 3

Form 3160-3  
(April 2004)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

## APPLICATION FOR PERMIT TO DRILL OR REENTER


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

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. <b>NMSF-080382A</b>
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator <b>XTO ENERGY INC</b>		7. If Unit or CA Agreement, Name and No. N/A
3a. Address <b>2700 FARMINGTON AVE., BLDG. K-1 FARMINGTON, NM 87401</b>	3b. Phone No. (include area code) <b>(505) 324-1090</b>	8. Lease Name and Well No. <b>SCHWERDTFEGER 8 2 E</b>
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface <b>935' FNL &amp; 1845' FEL</b> At proposed prod. zone <b>SAME</b>		9. API Well No. <b>30-045-30400 32230</b>
14. Distance in miles and direction from nearest town or post office* <b>10 AIR MILES SSW OF BLOOMFIELD</b>		10. Field and Pool, or Exploratory <b>BASIN DAKOTA</b>
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) <b>1,227'</b>	16. No. of acres in lease <b>2,081.12</b>	11. Sec., T. R. M. or Blk. and Survey or Area <b>B 8-27N-11W NMPM</b>
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. <b>165' (XTO's 8-1)</b>	19. Proposed Depth <b>6,860'</b>	12. County or Parish <b>SAN JUAN</b>
21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>6,136' GL</b>	22. Approximate date work will start* <b>07/01/2006</b>	13. State <b>NM</b>
23. Estimated duration <b>4 WEEKS</b>		

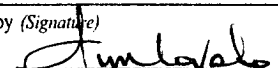
## 24. Attachments

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

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

25. Signature 	Name (Printed/Typed) <b>BRIAN WOOD</b>	Date <b>02/02/2006</b>
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Title **CONSULTANT** PHONE: (505) 466-8120 FAX: (505) 466-9682

Approved by (Signature) 	Name (Printed/Typed) <b>Acting AFM Minerals</b>	Date <b>2/23/07</b>
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Title **Acting AFM Minerals** Office

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 OGD  
IN TIME TO WITNESS241 hrs  
CSG/EC

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".

RECEIVED  
070 FARMINGTON NM

2006 FEB 6 AM 11 53

NMOCD

3/2/07

District I  
PO Box 1980, Hobbs, NM 88241-1980  
District II  
PO Drawer DD, Artesia, NM 88211-0719  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

Form C-102  
Revised February 21, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT  
RCVD FEB28'07

WELL LOCATION AND ACREAGE DEDICATION PLAT

* API Number <b>30-045-32230</b>		* Pool Code <b>71599</b>	* Pool Name <b>BASIN DAKOTA</b>	* Well Number <b>DIST. 3</b>
* Property Code <b>30340</b>	* Property Name <b>SCHWENITZGER 8</b>			* Well Number <b>2E</b>
* OGRIN No. <b>167067-5380</b>	* Operator Name <b>XTO Energy Inc.</b>			* Elevation <b>6136</b>

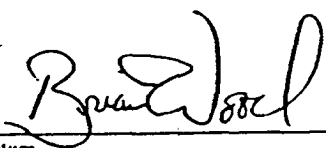
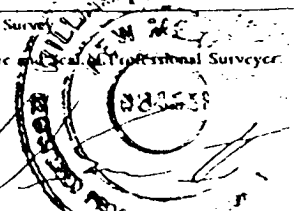
<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
B	8	27 N	11 W		935	North	1845	East	San Juan

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
" Dedicated Acres		" Joint or Infill		" 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

<div>16</div> <div>589°53'W</div> <div>80.04ch.</div> <div>935'</div> <div>1845'</div> <div>80.00ch.</div> <div>SEC.</div> <div>8</div> <div>RECEIVED</div> <div>2006 FEB 6 PM 11 53</div> <div>OTO FARMINGTON NM</div>	<div>17 OPERATOR CERTIFICATION</div> <div>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</div> <div></div> <div>Signature</div> <div>Printed Name</div> <div>BRIAN WOOD</div> <div>CONSULTANT</div> <div>Title</div> <div>FEB. 2, 2006</div> <div>Date</div>	
	<div>18 SURVEYOR CERTIFICATION</div> <div>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.</div> <div>16 Sep. 2000</div> <div>Date of Survey</div> <div></div> <div>Signature of Professional Surveyor</div> <div>William H. Mahke II</div> <div>Certificate Number</div> <div>8466</div>	

Submit 3 Copies To Appropriate District  
Office  
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 S. St. Francis Dr., Santa Fe, NM  
87505

State of New Mexico  
Energy, Minerals and Natural Resources

Form C-103  
May 27, 2004

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-045- <del>30400</del> <b>32230</b>
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other		5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>
2. Name of Operator XTO ENERGY INC.		6. State Oil & Gas Lease No. NMSF-080382A
3. Address of Operator 2700 FARMINGTON AVE., BLDG. K-1, FARMINGTON, NM 87401		7. Lease Name or Unit Agreement Name SCHWERDTFEGER 8
4. Well Location Unit Letter B : 935 feet from the NORTH line and 1845 feet from the EAST line Section 8 Township 27N Range 11W NMPM County SAN JUAN		8. Well Number 2 E
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 6,136' GL		9. OGRID Number 167067
Pit or Below-grade Tank Application <input checked="" type="checkbox"/> or Closure <input type="checkbox"/>		
Pit type DRILLING Depth to Groundwater >600' Distance from nearest fresh water well >3,000' Distance from nearest surface water >1,000'		
Pit Liner Thickness: 12 mil Below-Grade Tank: Volume bbls Construction Material		

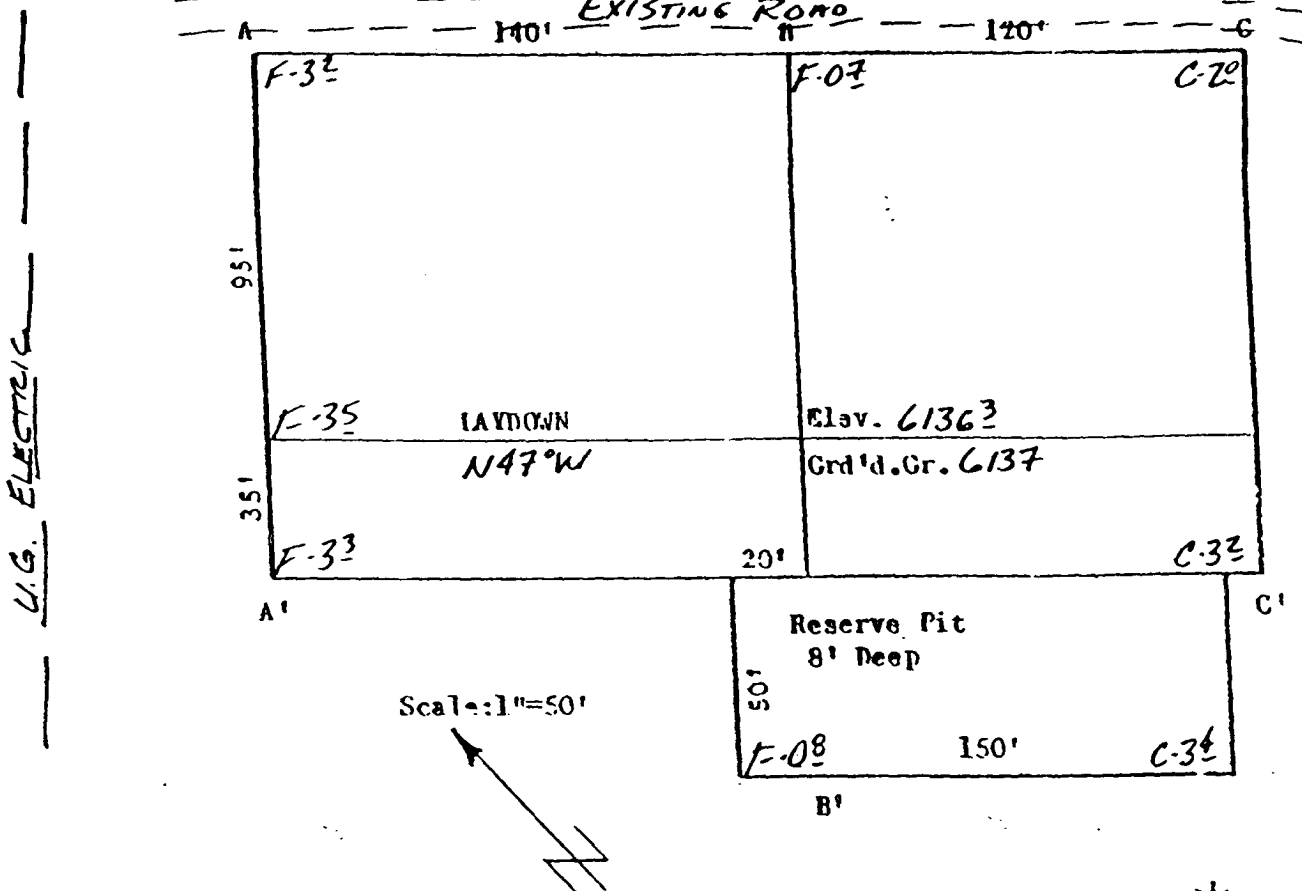
12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
OTHER: DRILLING PIT <input checked="" type="checkbox"/>		OTHER: <input type="checkbox"/>	
13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.			

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed & closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Brian Wood TITLE CONSULTANT DATE 2-2-06  
Type or print name BRIAN WOOD E-mail address: brian@permitswest.com Telephone No. (505) 466-8120  
**For State Use Only**  
APPROVED BY: [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. 03 DATE 2/28/07  
Conditions of Approval (if any):

935' FNL & 1945' FNL  
 Sec. 8, T27N, R11W, NMPM  
 San Juan Co., NM



✱  
 SCHWEDTFEBER  
 #8-1

A-A'	Vert: 1" = 30'	Horiz: 1" = 100'	C/L
6140			
6130			
B-B'			
6140			
6130			
C-C'			
6140			
6130			

XTO Energy Inc.  
Schwerdtfeger 8 2 E  
935' FNL & 1845' FEL  
Sec. 8, T. 27 N., R. 11 W.  
San Juan County, New Mexico

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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	000'	12'	+6,136'
Kirtland Shale	876'	888'	+5,260'
Fruitland Coal	1,396'	1,408'	+4,740'
Pictured Cliffs	1,891'	1,903'	+4,245'
Huerfanito Bentonite	2,397'	2,409'	+3,739'
Cliff House	3,496'	3,508'	+2,640'
Menefee	3,526'	3,538'	+2,610'
Pt. Lookout	4,370'	4,382'	+1,766'
Greenhorn	6,318'	6,330'	-182'
Graneros Shale	6,378'	6,390'	-242'
Dakota Sandstone	6,483'	6,495'	-347'
Total Depth (TD)	6,860'	6,872'	-724'

### 2. NOTABLE ZONES

#### Gas & Oil Zones

Fruitland  
Pictured Cliffs  
Cliff House  
Menefee  
Point Lookout  
Dakota

#### Water Zones

Nacimiento  
Kirtland  
Fruitland

#### Coal Zones

Fruitland  
Menefee

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.

XTO Energy Inc.  
Schwerdtfeger 8 2 E  
935' FNL & 1845' FEL  
Sec. 8, T. 27 N., R. 11 W.  
San Juan County, New Mexico

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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 2000 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

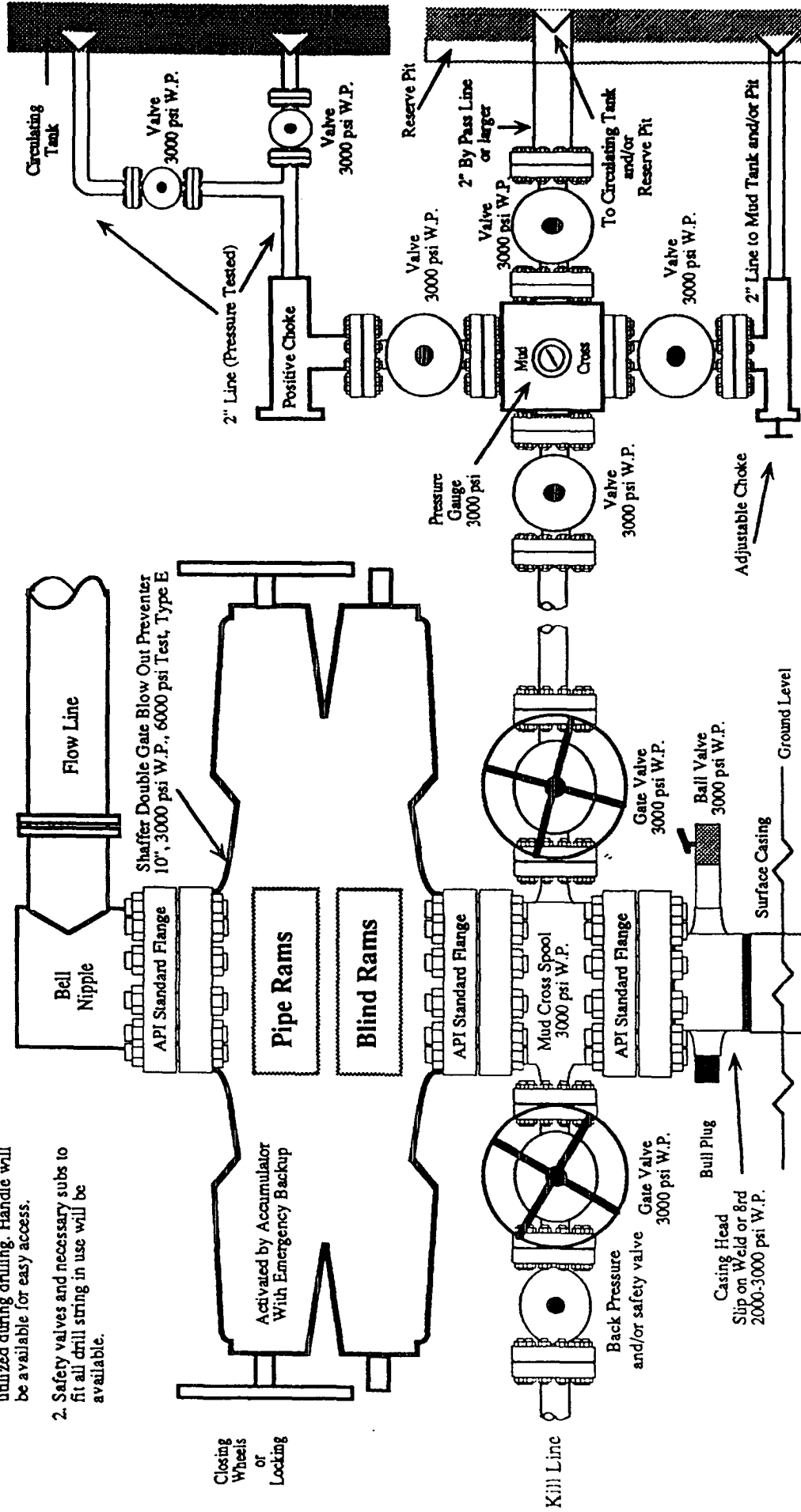
<u>Hole Size</u>	<u>O. D.</u>	<u>Weight (lb/ft)</u>	<u>Grade</u>	<u>Age</u>	<u>Connections</u>	<u>GL Setting Depth</u>
12-1/4"	8-5/8"	24	J-55	New	8 rd, S T & C	325'
7-7/8"	4-1/2"	11.6	K-55	New	8 rd, L T & C	6,860'

Surface casing will be cemented to surface with  $\approx$ <sup>230</sup>~~270~~ cubic feet ( $\approx$ 230 sacks) Class B Neat + 1/4 pound per sack cello-flake + 2% CaCl<sub>2</sub>. Yield = 1.27 cubic feet per sack. Weight = 15.2 pounds per gallon.

# 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.

**XTO Energy Inc.  
Schwerdtfeger 8 2 E  
935' FNL & 1845' FEL  
Sec. 8, T. 27 N., R. 11 W.  
San Juan County, New Mexico**

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Conventional centralizers will be set on the bottom two joints and every fourth joint to surface.

Production casing hole will be cemented to surface as follows. DV @  $\approx 4,000'$ .

First stage Lead will be cemented to  $\approx 4,000'$  with 828 cubic feet (600 sacks) 50:50 Poz + 5 pounds per sack gilsonite + 2% gel + 1/4 pounds per sack cello-flake, dispersant, and FLA. Yield = 1.38 cubic feet per sack. Weight = 13.5 pounds per gallon. Excess = 25%.

Second stage Lead will be cemented to surface with 1,440 cubic feet (500 sacks) Class B or H + 10 pounds per sack gilsonite + 4% gel + 1/2 pounds per sack cello-flake + 3% Econolite. Yield = 2.88 cubic feet per sack. Weight = 11.4 pounds per gallon. Excess = 50%

Second stage Tail will be cemented to  $\approx 3,600'$  with 126 cubic feet (100 sacks) Class B or H Neat + 1/4 pounds per sack cello-flake + 2%  $\text{CaCl}_2$ . Yield = 1.26 cubic feet per sack. Weight = 15.2 pounds per gallon. Excess = 10%.

Production casing may be cemented with an alternative foam cement.

First stage Lead will be cemented to 200' with 1,320 cubic feet (1,740 cubic feet when foamed) or 1,000 sacks 50:50 Poz + 2% gel + 2% Diacel LWL 0.094 gallons per sack foaming agent. Yield = 1.32 cubic feet per sack (1.74 when foamed). Weight = 13.8 pounds per gallon (10.5 when foamed). Excess = 15%.

First stage Tail will be cemented to  $\approx 6,000'$  with 146 cubic feet (116 sacks) Class B or H Neat + 1/4 pounds per sack cello-flake + 2%  $\text{CaCl}_2$ . Yield = 1.26 cubic feet per sack. Weight = 15.2 pounds per gallon.

Cap will be cemented to surface with 75 cubic feet (60 sacks) Class B or H with 2%  $\text{CaCl}_2$ .

XTO Energy Inc.  
Schwerdtfeger 8 2 E  
935' FNL & 1845' FEL  
Sec. 8, T. 27 N., R. 11 W.  
San Juan County, New Mexico

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Conventional centralizers will be set on the bottom two joints, every second joint to 6,100' and every fourth joint from  $\approx$ 2,000' to 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' - 350'	Fresh-Spud	8.5-8.8	30	NC	Gel, lime
350' - 4,000'	Fresh Water	8.5-8.8	28	NC	Gel, lime sweeps
4,000' - TD	Fresh Water	8.5-8.8	35	10 cc	Gel, soda ash, LCM

#### 6. CORING, TESTING, & LOGGING

No cores or drill stem tests are planned. Induction logs will be run from TD to  $\approx$ 3,000'. Neutron density - GR logs will be run from TD to base of surface casing.

#### 7. DOWN HOLE CONDITIONS

No abnormal pressures, temperatures, nor hydrogen sulfide are expected. Maximum pressure will be  $\approx$ 2,800 psi.

#### 8. OTHER INFORMATION

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

XTO Energy Inc.  
Schwerdtfeger 8 2 E  
935' FNL & 1845' FEL  
Sec. 8, T. 27 N., R. 11 W.  
San Juan County, New Mexico

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