

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

CONTACT R /ING  
OFFICE FOR N BER  
OF COPIES REQUIRED  
(Other instructions on  
reverse side)

BLM Roswell District  
Modified Form No.  
NM060-3160-2

**APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK**

1a. TYPE OF WORK  
 DRILL  DEEPEN  PLUG BACK

b. TYPE OF WELL  
 OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR  
 TEXACO EXPLORATION AND PRODUCTION INC.

3a. AREA CODE & PHONE NO.  
 (915) 688-4620

3. ADDRESS OF OPERATOR  
 P. O. Box 3109, Midland, Texas 79702

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*  
 At surface  
 1980' FSL & 330' FEL, UNIT LETTER: I  
 At proposed prod. zone  
 SAME

5. LEASE DESIGNATION AND SERIAL NO.  
 NM-59045

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME  
 FEDERAL (USA) 'J'

9. WELL NO.  
 3

10. FIELD AND POOL, OR WILDCAT  
 LUSK DELAWARE, WEST

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
 SEC. 30, T-19-S, R-32-E

12. COUNTY OR PARISH  
 LEA

13. STATE  
 NM

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
 15 MILES SOUTH OF MALJAMAR, NEW MEXICO

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any)  
 330'

16. NO. OF ACRES IN LEASE  
 160

17. NO. OF ACRES ASSIGNED TO THIS WELL  
 40

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.  
 1040'

19. PROPOSED DEPTH  
 7200'

20. ROTARY OR CABLE TOOLS  
 ROTARY

21. ELEVATIONS (Show Whether DF, RT, GR, ETC.)  
 GR-3547'

22. APPROX. DATE WORK WILL START\*  
 MARCH 1, 1994

23. PROPOSED CASING AND CEMENTING PROGRAM

HOLE SIZE	CASING SIZE	WEIGHT/FOOT	GRADE	THREAD TYPE	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2	16	65#	H-40	PE	40'	REDIMIX
14 3/4	11 3/4	42#	WC-40	ST&C	850'	1650 SACKS
11	8 5/8	32#	WC-50	LT&C	4100'	1115 SACKS
7 7/8	5 1/2	15.5#	WC50,J55,LS65	LT&C	7200'	1115 SACKS

CEMENTING PROGRAM: CONDUCTOR - REDIMIX.  
 SURFACE CASING - 300 SACKS CLASS C w/ 4% GEL, 2% CaCl2 (13.5ppg, 1.74f3/s, 9.1gw/s). F/B 170 SACKS CLASS C w/ 2% CaCl2 (14.8ppg, 1.34f3/s, 6.3gw/s).  
 INTERMEDIATE CASING - 450 SACKS 35/65 POZ CLASS H w/ 6% GEL, 5% SALT & 1/4# FLOCELE (12.8ppg, 1.94f3/s, 10.1gw/s). F/B 200 SACKS CLASS H w/ 1% CaCl2 (15.6ppg, 1.18f3/s, 5.2gw/s).  
 DV TOOL @ 2800' - 2nd STAGE: 900 SACKS 35/65 POZ CLASS H w/ 6% GEL, 5% SALT, 1/4# FLOCELE (12.8ppg, 1.94f3/s, 10.1gw/s). F/B 100 SACKS CLASS H w/ 2% CaCl2 (15.6ppg, 1.19f3/s, 5.2gw/s).  
 PRODUCTION CASING - 950 SACKS 35/65 POZ CLASS H w/ 6% GEL, 5% SALT & 1/4# FLOCELE (12.8ppg, 1.94f3/s, 10.1gw/s). F/B 165 SACKS 50/50 POZ CLASS H w/ 2% GEL, 5% SALT, 1/4# FLOCELE (14.2ppg, 1.35f3/s, 6.3gw/s).

THERE ARE NO OTHER OPERATORS IN THIS QUARTER QUARTER SECTION. Approval Subject to General Requirements and Special Stipulations Attached

OPER. OGRID NO. 022351  
 PROPERTY NO. 011936  
 POB AND 41540  
 EFF. DATE 3-3-94  
 APINO 30-025-37447

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, 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 C.P. Bashem/cwh TITLE DRILLING OPERATIONS MANAGER DATE 01-06-94

(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE (as of) MAR 3 1994  
AREA MANAGER

APPROVED BY Timothy P. Brian TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
 CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions On Reverse Side

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

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised 1-1-89

OIL CONSERVATION DIVISION

P. O. Box 2088  
Santa Fe, New Mexico 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

All distances must be from the outer boundaries of the section

DISTRICT I  
P. O. Box 1980, Hobbs, NM 88240

DISTRICT II  
P. O. Drawer DD, Artesia, NM 88210

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

Operator <b>TEXACO EXPLORATION AND PRODUCTION Inc.</b>			Lease <b>Federal (USA) "J"</b>		Well No. <b>3</b>
Unit Letter <b>I</b>	Section <b>30</b>	Township <b>19-South</b>	Range <b>32-East</b>	County <b>Lea</b>	
Actual Footage Location of Well: <b>1980</b> feet from the <b>South</b> line and <b>330</b> feet from the <b>East</b> line					
Ground level Elev. <b>3547</b>	Producing Formation <b>Delaware; Brushy Canyon</b>		Pool <b>Lusk Delaware, West</b>	Dedicated Acreage: <b>40</b> Acres	
<p>1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.</p> <p>2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).</p> <p>3. If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc?  <input type="checkbox"/> Yes    <input type="checkbox"/> No    If answer is "yes" type of consolidation _____            If answer is "no" list the owners and tract descriptions which have actually been consolidated (use reverse side of this form if necessary). _____            No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.</p>					
				<b>OPERATOR CERTIFICATION</b>	
				<p><i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</i></p> <p>Signature <i>Royce D. Mariott</i></p> <p>Printed Name <b>Royce D. Mariott</b></p> <p>Position <b>Division Surveyor</b></p> <p>Company <b>Texaco Exp. &amp; Prod.</b></p> <p>Date <b>December 17, 1993</b></p>	
				<b>SURVEYOR CERTIFICATION</b>	
				<p><i>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 knowledge and belief.</i></p> <p>Date Surveyed <b>December 15, 1993</b></p> <p>Signature &amp; Seal of Professional Surveyor <i>John S. Piper</i></p> <p>Certificate No. <b>7254 John S. Piper</b></p> <p>Lea Co. FB. 10, Page 1 Sheet 8 of 8</p>	

⊙ = Fd 2 or 3" Iron Pipe with GLO Brass Cap    ○ = Fd 1" Iron Pipe with GLO Brass Cap    ○ = Staked Location

## DRILLING PROGRAM

FEDERAL (USA) "J" WELL NO. 3

### **SURFACE DESCRIPTION:**

This well is in an area known as the Querecho Plains. The Querecho Plains occurs in a region which is typified by undulating landforms which possesses both stabilized and unstabilized sand dunes, mesquite anchored-hummocks and hills. Vegetation consists mainly of shin oak, mesquite, sand sage, broom-snake weed, and range grasses.

**FORMATION TOPS:** Estimated KB Elevation: 3559'

<u>Formation</u>	<u>Depth</u>	<u>Lithology</u>	<u>Fluid Content</u>
Rustler	810'	Anhydrite, Salt	----
Tansill	2495'	Dolomite	----
Yates	2555'	Sand, Dolomite	Oil/Gas
Capitan Reef	2825'	Limestone, Dolo	----
Delaware (Cherry Canyon)	4360'	Sandstone, Shale	Oil/Gas
Brushy Canyon- Pay	6600'	Sandstone, Shale	Oil/Gas
Bone Spring	7110'	Limestone	----

The base of the salt section is found around 2495'. No abnormal pressures or temperatures are anticipated to be encountered in this well. H<sub>2</sub>S is possible in this well. H<sub>2</sub>S RADIUS OF EXPOSURE: 100ppm = 19 feet, 500ppm = 9 feet, based on 400ppm and 180 mcf. (See attached H<sub>2</sub>S Drilling Operations Plan. H<sub>2</sub>S equipment to be operational prior to drilling out Surface Casing Shoe.)

### **PRESSURE CONTROL EQUIPMENT:**

A 3000 psi Dual Ram type preventer with rotating head will be used. (See Exhibit C). We do not plan to have an annular preventer. We will be able to achieve full closure of the well with the double ram preventer. It will be installed after surface casing is set. BOP will be tested each time it is installed on a casing string and at least every 29 days, and operated at least once each 24-hour period during drilling.

A PVT system will not be installed. We will be drilling thru the reserve pit and will circulate the steel pits one hour each tour to check for gains and losses and will be noted on the driller's log, which is Texaco's policy.

We do not plan to run an automatic remote-controlled choke. We will have installed and tested two manual, H<sub>2</sub>S trimmed, chokes.

**CASING AND CEMENT PROGRAM:**

The casing and cementing programs are detailed on Form 3160-3. All casing will be new.

**Centralizer Program:**

Surface Casing - Centralize the bottom 3 joints and every 4th to surface.

Intermediate Casing - Centralize the bottom 3 joints and above and below the DV tool.

Production Casing - Centralize bottom 600' every 3 joints.

**MUD PROGRAM:**

<u>Depth</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>
0'-850'	Fresh Water	8.4	28
850'-4100'	Brine Water	10.0	29
4100'-6900'	Fresh Water	8.4	28
6900'-7200'	FW/Starch	8.4-8.6	29-33

**LOGGING, TESTING:**

GR-CAL-DSN-SDL and GR-CAL-DLL-MSFL surveys will be run.

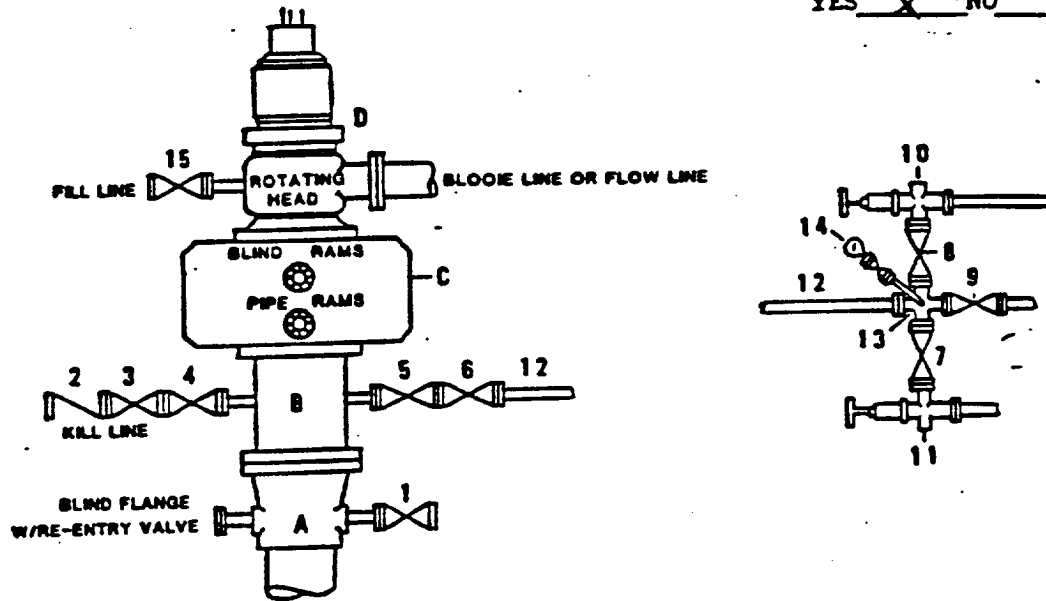
A two-man Mud Logging Unit will be used from 4100' to 7200'.

No drill stem tests will be conducted.

No cores will be taken.

**DRILLING CONTROL  
CONDITION II-B 3000 WP  
FOR AIR DRILLING OR  
WHERE NITROGEN OR AIR BLOWS ARE EXPECTED**

H<sub>2</sub>S TRIM REQUIRED  
YES  NO



**DRILLING CONTROL  
MATERIAL LIST - CONDITION II - B**

- A Texaco Wellhead
- B 3000# W.P. drilling spool with a 2" minimum flanged outlet for kill line and 3" minimum flanged outlet for choke line.
- C 3000# W.P. Dual ram type preventer, hydraulic operated with 1" steel, 3000# W.P. control lines (where sub-structure height is adequate, 2 - 3000# W.P. single ram type preventers may be utilized).
- D Rotating Head with fill up outlet and extended Blowout Line.
- 1,3,4, 2" minimum 3000# W.P. flanged full opening steel gate valve, or Halliburton Lo Torc Plug valve.
- 7,8, 2" minimum 3000# W.P. back pressure valve.
- 2 2" minimum 3000# W.P. back pressure valve.
- 5,6,9 3" minimum 3000# W.P. flanged full opening steel gate valve, or Halliburton Lo Torc Plug valve.
- 12 3" minimum schedule 80, Grade "B", seamless line pipe.
- 13 2" minimum x 3" minimum 3000# W.P. flanged cross.
- 10,11 2" minimum 3000# W.P. adjustable choke bodies.
- 14 Cameron Mud Gauge or equivalent ( location optional in choke line).
- 15 2" minimum 3000# W.P. flanged or threaded full opening steel gate valve, or Halliburton Lo Torc Plug valve.



TEXACO, INC.  
MILKLAND DIVISION  
MILKLAND, TEXAS



SCALE	DATE	EST. NO.	ORD. NO.
DRAWN BY:			
CHECKED BY:			
APPROVED BY:			

EXHIBIT C