11"of12 1/4"

(575) as per telecon'

31-15-36918

## UNITED STATES DEPARTMENT OF THE INTERIOR

|  |                       | $v_{T4,c}$            | · P                            | (一つつ一つ)           |            | 00-01                    | ワームいフィロ                                 |
|--|-----------------------|-----------------------|--------------------------------|-------------------|------------|--------------------------|---|
| Form 3160-3  |                       | Artes                 | SUI                            | BMIT IN TRI       | PLICATE*   | Form approved            |   |
| (December 1990)  |                       | ED STATES             | , , , , , ,                    | Teverse           | ECENED     | Budget Bureau            | No. 1004-0136                           |
|  | DEPARTMENT            | OF THE I              | NTERIOR                        |                   | 1          |                          | mber 31, 1991                           |
|  | BUREAU OF             | LAND MANAG            | EMENT                          | ., 4              | NSZI       | SIMMMO 4 OF 4 4 4        | AND SERIAL NO.                          |
| ADDLI  |                       |                       |                                |                   |            |                          | W OP TRIBE WINE                         |
|  | CATION FOR P          | ENMIT TO L            | MILL ON DE                     |                   |            |                          | - VA TRIBE NAME                         |
| Form 3160-3 (December 1990)  UNITED STATES  DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT  APPLICATION FOR PERMIT TO DRILL OR DEEPEN  Is. TIPE OF WORK  DRILL  OTHER  SINGLE  SOURMET IN TRIPLICATE  FOR approved.  Express: December 31, 1991  APPLICATION FOR PERMIT TO DRILL OR DEEPEN  Is. TIPE OF WORK  DRILL  OTHER  SINGLE  SONE  MULTIPLE  OTHER  SINGLE  SONE  TODD  12.3" FEDERAL #7-  10. FIELD AND POOL, OR WILLOW  ACTIVITY  ACT | NAMB                  |                       |                                |                   |            |                          |   |
| Commercial Property of Composition (Nevada)   Department of the interest of the composition of the composi   |                       |                       |                                |                   |            |                          |   |
| WELL W   |                       |                       |                                |                   | . [ ]      |                          | BLL NO.                                 |
|  | Corporation (N        | 3.3.                  |                                |                   |            | TODD "23" FE             | DERAL #4-                               |
|  | Corporation (Ne       | evada)•               |                                |                   | -          |                          | •                                       |
| 3. ADDRESS AND TELEPHONE NO.   |                       | ( -                   | 405) 235-361                   | .1                |            | # 4                      | /                                       |
| 20 N. Broadwa  | y, Suite 1500, (      | Oklahoma Ci           | ty, OK 7310                    | 2-8260            | [          | 10. FIELD AND POOL,      | OR WILDCAT                              |
| We pullace   |                       |                       | h any State requirer           | nents.*)          | X          | Sand Dunes               | Dalawasa                                |
| 1800   | ' FSL & 900' FE       |                       |                                |                   | - 1        | 11. SHC., T., R., M., OR | BLK.                                    |
| At proposed prod. zon  |                       | Wi.                   | <b>_</b>                       |                   |            |                          |   |
| 14. DISTANCE IN MILES  |                       | Par gown on poor      |                                |                   |            |                          |   |
|  |                       |                       | OFFICE                         |                   |            |                          |   |
| 15. DISTANCE FROM PROPO  | 08ED*                 | al, NM                | 16 NO OF LOPES                 | IN I BLOW (       | 17 10 0    | .2                       | NM                                      |
| LOCATION TO NEAREST<br>PROPERTY OR LEASE L   | r<br>Ine. pt.         | 900                   |                                | ,N LEASE          | TO THI     | ACRES ASSIGNED IS WELL   | 40                                      |
| (Also to nearest dr)   | g. unit line, if any) |                       |                                |                   |            |                          | 40                                      |
| TO NEAREST WELL, D   | RILLING. COMPLETED.   | 1                     |                                | н                 |            |                          |   |
|  |                       |                       |                                |                   |            | -                        |   |
|  | 24717 /               | ρ <del>3471'</del> GR |                                |                   |            | [                        |   |
| 23.  | 2 11011 0             | PROPOSED CASIN        | IC AND CEMENTIN                | C PROCE III       |            |                          | / · · · · · · · · · · · · · · · · · · · |
|  | i                     |                       |                                |                   | Set . 1911 |                          | K-11-F Potast                           |
| <del></del>  |                       |                       |                                |                   |            |                          |   |
|  |                       |                       |                                |                   |            |                          |   |
|  |                       |                       |                                |                   |            |                          |   |
|  |                       |                       | ľ                              |                   |            |                          |   |
| Dovon Energy   | w/ compression to dri | stage col.            | $\frac{1}{1}$ at $\frac{1}{1}$ | ()'<br>경나 + - + - | 2nd sta    | age: 300 sx P            | oz H + 100 sx F                         |
| quantities of  | oil If the D          | ii to appro           | gramed bos a                   | o. to te          | est the    | Delaware for             | commercial                              |
| and abandoned  | as per Federal        | regulation            | Programe                       | to adhe           | re to o    | wellbore wil             | r pe brugged                            |
| regulations a  | re outlined in        | the following         | na exhibits                    | and atta          | schmants   | onshore orr a            | na gas                                  |
|  |                       |                       |                                |                   |            | $\rho_{-}$               | + TD-1                                  |
|  |                       | an                    |                                |                   |            | 102                      | 71-95                                   |
|  |                       |                       | Equipment                      |                   |            | ,                        | 1 12                                    |
|  |                       |                       |                                |                   |            | New.                     | Loc 4 HTL                               |
| Exhibit #3= P  | lanned access re      | oads                  |                                |                   |            |                          |   |
| - 1 11 1 1 1 1   | 3 3 4 4 4 4           |                       |                                |                   |            |                          |   |

regulations are outlined in the following exhibits ar Drilling Program Surface use and operating plan Exhibit #1 and #1-A= Blowout Prevention Equipment Exhibit #2= Location and Elevation Plat Exhibit #3= Planned access roads Exhibit #4= Wells within one mile radius Exhibit #5= Production Facilities Plat Exhibit #6= Rotary rig layout Evidence of Bond Coverage

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS -ATTACHED \_\_\_\_

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, 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

| SIGNED Charl W Haran  | Charles W. Horsman   |   |
|---|--|---|
| (This space for Federal or State office use)                              |  | 7 - 5   |
| PERMIT NO.  | APPROVAL DATE  |   |
| Application approval does not warrant or certify that the applicant holds | s legal or equitable title to those rights in the subject lease which we | ould entitle the applicant to conduct operations thereon. |
| CONDITIONS OF APPROVAL, IF ANY:   |  |   |

LUMB HARRES TR 2013 多结的 **经发现**的图 。 (12)

#### DISTRICT | P.O. Bez 1900, Hobbs, MM 86240

## OIL CONSERVATION DIVISION

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

DISTRICT II P.O. Druwer DD, Artonia, NM 86210

WELL LOCATION AND ACREAGE DEDICATION PLAT

## DISTRICT III

All Distances must be from the outer houndaries of the section

| DEVO                 | N ENERGY        |                |                | Leave                                 | TODD 23 FI                   | EDERAL        |               | Well No.   |           |
|----------------------|-----------------|----------------|----------------|---------------------------------------|------------------------------|---------------|---------------|--|-----------|
| it Letter Sect       |                 | Township       | 2 COUTU        | Range                                 | 31 EAST                      |               | County        | DDY  |           |
| I                    | 23              |                | 3 SOUTH        |                                       | JI EASI                      | NMPM          | <u> </u>      |  |           |
| nel Footage Location | EAC'            | т              |                | 1800                                  |                              |               | sou           | TH line  |           |
| 900 feet free        | Producing For   |                | nd4            | Pool                                  |                              | feet from     | <u>the</u>    | Dedicated Acreage:                               | :         |
|                      | l               |                |                |                                       | Cand Dunca                   |               |               | 40   | Acres     |
| 3470.7               | Delaw           |                | all by colored | pendl or                              | Sand Dunes  hachure marks on |               |               | L  | 40100     |
|                      |                 |                |                |                                       | entify the ownership         |               |               | e interest and rows                              | ite).     |
|                      |                 |                |                |                                       |                              |               |               |  |           |
|                      |                 |                | is dedicated   | to the w                              | ell, have the interest       | of all owners | been conso    | lidated by communi                               | lizatio   |
| unitization, force   | -pooling, etc.? |                | is "yes" type  | of conse                              | didation                     |               |               |  |           |
| ∐ Yes                |                 |                |                |                                       | tually been consolida        | ted (Use reve | ree side of   |  |           |
| is form necessary.   |                 |                |                |                                       |                              |               |               |  |           |
| o allowable will b   | e assigned to   | the well ur    | it all intere  | sts have                              | been consolidated            | (by commun    | itization, u  | nitization, forced-                              | .booji    |
| therwise) or until   | a non-standa    | rd unit, elimi | inating such   | interest,                             | has been approved            | by the Divisi |               |  |           |
|                      |                 |                | T              | · · · · · · · · · · · · · · · · · · · |                              |               | OPERA         | TOR CERTIFICA                                    | TION      |
|                      | 1               |                |                |                                       | 1                            |               |               | reby persify the the in                          |           |
|                      | i               |                |                |                                       | 1                            | 11            |               | rein is true and comp<br>nowledge and belist.    | lete to   |
|                      | i               |                | 1              |                                       | i                            |               | ocat of may a | nomentally and seems.                            |           |
|                      | 1               |                | i              |                                       | i                            |               | Signature     | 1.11   |           |
|                      | 1               |                |                |                                       | i                            |               | / fra         | ile W Hais                                       | m         |
|                      | l<br>1          |                |                |                                       | 1                            |               | Printed Na    |  |           |
|                      | İ               |                |                |                                       | ļ.                           |               | Charle        | s W. Horsman                                     |           |
|                      | +               |                |                |                                       |                              | 7             | Position      |  |           |
|                      | j               |                |                |                                       |                              | 1 1           |               | ct Engineer                                      |           |
|                      |                 |                | -              |                                       | }                            | 1 1           | Devon         | Energy Corpo                                     | rati      |
|                      | 1               |                | 1              |                                       | 1                            |               | Date          | Literay corpo                                    | Lacı      |
|                      | l               |                |                |                                       | 1 1                          |               |               | er 17, 1991                                      |           |
|                      | ĺ               |                |                |                                       | j                            |               | Decemb        | CI 17, 1331                                      |           |
|                      | i               |                | ļ              |                                       | ĺ                            |               | SURVE         | YOR CERTIFICA                                    | MON       |
|                      |                 |                |                |                                       |                              |               |               |  |           |
|                      |                 |                |                |                                       |                              |               |               | lify that the well lees<br>was plotted from fiel |           |
|                      | 1               |                |                |                                       | l l                          |               |               | ye made by me or                                 | under     |
|                      | !               |                |                |                                       | 3468.7                       |               | supervison.   | and that the same to                             | , trus    |
|                      | !               |                | ļ              |                                       | 3468.7———                    | 3473.7        | bolist.       | The best of may and                              | mes all a |
|                      | l l             |                |                |                                       |                              | - 900         |               |  |           |
|                      | I               |                |                |                                       | 3469.1                       | 34 74.5       | Date Surv     | DEC. 4, 1991                                     |           |
|                      | ļ               |                |                |                                       | <b>!</b>                     |               | Signature     | k Seel piliting                                  |           |
| <u> </u>             | +               |                | _ <del> </del> |                                       | <del></del>                  |               | Profession    | al Surveyor                                      |           |
|                      | l               |                |                |                                       | 1                            | 1             |               | sal still oron                                   | 70.       |
|                      | 1               |                |                |                                       | 1                            |               | 2.5           |  | 3.3       |
|                      | 1               |                |                |                                       | 1 .                          |               | う             | 3 No. 1  |           |
|                      | j               |                |                |                                       | 1 -                          |               | <i>有</i> 是    | 1/1/12   | 1/)-      |
|                      | i               |                |                | * .                                   | j                            |               | NM            | 18/N 11. To                                      | Não       |
| 1                    | i               |                |                |                                       | <u> </u>                     |               | Certificat    | No. / JOHN W. W                                  | EST.      |
|                      | 1               |                |                |                                       | ; 1                          | 1             | 1 7 3         | RONALD A EIOS                                    |           |
|                      |                 |                |                |                                       |                              |               |               | GARY L'VO  | NES,      |
| 330 660 9            | 90 1320 165     | 0 1980 2310    | 2840           | 2000                                  | 1500 1000                    | 500 0         | 1             | 91-11-0460                                       |           |

#### DRILLING PROGRAM

Attached to Form 3160-3 Devon Energy Corporation Todd "23" Federal #4 1800' FSL & 900' FEL Section 23-T23S-R31E Eddy County, New Mexico

## 1. Geologic Name of Surface Formation:

Permian

## 2. Estimated Tops of Important Geologic Markers:

| Surface       |
|---------------|
| 3650 <b>′</b> |
|               |
| 4370'         |
| 4410'         |
| 6010 <b>′</b> |
| 8025 <b>′</b> |
| 8230'         |
| 8350′         |
|               |

#### 3. Estimated Depths of Anticipated Fresh Water, Oil or Gas:

| Upper Permian Sands      |               | Fresh Water |
|--------------------------|---------------|-------------|
| Delaware                 | 4370′         | Oil         |
| Delaware (Cherry Canyon) | 6010 <b>′</b> | Oil         |
| Delaware (Brushy Canyon) | 8025 <b>′</b> | Oil         |

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 13-3/8" casing at 600' and circulating cement back to surface. Potash and Salt will be protected by setting 8-5/8" casing at 4400' and circulating cement to surface. The Delaware intervals will be isolated by setting 5-1/2" casing to total depth and circulating cement above the base of the 8-5/8" casing.

## 4. <u>Casing Program</u>:

| <u> Hole Size</u>         | <u>Interval</u>            | Csq OD                   | <u>Weight, Grade, Type</u>   |
|---------------------------|----------------------------|--------------------------|--|
| 25"<br>17-1/2"<br>12-1/4" | 0-40'<br>0-600'<br>0-4400' | 20"<br>13-3/8"<br>8-5/8" | Conductor, 0.30" wall<br>48#, H-40, ST&C, New, R-3<br>32#, K-55, S-80, ST&C,<br>New, R-3 |
| 7-7/8"                    | 0-TD                       | 5-1/2"                   | 15.5 & 17#, K-55, LT&C,<br>New, R-3  |

## Casing Program:

| 20" Conductor Casin | ng: Cemented | with | ready-mix | to | surface. |
|---------------------|--------------|------|-----------|----|----------|
|---------------------|--------------|------|-----------|----|----------|

13-3/8" Surface Casing: Cemented to surface using 300 sx Poz
"C" (35:65) + 6% Gel + 1/4# sx
Flocele followed by 200 sx Class "C"
+ 2% CC.

8-5/8" Intermediate Cemented to surface with 1600 sx Poz Casing:

"C" (35:65) + 6% Gel + 10% Salt + 1/4# sx Flocele followed by 200 sx Class "C" + 1% CC.

5-1/2" Production Cemented with 360 sx Class "H" Casing: (50:50) Poz + 2% Gel + 5% Salt + 1/4# sx Flocele followed by 100 sx

Class "H". Stage Tool at  $\pm 6100'$ . Cemented with

300 sx Poz "H" (35:65) + 6% Gel + 5% Salt + 1/4# sx Flocele followed by 100 sx Class "H".

The above cement volumes could be revised pending the caliper measurement from the open hole logs. The top of cement is designed to reach above the 8-5/8" casing at 4400'.

## 5. <u>Minimum Specifications for Pressure Control</u>:

The blowout preventer equipment (BOP) shown in exhibit #1 will consist of a double ram type (3000 psi WP) preventer and a bag-type (Hydril) preventer (3000 psi WP). Both units will be hydraulically operated and the ram type preventer will be equipped with blind rams on top and 4-1/2" drill pipe rams on

TODD "23" FEDERAL #4
DRILLING PROGRAM
PAGE 3

bottom. Both BOP's will be installed on the 13-3/8" surface casing and utilized continuously until total depth is reached. All BOP's and associated equipment will be tested to 1000 psi before drilling out the 13-3/8" casing shoe. Prior to drilling out the 8-5/8" casing shoe the BOP's will be tested to 3000 psi and the Hydril tested to 2100 psi (70% of rated working pressure).

Pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These functional tests will be documented on the daily drillers log. A 2" kill line and 3" choke line will be incorporated in the drilling spool below the ram-type BOP. Other accessory BOP equipment will include a kelly cock, floor safety valve, choke lines and choke manifold having 3000 psi WP rating.

## 6. Types and Characteristics of the Proposed Mud System:

The well will be drilled to total depth using brine, cut brine and polymer mud systems. Depths of systems are as follows:

| <u>Depth</u>                   | Type                    |       |         | Weight<br>(ppg)    | Viscosity<br>(1/sec) | Waterloss<br>(cc)                 |
|--------------------------------|-------------------------|-------|---------|--------------------|----------------------|-----------------------------------|
| 0-600'<br>600-4400'<br>4400-TD | Fresh<br>Brine<br>Fresh | Water | Polymer | 8.8<br>10.0<br>8.8 | 34-36<br>28<br>32-36 | No Control<br>No Control<br>15-20 |

The necessary mud products for weight addition and fluid loss control will be on location at all times.

## 7. Auxiliary Well Control and Monitoring Equipment:

- A. A kelly cock will be in the drill string at all times.
- B. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
- C. A mud logging unit having Hydrogen Sulfide detection equipment will be in operation after drilling out the 8-5/8" casing shoe until total depth is reached.

#### 8. Logging, Testing and Coring Program:

- A. Drillstem tests will be based on geological sample shows.
- B. The open hole electrical logging program will be:

Total Depth to Intermediate Casing - Dual Laterolog-Micro Laterolog with Sp and Gamma Ray. Compensated Neutron - Z-Density Log with Gamma Ray and Caliper.

Total Depth to Surface - Compensated Neutron with Gamma Ray.

- C. No coring program is planned.
- D. Additional testing will be initiated subsequent to setting the 5-1/2" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests.

## 9. Abnormal Pressures, Temperatures and Potential Hazards:

No abnormal pressures or temperatures are foreseen. The anticipated bottom hole temperature at total depth is 125 degrees and maximum bottom hole pressure is 2900 psig. No Hydrogen Sulfide gas have been reported or known to exist at these depths in this area. No major loss circulation intervals have been encountered in adjacent wells.

#### 10. Anticipated Starting Date and Duration of Operations:

Notice of Staking (NOS) has been sent to the Carlsbad, New Mexico BLM office and Barry Hunt of that office was present for staking. The pad site and access road have been flagged by John West Engineering Company. A Cultural Resources Examination has been completed by Pecos Archeological Consultants and a copy forwarded to the Carlsbad, New Mexico BLM office.

Road and location preparation will not be undertaken until approval has been received from the BLM. The anticipated spud date is approximately January 20, 1991. The drilling operation should require approximately 20 days. If the well is deemed productive, completion operations will require an additional 30 days of testing to ascertain whether permanent production facilities will be constructed.

#### MINIMUM BLOWOUT PREVENTER REQUIREMENTS

#### 3,000 psi Working Pressure

#### 3 MWP

TODD "23" FEDERAL #4
EDDY COUNTY, NEW MEXICO
EXHIBIT #1

CONFIGURATION A

#### STACK REQUIREMENTS

| No. | ltem   |                  | Min.<br>1.D. | Min.<br>Nominal |
|-----|--|------------------|--------------|-----------------|
| 1   | Flowline   |                  |              |                 |
| 2   | Fill up line   |                  |              | 2"              |
| 3   | Drilling nipple  |                  |              |                 |
| 4   | Annular preventer  |                  |              |                 |
| 5   | Two single or one dual hy operated rams                  | ydraulically     |              |                 |
| 6a  | Drilling spool with 2" min<br>3" min choke line outlets  |                  |              |                 |
| 6b  | 2" min. kill line and 3" m<br>outlets in ram. (Alternate |                  |              |                 |
| 7   | Valve  | Gate □<br>Plug □ | 3-1/8"       |                 |
| 8   | Gate valve—power oper                                    | ated             | 3-1/8"       |                 |
| 9   | Line to choke manifold                                   |                  |              | 3"              |
| 10  | Valves   | Gale □<br>Plug □ | 2-1/16"      |                 |
| 11  | Check valve  |                  | 2-1/16"      |                 |
| 12  | Casing head  |                  |              |                 |
| 13  | Valve  | Gate □<br>Plug □ | 1-13/16"     |                 |
| 14  | Pressure gauge with ne                                   | edle valve       |              |                 |
| 15  |  |                  |              | 2"              |

| ②————————————————————————————————————— |
|--|
| ANNULAR PREVENTER 4                    |
| BLIND RAMS                             |
| PIPE RAMS                              |
| (B) (DRILLING) (DRILLING)              |
| SPOOL 7 13 9                           |
| (6) CASING (2) (4)                     |

| ОРТІО            | NAL      |
|------------------|----------|
| 16 Flanged valve | 1-13/16" |

## CONTRACTOR'S OPTION TO FURNISH:

- All equipment and connections above bradenhead or casinghead. Working pressure of preventers to be 3,000 psi, minimum.
- Automatic accumulator (80 gallon, minimum) capable of closing BOP in 30 seconds or less and, holding them closed against full rated working pressure.
- BOP controls, to be located near drillers position.
- 4. Kelly equipped with Kelly cock.
- 5.Inside blowout prevventer or its equivalent on derrick floor at all times with proper threads to fit pipe being used.
- 6.Kelly saver-sub equipped with rubber casing protector at all times.
- 7.Plug type blowout preventer tester.
- Extra set pipe rams to fit drill pipe in use on location at all times.
- 9. Type RX ring gaskets in place of Type R.

#### MEC TO FURNISH:

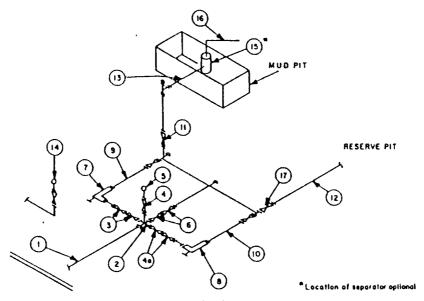
- Bradenhead or casinghead and side valves.
- 2. Wear bushing, if required.

#### **GENERAL NOTES:**

- Deviations from this drawing may be made only with the express permission of MEC's Drilling Manager.
- 2.Alt connections, valves, fittings, piping, etc., subject to well or pump pressure must be flanged (sultable clamp connections acceptable) and have minimum working pressure equal to rated working pressure of preventers up through chore. Valves must be full opening and suitable for high pressure mud service.
- Controls to be of standard design and each marked, showing opening and closing position.
- 4. Chokes will be positioned so as not to hamper or delay changing of choke beans. Replaceable parts for adjustable choke, other bean sizes, retainers, and choke wrenches to be conveniently located for immediate use.
- All valves to be equipped with handwheels or handles ready for immediate use.
- 6. Choke lines must be sultably anchored.

- 7. Handwheets and extensions to be connected and ready for use.
- Valves adjacent to drilling spool to be kept open. Use outside valves except for emergency.
- All seamless steel control plping (3000 psi working pressure) to have flexible joints to avoid stress. Hoses will be permitted.
- Casinghead connections shall not be used except in case of emergency.
- 11.Do not use kill line for routine fill-up operations.

3 MWP - 5 MWP - 10 MWP



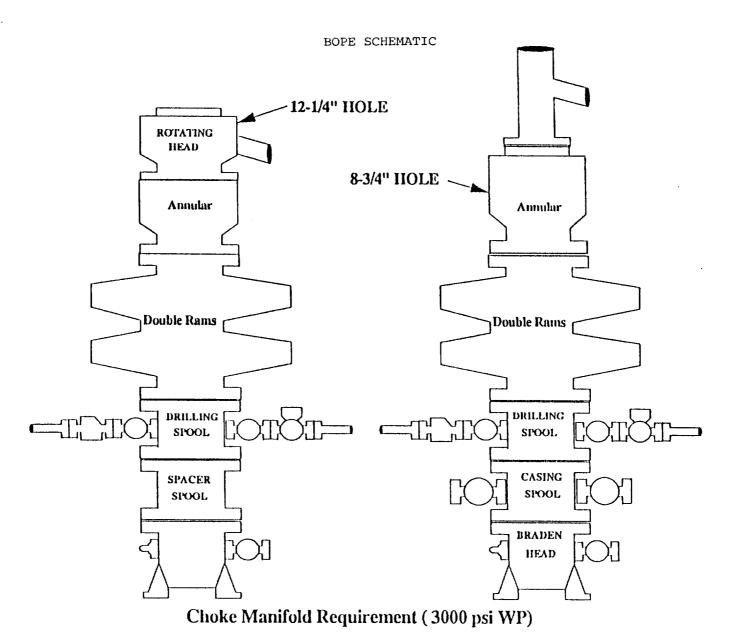
BEYOND SUBSTRUCTURE

|          |  |          | MINI      | NUM REQU | IREMENTS | 3         |        |          |            |        |
|----------|--|----------|-----------|----------|----------|-----------|--------|----------|------------|--------|
|          |  |          | 3,000 MWP |          |          | 5,000 MWP |        |          | 10,000 MWF | )      |
| No       |  | ID.      | NOMINAL   | RATING   | I.D.     | NOMINAL   | RATING | I.D.     | NOMINAL    | RATING |
| <u> </u> | Line from drilling spool                         |          | 3"        | 3,000    |          | 3-        | 5,000  |          | 3″         | 10,000 |
| 2        | Cross 3"x3"x3"x2"                                |          |           | 3,000    |          |           | 5,000  |          |            |        |
| •        | Cross 3"x3"x3"x3"                                |          |           |          |          |           |        |          | l          | 10,000 |
| 3        | Valves(1) Gate □<br>Plug □(2)                    | 3-1/8"   |           | 3,000    | 3-1/8*   |           | 5,000  | 3-1/8*   |            | 10,000 |
| 4        | Valve Gate □ Plug □(2)                           | 1-13/16" |           | 3,000    | 1-13/16" |           | 5,000  | 1-13/16* |            | 10,000 |
| 4a       | Valves(1)  | 2-1/16"  |           | 3,000    | 2-1/16"  |           | 5,000  | 3-1/8*   |            | 10,000 |
| 5        | Pressure Gauge                                   |          |           | 3,000    |          |           | 5,000  |          |            | 10,000 |
| 6        | Valves Gate □ Plug □(2)                          | 3-1/8"   |           | 3,000    | 3-1/8"   |           | 5,000  | 3-1/8*   |            | 10,000 |
| 7        | Adjustable Choke(3)                              | 2*       |           | 3,000    | 2.       |           | 5,000  | 2*       |            | 10,000 |
| 8        | Adjustable Choke                                 | 1"       |           | 3,000    | 1"       |           | 5,000  | 2"       |            | 10,000 |
| 9        | Line   |          | 3.        | 3,000    |          | 3*        | 5,000  |          | 3″         | 10,000 |
| 10       | Line   |          | 2"        | 3,000    |          | 2*        | 5,000  |          | 3"         | 10,000 |
| 11       | Valves Gate □ Plug □(2)                          | 3-1/8*   |           | 3,000    | 3-1/8*   |           | 5,000  | 3-1/8"   |            | 10,000 |
| 12       | - <del> </del>                                   |          | 3*        | 1,000    |          | 3*        | 1,000  |          | 3*         | 2,000  |
| 13       | Lines  |          | 3.        | 1,000    |          | 3.        | 1,000  | •        | 3*         | 2,000  |
| 14       | Remote reading compound standpipe pressure gauge |          |           | 3,000    |          |           | 5,000  |          |            | 10,000 |
| 15       | Gas Separator                                    |          | 2'x5'     |          |          | 2'x5'     |        |          | 2'x5'      |        |
| 16       | Line   |          | 4"        | 1,000    |          | 4"        | 1,000  | <u> </u> | 4"         | 2,000  |
| 17       | Valves Gate □ (2)                                | 3-1/8"   |           | 3,000    | 3-1/8"   |           | 5,000  | 3-1/8*   |            | 10,000 |

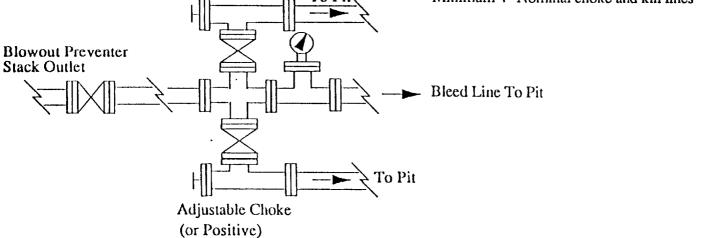
- (1) Only one required in Class 3M.
- (2) Gate valves only shall be used for Class 10M.
- (3) Remote operated hydraulic choke required on 5,000 psi and 10,000 psi for drilling.

#### **EQUIPMENT SPECIFICATIONS AND INSTALLATION INSTRUCTIONS**

- 1. All connections in choke manifold shall be welded, studded, flanged or Cameron clamp of comparable rating.
- 2. All flanges shall be API 6B or 6BX and ring gaskets shall be API RX or BX. Use only BX for 10 MWP.
- 3. All lines shall be securely anchored.
- 4. Chokes shall be equipped with tungsten carbide seats and needles, and replacements shall be available.
- Choke manifold pressure and standpipe pressure gauges shall be available at the choke manifold to assist in regulating
  chokes. As an alternate with automatic chokes, a choke manifold pressure gauge shall be located on the rig floor in conjunction with the standpipe pressure gauge.
- 6. Line from drilling spool to choke manifold should be as straight as possible. Lines downstream from chokes shall make turns by large bends or 90° bends using bull plugged tees.
- 7. Discharge lines from chokes, choke bypass and from top of gas separator should vent as far as practical from the well.



Adjustable Choke Minimum 4" Nominal choke and kill lines To Pit



# Attachment to Exhibit #1 NOTES REGARDING BLOWOUT PREVENTORS Todd "23" Federal #4 Eddy County, New Mexico

- 1. Drilling nipple will be constructed so it can be removed mechanically without the aid of a welder. The minimum internal diameter will equal BOPE bore.
- 2. Wear ring will be properly installed in head.
- 3. Blowout preventor and all associated fittings will be in operable condition to withstand a minimum 3000 psi working pressure.
- 4. All fittings will be flanged.
- 5. A full bore safety valve tested to a minimum 3000 psi W.P. with proper thread connections will be available on the rotary rig floor at all times.
- 6. All choke lines will be anchored to prevent movement.
- 7. All BOP equipment will be equal to or larger in bore than the internal diameter of the last casing string.
- 8. Will maintain a kelly cock attached to the kelly.
- 9. Hand wheels and wrenches will be properly installed and tested for safe operation.
- 10. Hydraulic floor control for blowout preventor will be located as near in proximity to driller's controls as possible.
- 11. All BOP equipment will meet API standards and include a minimum 40 gallon accumulator having two independent means of power to initiate closing operation.

## Attachment to Exhibit #4

## STATUS OF WELLS WITHIN ONE MILE RADIUS Todd "23" Federal #4 Section 23-T23S-R31E

Eddy County, New Mexico
December 1991

| Sec. 23-T23S-R31E   |   |  |
|---|---|--|
| Devon Energy Corp   |   |  |
| Todd "23" Federal #2  | 660' FSL & 1650' FEL<br>1980' FSL & 1650' FEL<br>1980' FSL & 1800' FEL  | Delaware Oil Well  |
| Sec. 24-T23S-R31E   |   |  |
| Amax Petroleum  |   |  |
| Federal 24-1<br>Federal 24-2<br>Federal 24-3  | 3300' FSL & 4813' FEL<br>2310' FSL & 4950' FEL<br>4290' FSL & 4290' FEL   | Delaware Oil Well<br>Delaware Oil Well<br>Delaware Oil Well  |
| Sec. 25-T23S-R31E   |   |  |
| Texaco Inc.   |   |  |
| Todd "25" Federal 1-X   | 3300' FSL & 3310' FEL   | Morrow Gas Well  |
| Sec. 26-T23S-R31E   |   |  |
| Devon Energy Corp   |   |  |
| Todd "26" Federal #1 Todd "26" Federal #2 Todd "26" Federal #3 Todd "26" Federal #4 Todd "26" Federal #5 Todd "26" Federal #6 | 3300' FSL & 3300' FEL<br>3300' FSL & 1650' FEL<br>3300' FSL & 1980' FEL<br>4620' FSL & 1980' FEL<br>2310' FSL & 1980' FEL<br>4620' FSL & 990' FEL | Atoka Gas Well Delw Oil Well-TA Delw Wtr Inj Well Delaware Oil Well Delaware Oil Well Delw Oil Well-TA |

#### SURFACE USE AND OPERATING PLAN

Attachment to Form 3160-3 Devon Energy Corporation Todd "23" Federal #4 1800' FSL & 900' FEL Section 23-T23S-R31E Eddy County, New Mexico

#### 1. Existing Roads:

- A. The well site and elevation plat for the proposed Todd "23" Federal #4 is reflected on Exhibit #2. It was staked by John West Engineering Company, Hobbs, New Mexico.
- B. All roads into the location are depicted in Exhibit #3. County road #798 will be used to access the location. No upgrades to roads other than the access into location from the county road will be necessary.
- C. Directions to location: Travel west-northwest from Jal, N.M. approximately 33 miles on state highway #128 to county road #798, just into Eddy county from Lea county. Turn north (right) on road #798 and go roughly 2.5 miles to the wellsite access road. Turn west (left) and travel about 600 feet into the well.

## 2. Proposed Access Road:

Exhibit #3 shows the 600' of new access road to be constructed. It will be constructed as follows:

- A. The maximum width of the road will be fifteen (15) feet. Sufficient width (approximately 80') will be provided at the point of entry from county road #798 to allow for trucks to turn.
- B. It will be crowned and made of 6 inches of rolled and compacted caliche and will reside in a east to west direction. Water will be deflected, as necessary, to avoid accumulation and prevent surface erosion.
- C. A culvert will be required at the point of entry. It will be of sufficient size (12-18") to not result in ponding of water and allow for adequate drainage.

- D. Surface material will be native caliche. This material will be obtained from a BLM approved pit nearest in proximity to the location.
- E. The average grade will be approximately 1%.
- F. No cattleguards, grates or fence cuts are necessary.
- G. No turnouts are planned.
- H. The proposed access road as seen on exhibit #3 has been center line flagged by John West Engineering Company, Hobbs, New Mexico.

## 3. Location of Existing Wells:

Exhibit #4 shows all existing wells within a one-mile radius of the proposed Todd "23" Federal #4. There are six producing Delaware oil wells, two inactive Delaware oil wells, two producing Morrow-Atoka gas wells, one active Atoka gas well and one Delaware injection well. A list of the wells is depicted on exhibit #4 attachment.

## 4. Location of Existing and/or Proposed Facilities:

A. Devon Energy Corporation operates one production facility on this lease. It is as follows:

(Cherry Canyon) Field - Section 23 Tank Battery Wells #1 & #2

- B. In the event the well is found productive, the probable production equipment will be as follows:
  - a. Production facilities as outlined on exhibit #5 will be positioned on the drilling pad. The area of the production site will be roughly 200' x 250'.
  - b. The tank battery, all connections and all lines will adhere to API standards.
  - c. The well will be operated by means of a gas driven prime mover. No power will be required.

- d. Any caliche required to build the firewall around the battery will be obtained from a BLM approved caliche pit.
- D. If the well is productive, rehabilitation plans are as follows:
  - a. The reserve pit will be back-filled after the contents of the pit are dry (within 120 days after completion, weather permitting).
  - b. Caliche from unused portions of the drill pad will be removed. The original topsoil from the wellsite will returned to the location. The drill site will then be contoured to the original natural state. Reseeding will be to BLM specifications.
- 5. Location and Type of Water Supply:

The Todd "23" Federal #4 will be drilled using a combination of brine and fresh water mud systems (outlined in drilling program). The water will be obtained from commercial water stations in the area and hauled to location by transport truck using the existing and proposed roads shown in exhibit #3. No water well will be drilled on the location.

#### 6. Source of Construction Materials:

All caliche utilized for the drilling pad and proposed access road will be obtained from a existing BLM approved pit. All roads will be constructed of 6" rolled and compacted caliche.

## 7. Methods of Handling Water Disposal:

- A. Drill cuttings will be disposed into the reserve pit.
- B. Drilling fluids will be contained in steel mud tanks. The reserve pit will contain excess drilling fluid or fluid from the well during drilling, cementing, and completion operations. The reserve pit will be an earthen pit roughly 125' x 125' x 6' in size.

- C. The reserve pit will be fenced on three sides throughout drilling operations and will be totally isolated upon removal of the rotary rig. The pit will be lined using a 5-7 mil plastic to minimize loss of drilling fluids and saturation of the ground with brine water used to drill from 600' to 4400'.
- D. Water produced from the well during completion operations will be disposed into a steel tank or reserve pit, if volumes prove excessive. After placing the well on production through the production facilities, all water will be collected in tanks and injected into the Todd "23" Federal #3 disposal well. Produced oil will be separated into steel stock tanks until sold.
- E. A portable chemical toilet will be available on the location for human waste during the drilling and completion operations.
- F. Garbage, trash and waste paper produced during drilling and completion operations will be buried in a separate "trash" pit covered with a minimum of 24 inches of dirt. All waste material will be contained to prevent scattering by the wind. All water, fluids, salt or other chemicals will be disposed in the reserve pit. No toxic waste or hazardous chemicals will be generated by this operation.
- G. All waste material will be removed or buried within 30 days after the well is either completed or abandoned. The reserve pit will be completed fenced and netted until it has dried. At the point the reserve pit is found sufficiently dry, it will be backfilled and reclaimed as outlined by BLM specifications. Only the portion of the drilling pad used by the production equipment (pumping unit) will remain in use. If the well is deemed non-commercial, only a dry hole marker will remain.

#### 8. Ancillary Facilities:

No campsite or other facilities will be constructed as a result of this well.

#### 9. Well Site Layout:

- A. The drill pad is shown on exhibit #6. Approximate dimensions of the pad, pits and general location of the rig equipment is displayed. Top soil will be stored adjacent to the pad until reclamation efforts are undertaken. Only modest cuts will be necessary to build the pad which will be covered with 6" of compacted caliche. Mr. Barry Hunt of the Carlsbad, New Mexico BLM office has observed the proposed pad construction area.
- B. No permanent living facilities are planned, but temporary trailers for the toolpusher, drilling foreman and mud logger may be on location throughout drilling operations.
- C. The reserve pit will be lined using plastic sheeting of 5-7 mil thickness.

## 10. Plans for Restoration of Surface:

- A. After concluding the drilling and/or completion operations, if the well is found non-commercial, the caliche will be removed from the pad and road and transported to the original caliche pit. The reserve pit area will be broken out and leveled after drying to a condition where these efforts are feasible. The original top soil will again be returned to the pad and road and contoured, as close as possible, to the original topography.
- B. All trash, garbage and pit lining will be buried or hauled away in order to return the location and road to their pristine nature. All pits will be filled and location leveled within 120 days after abandonment.
- C. The location and road will be rehabilitated and reseeded during the growing season as recommended by the BLM.
- D. The reserve pit will be fenced on three sides throughout drilling operations. After the rotary rig is removed, the reserve pit will be fenced on the fourth side and netted to preclude endangering wildlife. The fencing and netting will be in place until the pit is reclaimed.

E. If the well is deemed commercially productive, the reserve pit will be restored as documented in 10 (A) within 120 days subsequent to the completion date. Caliche from areas of the pad site not required for operations will be reclaimed and utilized in building the firewall at the tank battery site. If any additional caliche is needed at the new battery, it will be obtained from the nearest BLM approved cliche pit. The original top soil will be returned to the area of the drill pad not necessary to operate the well. These unused areas of the drill pad will be contoured, as close as possible, to match the original topography.

#### 11. Surface Ownership:

The lease and wellsite are located on Federal surface.

## 12. Other Information:

- A. The area surrounding the well site is grassland. The top soil is very sandy in nature. The vegetation is moderately sparse with native prairie grass, sagebrush, yucca and miscellaneous weeds.
- B. There is no permanent or live water in the general proximity of the location.
- C. A Cultural Resources Examination has been completed by Pecos Archeological Consultants and forwarded to the Carlsbad, New Mexico BLM office. The report references no cultural areas on either the access road or drilling pad.

#### 13. Lessees's and Operator's Representative:

The Devon Energy Corporation representative responsible for assuring compliance of the surface use plan is:

Chuck Horsman District Engineer Roy Henson Production Foreman

Devon Energy Corporation 1500 Mid-America Tower 20 North Broadway Oklahoma City, Oklahoma 73102-8250

Devon Energy Corporation P. O. Box 372 Monahans, Texas 79756-9977

Phone:

(405) 235-3611 (Office) (405) 348-5964 (Home)

(915) 943-3952 (Office) (915) 943-4759 (Home)

#### Certification:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access road; that I an familiar with the conditions that presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Devon Energy Corporation and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

Date: 12-17-91

Signed: Charle W Harana

Charles W. Horsman District Engineer

