

Form 3160-3  
(April 2004)

## OPERATOR'S COPY

R-111-POTASH

 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. NMA-0418220-A
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input 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
2. Name of Operator Devon Energy Production Company, LP		7. If Unit or CA Agreement, Name and No.
3a. Address 20 North Broadway Oklahoma City, Oklahoma City 73102-8260		8. Lease Name and Well No. Todd 27B Federal 2 36922
3b. Phone No. (include area code) 405-228-8699		9. API Well No. 30-015-35504
4. Location of Well (Report location clearly and in accordance with any State requirements) At surface NWNE 660' FNL & 2140' FEL At proposed prod. zone NWNE 660' FNL & 2140' FEL		10. Field and Pool, or Exploratory Ingle Well; Delaware
14. Distance in miles and direction from nearest town or post office* Approximately 30 miles southeast of Carlsbad.		11. Sec., T. R. M. or Blk and Survey or Area SEC 27 T23S R31E
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of acres in lease 720	17. Spacing Unit dedicated to this well 40
18. Distance from proposed location* to nearest well, drilling completed, applied for, on this lease, ft.	19. Proposed Depth TMD 8500'	20. BLM/BIA Bond No. on file C01104
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3411' GL	22. Approximate date work will start* 03/01/2007	23. Estimated duration 45 days

## 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>Judy A. Barnett</i>	Name (Printed/Typed) Judy A. Barnett	Date 12/04/2006
Title Regulatory Analyst		

Approved by (Signature) <i>Linda S. C. Rundell</i>	Name (Printed/Typed) Linda S. C. Rundell	Date 3/21/07
Title STATE DIRECTOR		

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)

APPROVAL FOR 1 YEAR

CARLSBAD CONTROLLED WATER BASIN

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

If earthen pits are used in  
association with the drilling of this  
well, an OCD pit permit must be  
obtained prior to pit construction.

**Additional Operator Remarks:**

Devon Energy Production Company, LP proposes to drill a Delaware well to 8,500' for commercial quantities of oil and gas. If the well is deemed noncommercial, the wellbore will be plugged and abandoned per Federal regulations. Devon Energy Production Co., LP plans to drill the well per the attached Drilling and Surface Use Plan.

**Directions To Location:** From the junction of State Hwy 128 and County Rd. 29, go north on County Rd. for approximately 2.3 miles to a lease road; then west winding northwest for approximately 1.0 mile to lease road, then proceed south for approximately 1.3 miles to dry hole marker and proposed lease road.

**Access Road:**

Approximately 1127.2' of access road will be required. Archeological survey's will be requested for the pad and access road.

**H2S:**

No H2S is anticipated to be encountered.

**LPC Timing Stipulation Areas:**

The location of this well does not fall in the LPC Timing Stipulation Area per BLM-CFO 2006 LPC Timing Stipulation Areas map.

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

DISTRICT II  
1301 W. Grand Avenue, Artesia, NM 86210

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 Department

**OIL CONSERVATION DIVISION**  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 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	Pool Code <b>33745</b>	Pool Name <u>Ingle Well, Delaware</u>
Property Code	Property Name <b>TODD "27B"</b>	Well Number <b>2</b>
OGRID No. <b>6137</b>	Operator Name <b>DEVON ENERGY PRODUCTION COMPANY LP</b>	Elevation <b>3411'</b>

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>B</b>	<b>27</b>	<b>23 S</b>	<b>31 E</b>		<b>660</b>	<b>NORTH</b>	<b>2140</b>	<b>EAST</b>	<b>EDDY</b>

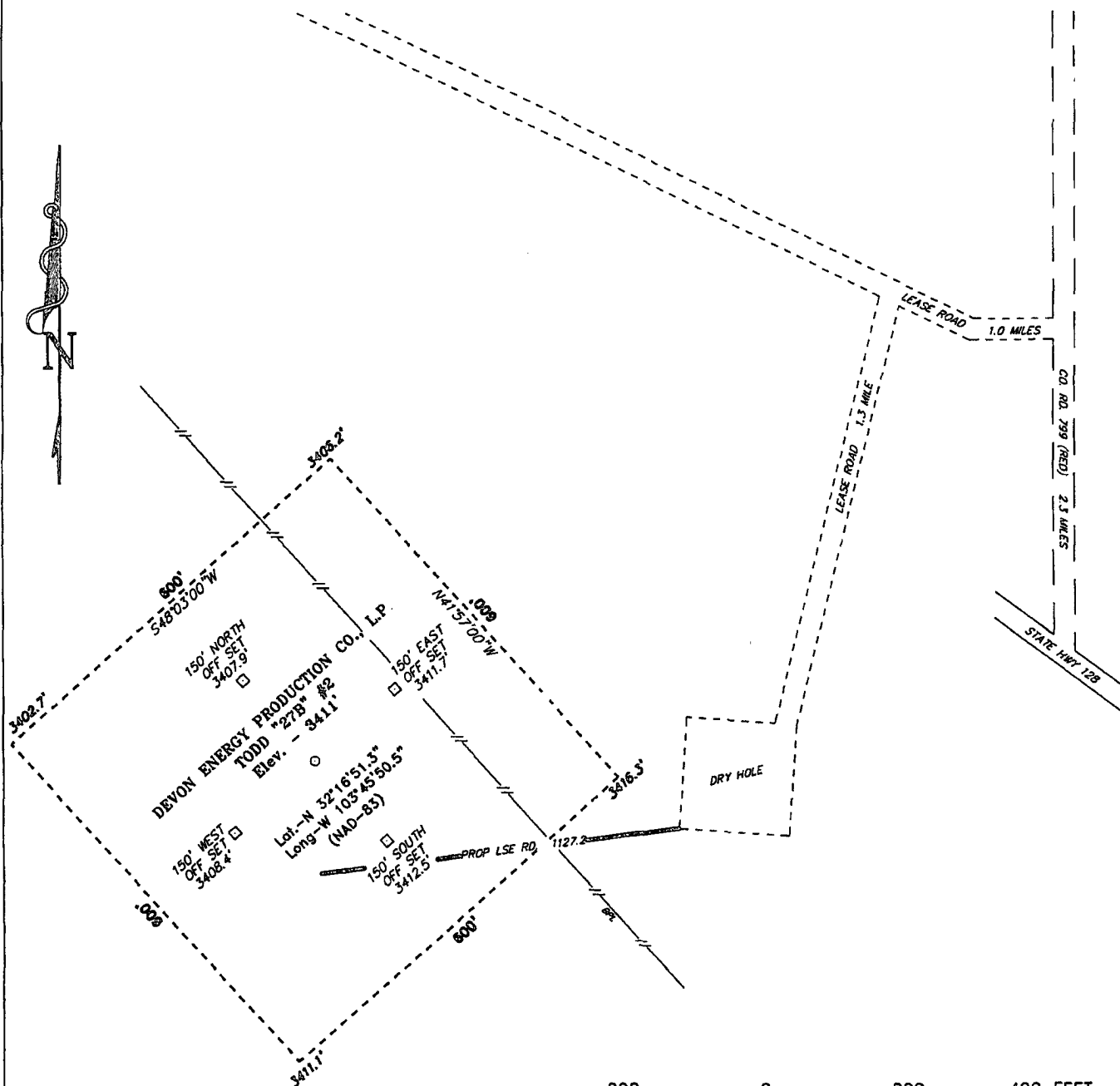
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres <b>40</b>	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

	<p><b>OPERATOR CERTIFICATION</b></p> <p>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 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.</p> <p><i>[Signature]</i> Signature _____ Date <u>11/03/06</u></p> <p>Judy A. Barnett Printed Name <u>Regulatory Analyst</u></p>
	<p><b>SURVEYOR CERTIFICATION</b></p> <p>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.</p> <p><b>NOVEMBER 03, 2006</b></p> <p>Date Surveyed _____ Signature <u>Gary L. Jones</u> Professional Surveyor No. <u>1221</u></p>
	<p>Certificate No. <u>Gary L. Jones</u> 7977</p>
	<p><b>BASIN SURVEYS</b></p>

SECTION 27, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



Directions to Location:

FROM THE JUNCTION OF STATE HWY 128 AND CO.  
RD. 29 (RED); PROCEED NORTH ON CO. RD. 2.3  
MILES TO LEASE ROAD. ON LEASE ROAD PROCEED  
WEST WINDING NORTHWEST 1.0 MILE TO LEASE ROAD;  
PN LEASE ROAD PROCEED SOUTH 1.3 MILE TO DRY  
HOLE MARKER AND PROPOSED LEASE ROAD.

200 0 200 400 FEET  
SCALE: 1" = 200'

**DEVON ENERGY PROD. CO., L.P.**

REF: TODD "27B" #2 / WELL PAD TOPO

THE TODD "27B" No. 2 LOCATED 660'

FROM THE NORTH LINE AND 2140' FROM THE EAST LINE OF  
SECTION 27, TOWNSHIP 23 SOUTH, RANGE 31 EAST,  
N.M.P.M., EDDY COUNTY, NEW MEXICO.

**BASIN SURVEYS** P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 17321

Drawn By: J. M. SMALL

Date: 11-06-2006 Disk: 17321W JMS

Survey Date: 11-03-2006 Sheet 1 of 1 Sheets

## DRILLING PROGRAM

Devon Energy Production Company, LP

### **Todd 27B Federal 2**

Surface Location: 660' FNL & 2140' FEL, Unit B, Sec 27 T23S R31E, Eddy, NM

Bottom hole Location: 660' FNL & 2140' FEL, Unit B, Sec 27 T23S R31E, Eddy, NM

**1. Geologic Name of Surface Formation:**

- a. Permian

**2. Estimated tops of geological markers:**

- |                     |       |
|---------------------|-------|
| a. Rustler          | 600'  |
| b. Top of Salt      | 900'  |
| c. Base of Salt     | 4070' |
| d. Bell Canyon      | 4330' |
| e. Cherry Canyon    | 5250' |
| f. Brushy Canyon    | 6625' |
| g. Bone Spring Lime | 8165' |

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

- |                  |       |       |
|------------------|-------|-------|
| a. Rustler       | Water | 600'  |
| b. Cherry Canyon | Oil   | 5250' |
| c. Brushy Canyon | Oil   | 6625' |

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 850' and circulating cement back to surface. Potash and salt will be protected by setting 8 5/8" casing at 4350' 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. Casing Program:**

<u>Hole Size</u>	<u>Interval</u>	<u>OD Csg</u>	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>
30"	0' - 40'	20"	NA	NA	Conductor
17 1/2"	0' - 850'	13 3/8"	48#	ST&C	H-40
11"	0' - 4350'	8 5/8"	32#	ST&C	J-55
7 7/8"	0' - 8800'	5 1/2"	15.5# & 17#	LT&C	J-55

**5. Cement Program:**

- |            |           |   |
|------------|-----------|---|
| a. 20"     | Conductor | Cement with ready-mix to surface.   |
| b. 13 3/8" | Surface   | Cement to surface using 500 sx Poz (35% Poz, 65% Class C, 6% gel) w/ 2% CaCl <sub>2</sub> , 1/4 #/sx celloflk + 200 sx Class C w/ 2% CaCl <sub>2</sub> , 1/4 #/sx celloflk. |

- c. 8 5/8" Intermediate Cement to surface w/ 1600 sx Poz (35% Poz, 65% Class C, 6% gel, 15% salt) w/ 1/4 #/sx celloflk + 200 sx Class C w/ 2% CaCl<sub>2</sub>, 1/4 #/sx celloflk.
- d. 5 1/2" Production Cement 1<sup>st</sup> stage w/ 525 sx Silica Lite (Class H) w/ 3% salt, 0.6% FL additive, 1/4 #/sx celloflk w/ DV tool at ~ 5500'. Cement 2<sup>nd</sup> stage w/ 225 sx Poz (35% Poz, 65% Class H, 6% gel) w/ 1/4 #/sx celloflk + 400 sx Class H w/ 4% gel, 5% salt, 1/4 #/sx celloflk.

The above cement volumes could be revised pending the caliper measurement from the open hole logs. The top of cement is designed to reach ~450' above the 8 5/8" casing seat at 4350'.

#### 6. Pressure Control Equipment:

The blowout preventor equipment (BOP) shown in Exhibit #1 will consist of a (3M system) double ram type (2000 psi WP) preventor and a bag-type (Hydril) preventor (2000 psi WP). Both units will be hydraulically operated and the ram type preventor will be equipped with blind rams on top and 4 1/2" drill pipe rams on bottom. The drilling head 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 **1200 psi with the rig pump before drilling out the 13 3/8" casing shoe (70% of 48#, H-40 casing)**. Prior to drilling out the 8 5/8" casing shoe, the BOP's and Hydril will be tested as per BLM Drilling Operations Order #2.

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.

#### 7. Types and Characteristics of the Proposed Mud System

<u>Depth</u>	<u>Mud Wt.</u>	<u>Visc</u>	<u>Fluid Loss</u>	<u>Type System</u>
0' - 850'	8.8	34-36	NC	Fresh Water
850' - 4350'	10.0	28	NC	Brine Water
4350' - TD	8.8	32-36	10-20	Fresh Water Polymer

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

#### 8. 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. Hydrogen Sulfide detection equipment will be in operation when drilling out the 13 3/8" casing shoe until the 5 1/2" casing is cemented. Breathing equipment will be on location upon drilling the 13 3/8" shoe until total depth is reached.

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

- a. Drill stem tests will be based on geological sample shows.
- b. The open hole electrical logging program will be:
  - i. Total Depth to Intermediate Casing      Gamma Ray./ Neutron Density Log
  - ii. Total Depth to Surface      Neutron with Gamma Ray
  - iii. Rotary sidewalls cores are planned.
  - iv. 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. Potential Hazards:**

- a. No abnormal pressures or temperatures are expected. There is no known presence of H<sub>2</sub>S in this area. If H<sub>2</sub>S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6 No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 2900 psi and Estimated BHT 130°.

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

- a. Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 21 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flow lines in order to place well on production.

Attachment to Exhibit #1  
NOTES REGARDING BLOWOUT PREVENTERS  
Devon Energy Production Company, LP

**Todd 27B Federal 2**

Surface Location: 660' FNL & 2140' FEL, Unit B, Sec 27 T23S R31E, Eddy, NM  
Bottom hole Location: 660' FNL & 2140' FEL, Unit B, Sec 27 T23S R31E, Eddy, NM

1. Drilling nipple will be constructed so it can be removed mechanically without the aid of a welder. The minimum internal diameter will equal BOP bore.
2. Wear ring will be properly installed in head.
3. Blowout preventer 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 WP 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 preventer 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.



## **HYDROGEN SULFIDE DRILLING OPERATIONS PLAN**

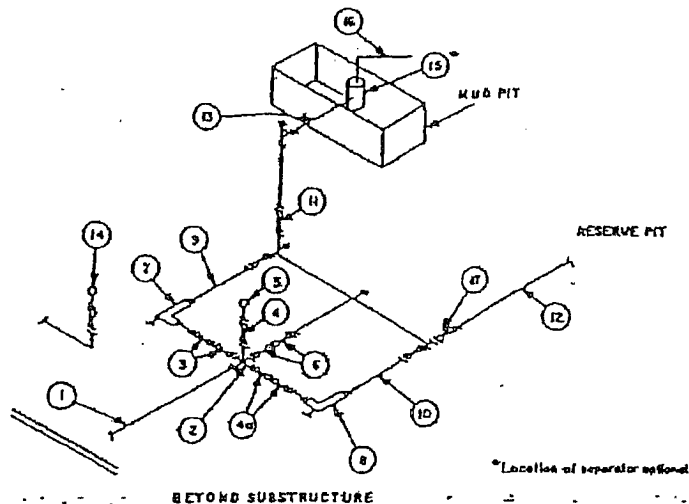
1. All Company and Contract personnel admitted on location must be trained by a qualified H2S safety instructor to the following:
  - a. Characteristics of H2S
  - b. Physical effects and hazards
  - c. Proper use of safety equipment and life support systems.
  - d. Principle and operation of H2S detectors, warning system and briefing areas
  - e. Evacuation procedures, routes and first aid.
  - f. Proper use of 30-minute pressure demand air pack.
2. H2S Detection and Alarm System
  - a. H2S detectors and audio alarm system to be located at bell nipple, end of blooie line (mud pit) and on derrick floor or doghouse.
3. Windsock and/or wind streamers
  - a. Windsock at mud pit area should be high enough to be visible
  - b. Windsock at briefing area should be high enough to be visible
  - c. There should be a windsock at entrance to location
4. Condition Flags and Signs
  - a. Warning Sign on access road to location
  - b. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow flag indicates potential pressure and danger. Red flag, danger, H2S present in dangerous concentration. Only emergency personnel admitted to location.
5. Well Control Equipment
  - a. See Exhibit "E" & "E-1"
6. Communication
  - a. While working under masks chalkboards will be used for communication.
  - b. Hand signals will be used where chalk board is inappropriate
  - c. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.
7. Drill stem Testing
  - a. Exhausts will be watered
  - b. Flare line will be equipped with an electric igniter or a propane pilot light in case gas reaches the surface.
  - c. If the location is near to a dwelling a closed DST will be performed.
8. Drilling contractor supervisor will be required to be familiar with the effects H2S has on tubular goods and other mechanical equipment.

If H2S is encountered, mud system will be altered if necessary to maintain control or formation. A mud gas separator will be brought into service along with H2S scavengers if necessary.

MINIMUM CHOKE MANIFOLD  
3,000, 5,000 and 10,000 PSI Working Pressure

3 MWP - 5 MWP - 10 MWP

Exhibit E



No.		MINIMUM REQUIREMENTS								
		3,000 MWP			5,000 MWP			10,000 MWP		
		LD.	NOMINAL	RATING	LD.	NOMINAL	RATING	LD.	NOMINAL	RATING
1	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"									10,000
3	Valves (1) Gate <input type="checkbox"/> Plug <input type="checkbox"/> (2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000
4	Valve Gate <input type="checkbox"/> Plug <input type="checkbox"/> (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 <input type="checkbox"/> Plug <input type="checkbox"/> (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 <input type="checkbox"/> Plug <input type="checkbox"/> (2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000
12	Lines		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		4"	2,000
17	Valves Gate <input type="checkbox"/> Plug <input type="checkbox"/> (2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000

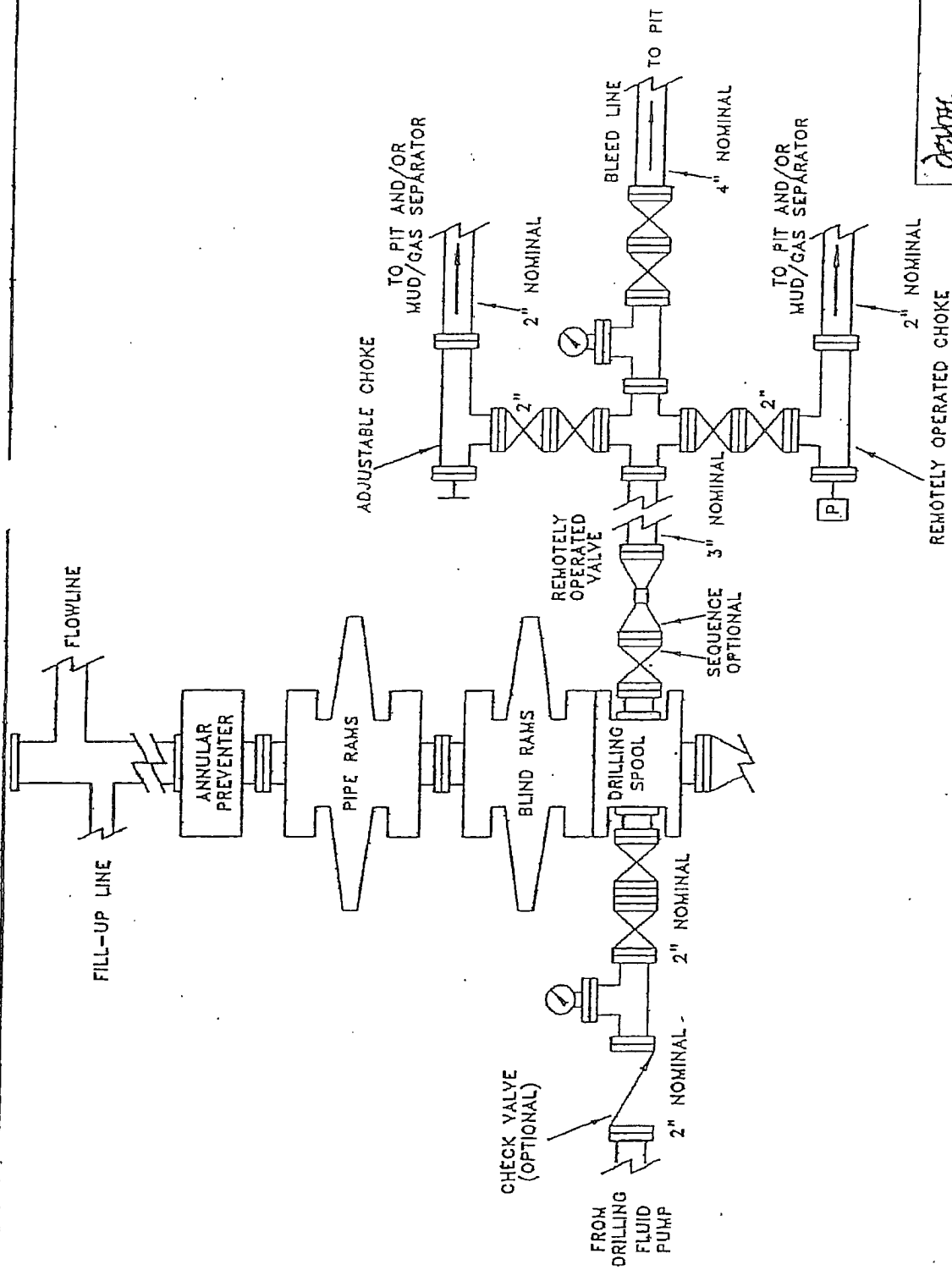
(1) Only one required in Class 3M.

(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.
5. 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 ball plugged tees.
7. Discharge lines from chokes, choke bypass and from top of gas separator should vent as far as practical from the well.



delphi

EXHIBIT 1

PROPOSED 5-M BOPE  
AND CHOKE ARRANGEMENT

91\m\plots  
5mb00a.dwg

SC

1/8/01

**CONDITIONS OF APPROVAL - DRILLING**

Well Name & No. Todd 27B Federal # 2  
Operator's Name: Devon Energy Prod Co LP  
Location: 660'FNL, 2140'FEL, SEC27, T23S, R31E, Eddy County, NM  
Lease: NM-0418220A

**I. DRILLING OPERATIONS REQUIREMENTS:**

1. The Bureau of Land Management (BLM) is to be notified at the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County; and the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:

**A. Spudding**

B. Cementing casing: 20 inch, 13.375 inch, 8.625 inch, 5.5 inch

**C. BOP tests**

2. A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Plan should be activated prior to drilling into the N/A Formation. A copy of the plan shall be posted at the drilling site.

3. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

4. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.

5. The API No. assigned to the well by NMOC D shall be included on the subsequent report of setting the first casing string.

6. A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.

7. Gamma-Ray/Neutron logs shall be run from the base of the Salado Formation to the surface; cable speed not to exceed 30 feet per minute.

**II. CASING:**

1. The 13.375 inch surface casing shall be set ABOVE THE SALT, AT LEAST 25 feet INTO THE RUSTLER ANHYDRITE @ APPROXIMATELY 850 FEET, below usable water and cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string. Operator will comply with all provisions of Order # R-12513 of Case # 13580.

2. The minimum required fill of cement behind the 8.625 inch salt protection casing is CIRCULATE CEMENT TO THE SURFACE. This casing string will be set at least 100' below the Salt, but no more than 600' below the salt, in the Basal Anhydrite or the Lamar Limestone.

3. The minimum required fill of cement behind the 5-1/2 inch production casing is cement shall CIRCULATE TO AT LEAST 500 FEET INTO THE 8.625 inch casing string.

5. Whenever a casing string is cemented in the R-111-P Potash Area, cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests.

### **III. PRESSURE CONTROL:**

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 13.375 inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) is 2000 psi.

3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.

- A variance to test the BOP and BOPE to the reduced pressure of 1200 psi with the rig pumps is approved.
- The tests shall be done by an independent service company.
- The results of the test shall be reported to the appropriate BLM office.
- Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
- Testing must be done in a safe workman-like manner. Hard line connections shall be required.

**Engineers can be reached at 505-706-2779 for any variances that might be necessary.**

F Wright 1/12/07