

# OCD-HOBBS

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>NMNM-100864</b>
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 <b>Devon Energy Production Company, LP</b>		7. If Unit or CA Agreement, Name and No.
3a. Address <b>20 North Broadway Oklahoma City, Oklahoma City 73102-8260</b>		8. Lease Name and Well No. <b>Rio Blanco 35 #3</b>
3b. Phone No. (include area code) <b>405-552-8198</b>		9. API Well No. <b>30-025-37860</b>
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface <b>1980' FSL &amp; 1830' FWL</b> At proposed prod. zone <b>Unit K</b>		10. Field and Book or Exploratory <b>Sec. 34 T22S R34E</b>
11. Distance in miles and direction from nearest town or post office* <b>Approximately 20 miles west of Jal, NM</b>		12. County or Parish <b>Lea County</b>
13. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any)		13. State <b>NM</b>
14. No. of acres in lease <b>360</b>	15. Spacing (unit dedicated to this well) <b>40 acres</b>	
16. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	17. BLM/BIA Bond No. on file	
18. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>3406' GL</b>	19. Approximate date work will start* <b>05/01/2006</b>	20. Estimated duration <b>32 days</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>Norvella Adams</b>	Date <b>03/06/2006</b>
Title <b>Sr. Staff Eng. Tech</b>		

Approved by (Signature) <b>/S/ Russell E. Sorensen</b>	Name (Printed/Typed) <b>/S/ Russell E. Sorensen</b>	Date <b>MAY 04 2006</b>
Title <b>ACTING FIELD MANAGER</b>	Office <b>CARLSBAD FIELD OFFICE</b>	

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.

**APPROVAL FOR 1 YEAR**

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)

Witness Surface Casing

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED

*Kz*

DISTRICT I  
1825 N. French Dr., Hobbs, NM 88240

DISTRICT II  
811 South First, Artesia, NM 88210

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

DISTRICT IV  
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised March 17, 1999

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

OIL CONSERVATION DIVISION

2040 South Pacheco  
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <b>30-025-37860</b>	Pool Code <b>✓</b>	Pool Name <b>Wildcat Delaware</b>
Property Code <b>32682</b>	Property Name <b>RIO BLANCO "33" Federal</b>	Well Number <b>3</b>
OGRID No. <b>6137</b>	Operator Name <b>DEVON ENERGY PRODUCTION CO., L.P.</b>	Elevation <b>3406'</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
K	33	22 S	34 E		1980	SOUTH	1830	WEST	LEA

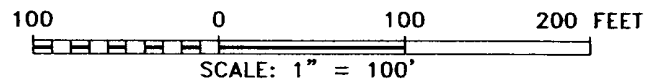
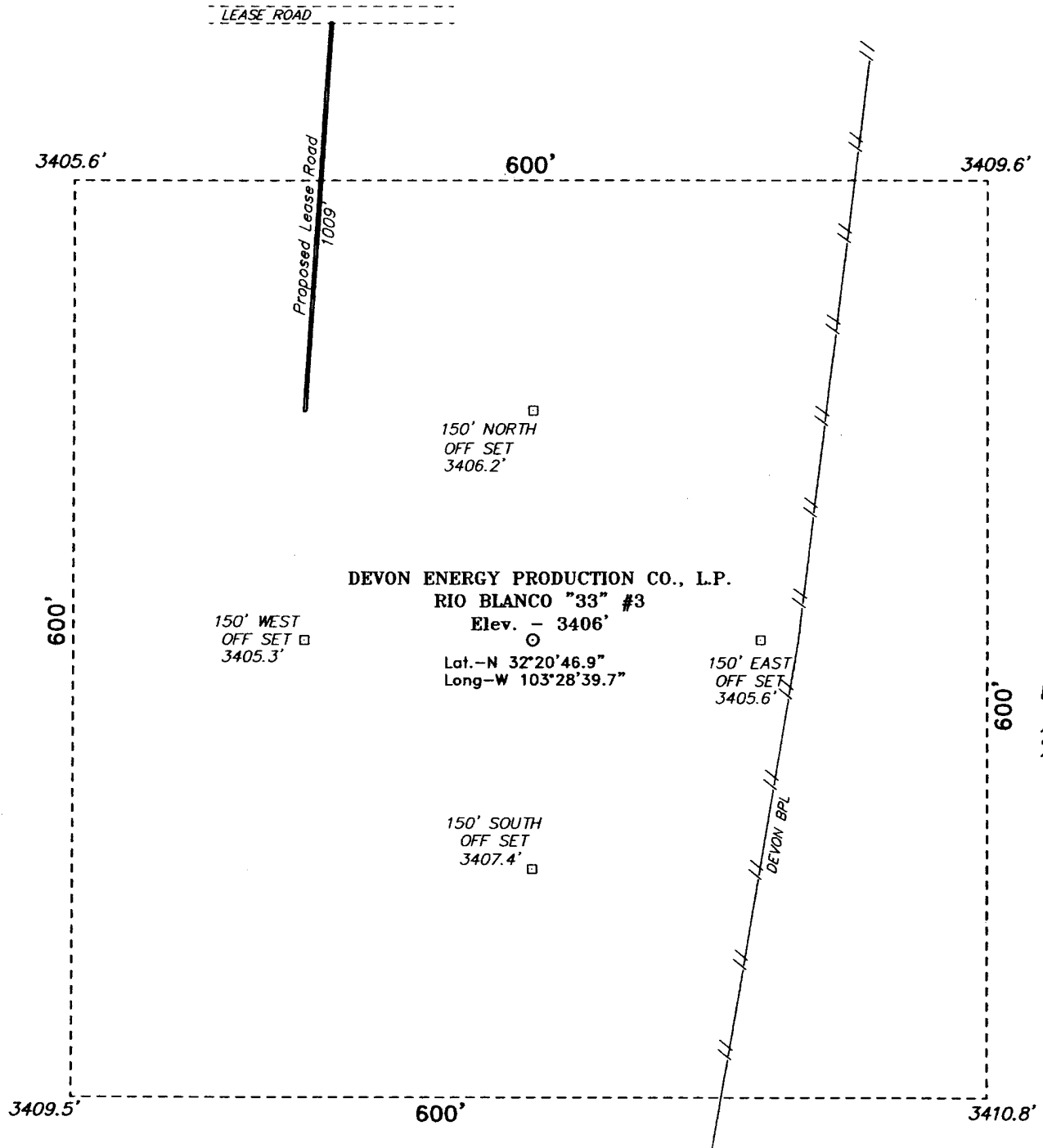
Bottom Hole Location If Different From Surface

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

	<b>OPERATOR CERTIFICATION</b>  <i>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</i>   Signature Norvella Adams Printed Name Sr. Staff Eng. Tech. Title February 27 2006 Date
	<b>SURVEYOR CERTIFICATION</b>  <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 belief.</i>  DECEMBER 12, 2005 Date Surveyed
	 Signature & Seal of Professional Surveyor
	Certificate No. <b>Gary L. Jones 7977</b> BASIN-SURVEYS

SECTION 33, TOWNSHIP 22 SOUTH, RANGE 34 EAST, N.M.P.M.,  
LEA COUNTY, NEW MEXICO.



Directions to Location:

FROM THE JUNCTION OF DELAWARE BASIN ROAD AND ANTELOPE ROAD, GO WEST ON DELAWARE BASIN ROAD FOR 0.7 MILES TO LEASE ROAD; THENCE NORTH ON LEASE ROAD FOR 1.6 MILE; THENCE EAST FOR 0.3 MILE TO PROPOSED LEASE ROAD.

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

W.O. Number: 6054 Drawn By: K. GOAD

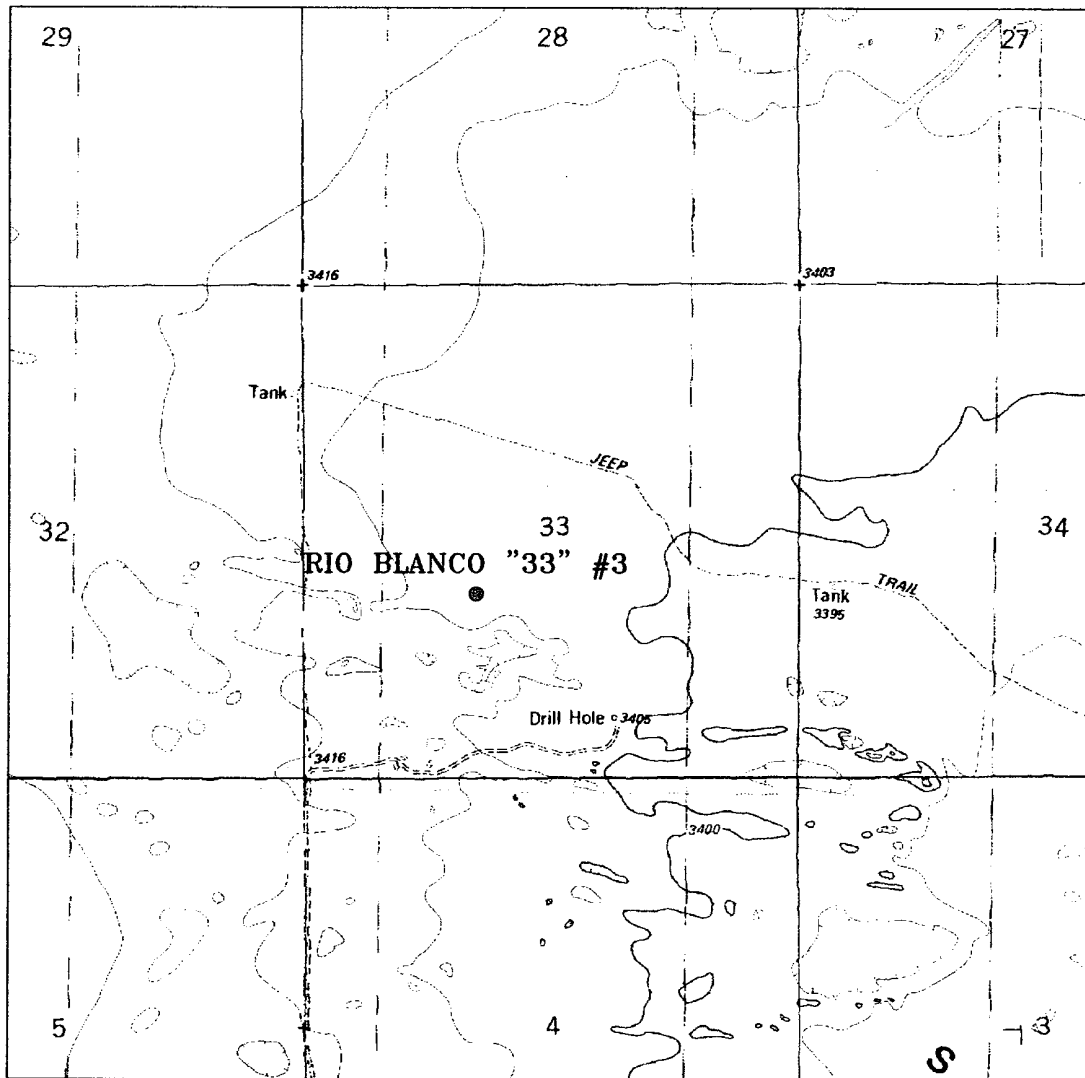
Date: 12-13-2005 Disk: KJG CD#4 - 6054A.DWG

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

REF: RIO BLANCO "33" No. 3 / Well Pad Topo

THE RIO BLANCO "33" No. 3 LOCATED 1980' FROM  
THE SOUTH LINE AND 1830' FROM THE WEST LINE OF  
SECTION 33, TOWNSHIP 22 SOUTH, RANGE 34 EAST,  
N.M.P.M., LEA COUNTY, NEW MEXICO.

Survey Date: 12-12-2005 Sheet 1 of 1 Sheets



### RIO BLANCO "33" #3

Located at 1980' FSL AND 1830' FWL  
 Section 33, Township 22 South, Range 34 East,  
 N.M.P.M., Lea County, New Mexico.



P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (505) 393-7316 - Office  
 (505) 392-3074 - Fax  
 basinsurveys.com

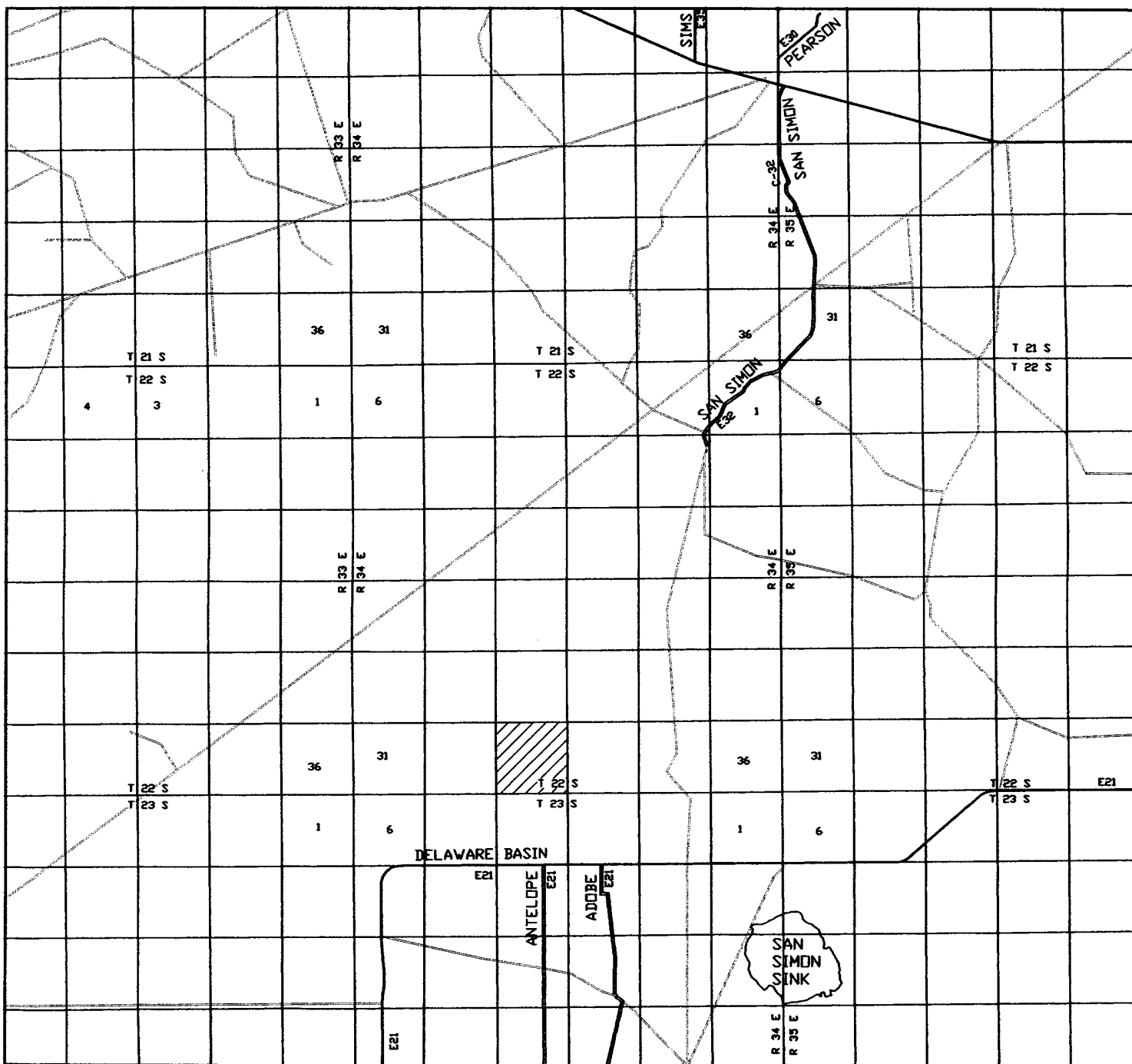
W.O. Number: 50544A - KJG CD#4

Survey Date: 12-12-2005

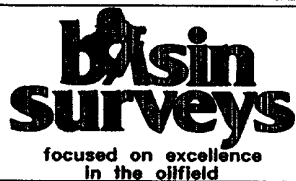
Scale: 1" = 2000'

Date: 12-13-2005

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



RIO BLANCO "33" #3  
 Located at 1980' FSL AND 1830' FWL  
 Section 33, Township 22 South, Range 34 East,  
 N.M.P.M., Lea County, New Mexico.



P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (505) 393-7316 - Office  
 (505) 392-3074 - Fax  
[basinsurveys.com](http://basinsurveys.com)

W.O. Number: 6054AA - KJG CD#4

Survey Date: 12-12-2005

Scale: 1" = 2 MILES

Date: 12-13-2005

DEVON ENERGY  
 PROD. CO., L.P.

## DRILLING PROGRAM

Devon Energy Production Company, LP  
**RIO BLANCO 33 FEDERAL #3**  
1980' FSL & 1830' FWL, Section 33 T22S, R34E  
Lea County, New Mexico

### 1. Geologic Name of Surface Formation

- a. Alluvium

### 2. Estimated Tops of Important Geologic Markers

- a. Rustler 2180'  
b. Delaware 5160'  
c. Bone Spring 8490'

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 the 13 3/8" casing at 2205' and circulating cement back to surface.

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

The estimated depths at which water, oil and gas will be encountered are as follows.

Water None expected in area  
Oil Bone Spring @ 9100'  
Gas Upper Morrow @ 13,100'  
Devonian @ 14,450''

### 4. Casing Program

Hole Size	Interval	OD Csg	Weight	Collar	Grade
17 1/2"	0 – 2205'	13 3/8"	54.5 & 61#	ST&C	J55
12 1/4:"	0 - 5155'	9 5/8"	40#	LT&C	J55 & N80
8 3/4"	0 - 8600'	5 1/2"	17#	LT&C	N80

### 5. Cement & Setting Depth:

13 3/8" Surface Cement with Lead – 1151 sx 35:65 Poz Class C, 1/4 #/sx Celloflake, 5% NaCl, 6% Bentonite; tail with 300 sx Class C, 1/4 #/sx Celloflake, 2% CaCl. Cement to surface.

9 5/8" Intermediate Cement Stage I: Lead with 418 sx (50:50) Poz Class C, 5% NaCl, 1/4 #/sx Celloflake, 0.05% ASA-301, 10% Bentonite, 0.006 gps FP-13L; Tail with 250 sx (60:40) Poz Class C, 5% NaCl, 1/4 #/sx Celloflake, 4% MPA-1, 0.3% Sodium Metasilicate, DV Tool @ 3100'. Stage 2: Lead with 472 sx (50:50) Poz Class C, 5% NaCl, 1/4 #/sx, 0.05% ASA-301, 10% Bentonite, 0.006 gps FP-13L, Tail with 200sx (60:40) Poz Clas C, 5% NaCl, 1/4 #/sx Celloflake, 0.3% Sodium Metasilicate, 4% MPA-1. TOC – surface.

5 1/2"	Production	Cement Stage 1: 985 sx (60:40) Poz Class C, 1% NaCl, 0.5% BA-10, 1/4 #/sx Celloflake, 2 pps Kol Seal, 4% MPA-1, 0.2% R-3, DV Tool at 6000'. Stage 2: 405 sx (60:40) Poz Class C, 0.5% BA-10, 5% NaCl, 1/4 #/sx Celloflake, 4% MPA-1, 2 pps Kol Seal. TOC to be 500' inside of the 9 5/8" casing.
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The above cement volumes could be revised pending caliper measurement from the open hole logs.

**6. Pressure Control Equipment:**

The blowout preventor equipment (BOP) shown in Exhibit # B (A) will consist of a (5M system) double ram type (5000 psi WP) preventor and a bag-type (Hydril) preventor (3000 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. 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 1200 psi with the rig pump before drilling out the 13 3/8" casing shoe (70% of 54.5#/61#, J-55 casing).** Prior to drilling out the 9 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 check 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 5000 psi WP rating.

**7. Proposed Mud Circulation System:**

DEPTH	MUD WT.	VISC	FLUID LOSS	TYPE MUD
0' – 2205'	8.5 – 9.1	30-40	NC	Fresh
2205' – 5155'	10	29-35	NC	Brine
5155-8600'	8.4 – 9.1	29-35	N/C to 15	Fresh / 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 operations after drilling out the 13 3/8" casing shoe until the 9 5/8" casing is cemented. Breathing equipment will be on location upon drilling the 13 3/8" shoe until total depth is reached.

**9. Logging, Testing and Coring Program**

- a. Drill stem tests may be run on potential pay interval.
- b. The open hole electrical logging program will be:
  - i. Total Depth to Intermediate Casing      Dual Laterolog-Micro Laterolog with SP and Gamma Ray. Compensated Neutron – Z Density log with Gamma Ray and Caliper.
  - ii. Total Depth to Surface      Compensated Neutron with Gamma Ray
  - iii. No coring program is 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.

**10. Potential Hazards**

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 3750 psi and Estimated BHT 130°.

**11. Anticipated Starting Date and Duration of Operations**

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 32 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.



## **SURFACE USE AND OPERATING PLAN**

Devon Energy Production Company, LP  
**RIO BLANCO 33 FEDERAL #3**  
1980' FSL & 1830' FWL, Section 33 T22S, R34E  
Lea County, New Mexico

### **1. Existing Roads**

- a. The well site and elevation plat for the proposed well are reflected on Exhibit #2. This well was staked by Basin Surveys in Hobbs, NM.
- b. All roads into the location are depicted in Exhibit #3.
- c. Directions to location: From the junction of Delaware Basin Road and Antelope Road, go west on Delaware Basin Road for 0.7 miles to lease road; then north on lease road for 1.6 mile; then east for 0.3 mile to proposed lease road.

### **2. Access Road**

- a. Exhibit #3 shows the existing lease road. Approximately 1009' of new access road will be required. It will be constructed as follows:
- b. The maximum width of the road will be 15'. It will be crowned and made of 6" of rolled and compacted caliche. Water will be deflected, as necessary, to avoid accumulation and prevent surface erosion.
- c. Surface material will be native caliche. This material will be obtained from a BLM approved pit nearest in proximity to the location. The average grade will be approximately 1%.
- d. No cattle guards, grates or fence cuts will be required. No turnouts are planned.

### **3. Proposed Facilities**

- a. In the event the well is found productive, a tank battery would be constructed.
- a. The tank battery, all connections and all lines will adhere to API standards.
- b. If the well is productive, rehabilitation plans are as follows.
  - i. The reserve pit will be closed pursuant to OCD rules and guidelines.
  - ii. The original topsoil from the well site will be returned to the location. The drill site will then be contoured as close as possible to the original state.

### **4. Methods of Handling Water Disposal**

- a. Drill cuttings will be disposed into the reserve pit.
- b. All trash, junk and other waste material will be contained in trash cages or trash bins to prevent scattering. When the job is completed all contents will be removed and disposed of in an approved sanitary landfill.
- c. The supplier will pick up salts, including broken sacks, remaining after completion of well.
- d. Wastewater from living quarters will be drained into a hole with a minimum depth of 10'. These holes will be covered during drilling and will be back filled when the well is completed. A portable chemical toilet will be provided for the rig crews. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.
- e. Remaining drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry enough to be closed. If the drilling fluids do not evaporate in a reasonable time they will be hauled off by transports to a state approved disposal site. The reserve pit will be closed pursuant to NM OCD rules and guidelines. Water produced during completion will be put in reserve pits. Oil and condensate produced will be put in a storage tank and sold.

**5. Well Site Layout**

- a. Exhibit D shows the proposed well site layout.
- b. This exhibit indicates proposed location of reserve and sump pits and living facilities.
- c. Mud pits in the active circulating system will be steel pits & the reserve pit will be lined with a 12 mil synthetic woven liner
- d. The reserve pit will be fenced on three sides with four strands of barbed wire during drilling and completion phases. After the rig is removed, the reserve pit will be fenced on the fourth side to preclude endangering wildlife. The fencing will be in place until the pit is reclaimed. If the well is a producer, the reserve pit and those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.

**6. Other Information:**

- f. The area surrounding the well site is grassland. The topsoil is very sandy in nature. The vegetation is moderately sparse with native prairie grass, sagebrush, yucca and miscellaneous weeds.
- g. The surface and minerals are owned by the US Government and is administered by the Bureau of Land Management. The surface is of limited use except for the grazing of livestock and the production of oil and gas.
- h. An archaeological survey will be forwarded to the Bureau of Land Management.
- i. There are no dwellings within 2 miles of location.

**Operator's Representative:**

The Devon Energy Production Company, L.P. representatives responsible for ensuring compliance of the surface use plan are listed below.

Bill Greenlees  
Operations Engineer Advisor

Don Mayberry  
Superintendent

Devon Energy Production Company, L.P.  
20 North Broadway, Suite 1500  
Oklahoma City, OK 73102-8260

Devon Energy Production Company, L.P.  
Post Office Box 250  
Artesia, NM 88211-0250

(405) 552-8194 (office)  
(405) 203-7778 (Cellular)

(505) 748-3371 (office)  
(505) 746-4945 (home)

**Certification**

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access road; that I am 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 Production Company, L.P. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

Signed: \_\_\_\_\_

Norvella Adams  
Sr. Staff Engineering Technician

Date: March 6, 2006

Attachment to Exhibit #1  
NOTES REGARDING BLOWOUT PREVENTERS  
Devon Energy Production Company, LP  
**RIO BLANCO 33 FEDERAL #3**  
1980' FSL & 1830' FWL, Section 33 T22S, R34E  
Lea 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 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 5000 psi working pressure.
4. All fittings will be flanged.
5. A full bore safety valve tested to a minimum 5000 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.

UNITED STATES DEPARTMENT OF THE INTERIOR  
Bureau of Land Management  
Carlsbad Field Office  
620 E. Greene Street  
Carlsbad, New Mexico 88221-1778

Statement Accepting Responsibility for Operations

Operator Name: **Devon Energy Production Company, LP**  
Street or Box: **20 North Broadway**  
City, State: **Oklahoma City, Oklahoma**  
Zip Code: **73102-8260**

The undersigned accepts all applicable terms, conditions, stipulations and restrictions concerning operations conducted on the leased land or portion thereof, as described below.

Lease No.: **NMNM-100864**


Legal Description of Land: **40 acres 33-22S-R34E**  
**1980' FSL & 1830 FWL, NE4/SW4**

Formation(s): **Delaware**  
**Nationwide**

Bond Coverage: **CO-1104**

BLM Bond File No.:

Authorized Signature:

  
**Norvella Adams**

Title: **Sr. Staff Engineering Technician**

Date: **03/06/06**

Well name:  
Operator: **Devon**  
String type: Surface

### Rio Blanco 33 #3

#### Design parameters:

##### Collapse

Mud weight: 10.000 ppg  
Design is based on evacuated pipe.

#### Minimum design factors:

##### Collapse:

Design factor 1.125

##### Burst:

Design factor 1.00

#### Environment:

H2S considered? No  
Surface temperature: 75 °F  
Bottom hole temperature: 106 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 1,000 ft  
Minimum Drift: 2.250 in

##### Burst

Max anticipated surface pressure: 2,059 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 2,324 psi

No backup mud specified.

##### Tension:

8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.60 (B)

Tension is based on air weight.  
Neutral point: 1,907 ft

Estimated cost: 27,632 (\$)

Non-directional string.

#### Re subsequent strings:

Next setting depth: 5,155 ft  
Next mud weight: 10.000 ppg  
Next setting BHP: 2,678 psi  
Fracture mud wt: 19.250 ppg  
Fracture depth: 5,155 ft  
Injection pressure 5,155 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
2	1800	13.375	54.50	J-55	ST&C	1800	1800	12.49	22334
1	405	13.375	61.00	J-55	ST&C	2205	2205	12.39	5298

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
2	935	1121	1.20	2275	2730	1.20	122.8	514	4.19 J
1	1145	1540	1.34	2324	3090	1.33	24.7	595	24.08 J

Devon Energy

Date: February 21, 2006  
Oklahoma City, Oklahoma

#### Remarks:

Collapse is based on a vertical depth of 2205 ft, a mud weight of 10 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Well name:  
Operator: **Devon**  
String type: **Intermediate**

## Rio Blanco 33 #3

### Design parameters:

#### Collapse

Mud weight: 10.000 ppg  
Design is based on evacuated pipe.

### Minimum design factors:

#### Collapse:

Design factor 1.125

#### Burst:

Design factor 1.00

### Environment:

H2S considered? No  
Surface temperature: 75 °F  
Bottom hole temperature: 147 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 1,000 ft  
Minimum Drift: 8.750 in

#### Burst

Max anticipated surface pressure: 3,436 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 4,054 psi

No backup mud specified.

#### Tension:

8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.60 (B)

Tension is based on air weight.  
Neutral point: 4,388 ft

Estimated cost: 50,997 (\$)

Non-directional string.

### Re subsequent strings:

Next setting depth: 8,600 ft  
Next mud weight: 10.000 ppg  
Next setting BHP: 4,468 psi  
Fracture mud wt: 19.250 ppg  
Fracture depth: 5,155 ft  
Injection pressure 5,155 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
2	4000	9.625	40.00	J-55	LT&C	4000	4000	8.75	36300
1	1155	9.625	40.00	N-80	LT&C	5155	5155	8.75	14697

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
2	2078	2515	1.21	3916	3950	1.01	206.2	520	2.52 J
1	2678	3090	1.15	4054	5750	1.42	46.2	737	15.95 J

Devon Energy

Date: February 21, 2006  
Oklahoma City, Oklahoma

#### Remarks:

Collapse is based on a vertical depth of 5155 ft, a mud weight of 10 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Well name:  
Operator: **Devon**  
String type: **Production**

### Rio Blanco 33 #3

**Design parameters:****Collapse**

Mud weight: 10.000 ppg  
Design is based on evacuated pipe.

**Minimum design factors:****Collapse:**

Design factor 1.125

**Environment:**

H2S considered? No  
Surface temperature: 75 °F  
Bottom hole temperature: 195 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 1,000 ft

**Burst:**

Design factor 1.00

**Burst**

Max anticipated surface  
pressure: 3,436 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 4,468 psi

No backup mud specified.

**Tension:**

8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.60 (B)

Non-directional string.

Tension is based on air weight.

Neutral point: 7,296 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	8600	5.5	17.00	N-80	LT&C	8600	8600	4.767	48473
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	4468	6290	1.41	4468	7740	1.73	146.2	348	2.38 J

Devon Energy

Date: February 21, 2006  
Oklahoma City, Oklahoma

**Remarks:**

Collapse is based on a vertical depth of 8600 ft, a mud weight of 10 ppg. The casing is considered to be evacuated for collapse purposes.  
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

*Engineering responsibility for use of this design will be that of the purchaser.*

Nov 10 05 02:10p  
Aug 23 04 08:10a

505 7485211

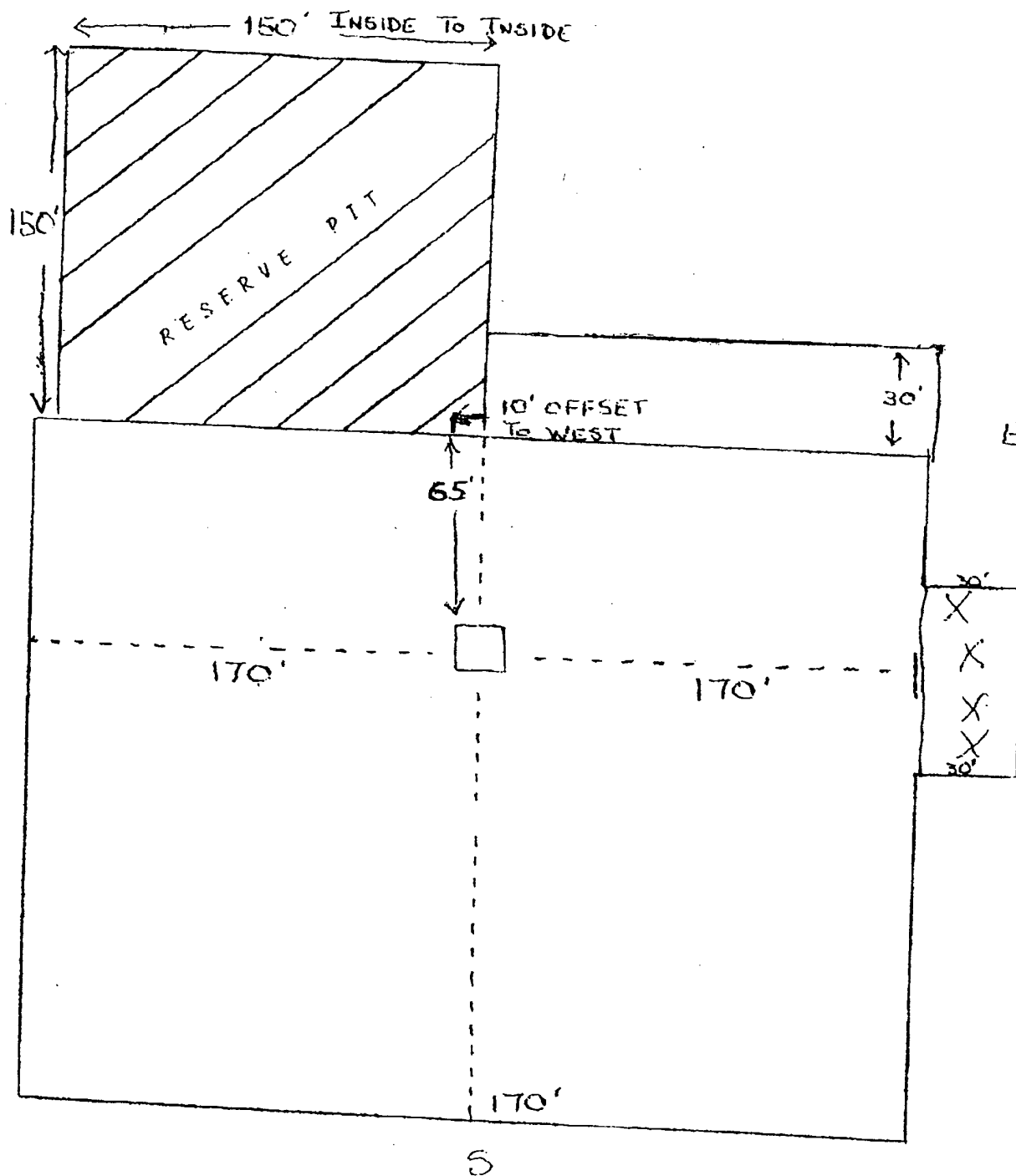
P.1  
P.2



McVAY DRILLING COMPANY  
Post Office Box 924  
Hobbs, New Mexico 88241  
(505) 397-3311  
(505) 393-3744

N

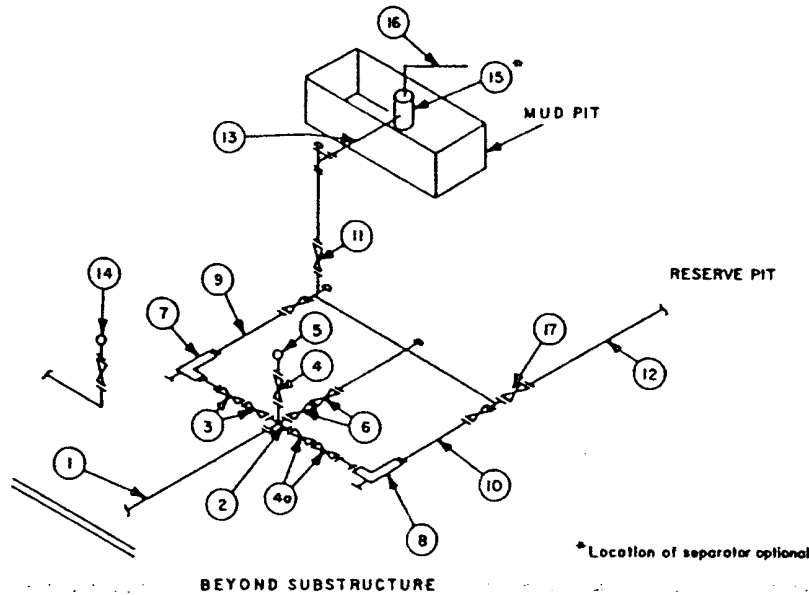
McVAY 7





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

**3 MWP - 5 MWP - 10 MWP**



MINIMUM REQUIREMENTS										
No.		3,000 MWP			5,000 MWP			10,000 MWP		
		I.D.	NOMINAL	RATING	I.D.	NOMINAL	RATING	I.D.	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

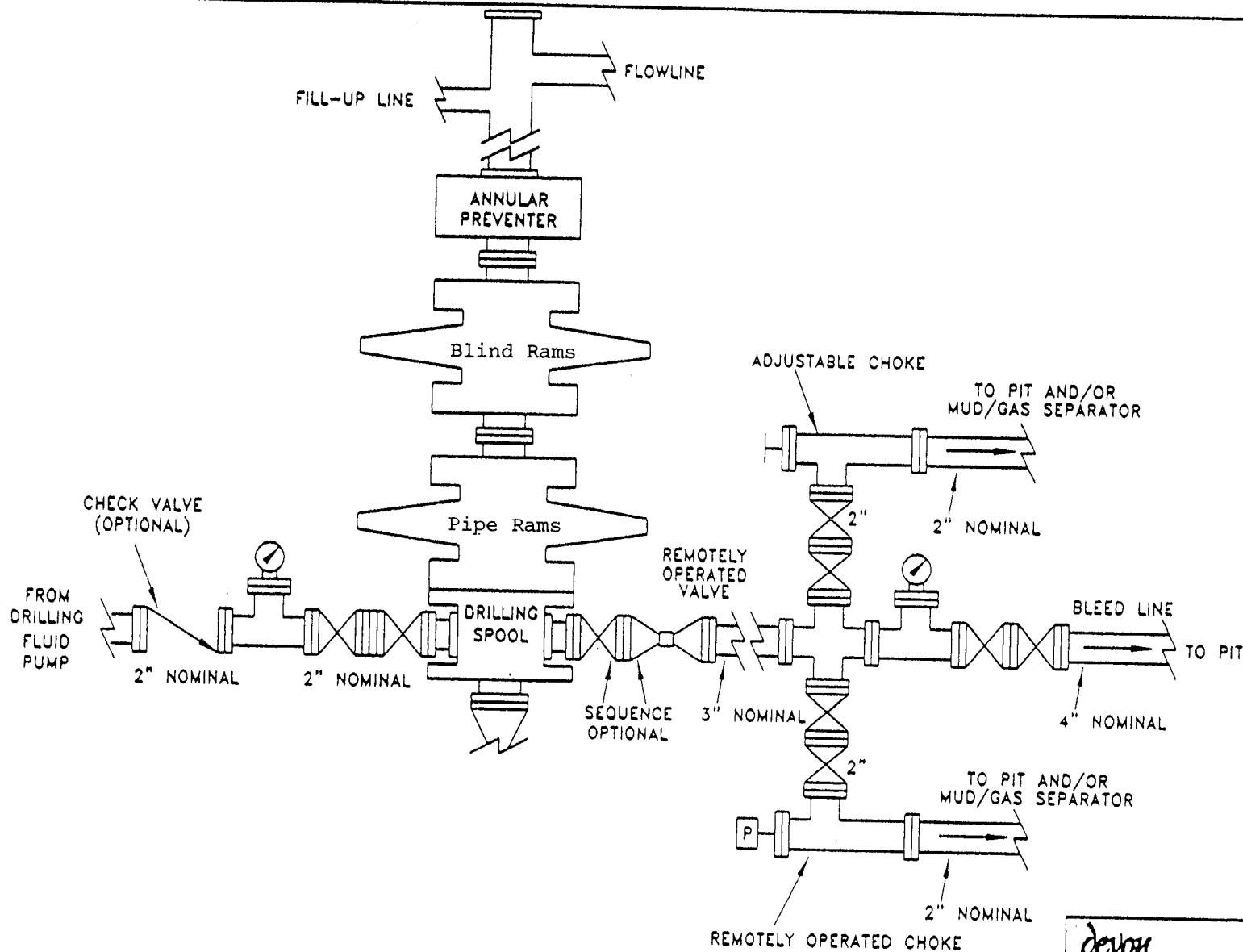
(1) Only one required in Class 3M.

(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 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.



devon

AREA NAME

COUNTY, STATE

SCHEMATIC

PROPOSED 5-M BOPE  
AND CHOKE ARRANGEMENT

s:\...nm\plots  
5mbope.dwg

SC

10/00

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, 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-144  
June 1, 2004

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

For drilling and production facilities, submit to appropriate NMOCD District Office.  
For downstream facilities, submit to Santa Fe office

**Pit or Below-Grade Tank Registration or Closure**

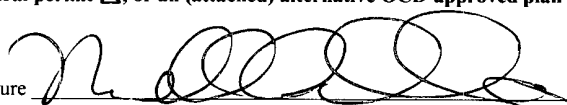

Is pit or below-grade tank covered by a "general plan"? Yes ☒ No ☐


Type of action: Registration of a pit or below-grade tank ☒ Closure of a pit or below-grade tank ☐

Operator: <u>Devon Energy Production Company, LP</u> Telephone: <u>405-552-8198</u> e-mail address: <u>norvella.adams@dev.com</u>		
Address: <u>PO Box 250 Artesia NM 88211</u>		
Facility or well name: <u>Rio Blanco 33 #3</u> API #: <u>30-025-37860</u> U/L or Qtr/Qtr <u>K</u> Sec <u>33</u> T <u>22S</u> R <u>34E</u>		
County: <u>Lea</u> Latitude <u>N32°20' 46.9"</u> Longitude <u>W103°28'39.7"</u> NAD: 1927 <input type="checkbox"/> 1983 <input type="checkbox"/>		
Surface Owner: Federal <input checked="" type="checkbox"/> State <input type="checkbox"/> Private <input type="checkbox"/> Indian <input type="checkbox"/>		
<b>Pit</b> Type: Drilling <input checked="" type="checkbox"/> Production <input type="checkbox"/> Disposal <input type="checkbox"/> Workover <input type="checkbox"/> Emergency <input type="checkbox"/> Lined <input checked="" type="checkbox"/> Unlined <input type="checkbox"/> Liner type: Synthetic <input checked="" type="checkbox"/> Thickness <u>12</u> mil Clay <input type="checkbox"/> Pit Volume <u>      </u> bbl	<b>Below-grade tank</b> Volume: <u>      </u> bbl Type of fluid: <u>      </u> Construction material: <u>      </u> Double-walled, with leak detection? Yes <input type="checkbox"/> If not, explain why not. <u>      </u>	
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet	(20 points)
	50 feet or more, but less than 100 feet	(10 points)
	100 feet or more	( 0 points)
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes	(20 points)
	No	( 0 points)
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet	(20 points)
	200 feet or more, but less than 1000 feet	(10 points)
	1000 feet or more	( 0 points)
<b>Ranking Score (Total Points)</b>		0 Points

**If this is a pit closure:** (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if you are burying in place) onsite ☐ offsite ☐ If offsite, name of facility       . (3) Attach a general description of remediation action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface        ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments:

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines <input type="checkbox"/> , a general permit <input checked="" type="checkbox"/> , or an (attached) alternative OCD-approved plan <input type="checkbox"/> .		
Date: <u>3/21/06</u>	Signature <u></u>	
Printed Name/Title <u>Norvella Adams / Sr. Staff Engineering Technician</u>		
Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.		
Approval: Printed Name/Title <u>ORIGINAL SIGNED BY PAUL F. KAUTZ</u> <u>PETROLEUM ENGINEER</u>	<u>PETROLEUM ENGINEER</u> Signature <u></u>	Date: <u>MAY 08 2006</u>

 The sender of this message has requested a read receipt. [Click here to send a receipt.](#)

**Mull, Donna, EMNRD**

**From:** Phillips, Dorothy, EMNRD  
**To:** Mull, Donna, EMNRD  
**Cc:**  
**Subject:** RE: Financial Assurance Requirement  
**Attachments:**

**Sent:** Mon 5/8/2006 11:16 AM

Apache still has bonds pending on a change of operator that have not been submitted for shut-in wells they are acquiring. All the rest have blanket bonds and do not appear on Jane's list.

---

**From:** Mull, Donna, EMNRD  
**Sent:** Monday, May 08, 2006 9:15 AM  
**To:** Phillips, Dorothy, EMNRD  
**Cc:** Macquesten, Gail, EMNRD; Sanchez, Daniel J., EMNRD  
**Subject:** Financial Assurance Requirement

Dorothy,

Is the Financial Assurance Requirement for these Operators OK?

Samson Resources Co ( 20165)  
Apache Corp (873)  
Devon Energy Production Co LP (6137)  
Marbob Energy Corp ( 14049)  
BC Operating Inc (160825)

Please let me know. Thanks and have a nice day. Donna