K-06-78

Form 3160-3
(April 2004)

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

# APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
**NM-103572**

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.

1b. Type of Well: ☐ Oil Well ☑ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No. 36078
**Winged Foot 34 Federal Com 2H**

2. Name of Operator
**Devon Energy Production Company, LP** 6137

9. API Well No.
30-015-35181

3a. Address **20 North Broadway, Oklahoma City, Oklahoma 73102-8260**

3b. Phone No. *(include area code)* **405-552-8198**

10. Field and Pool, or Exploratory
**Wildcat Wolfcamp**

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface **1930 FNL & 330 FEL, Unit H**
At proposed prod. zone **1930 FNL & 660 FWL, Unit E**

Subject to Like Approval By State

11. Sec., T. R. M. or Blk. and Survey or Area
**Sec 34 T19S R21 E**

14. Distance in miles and direction from nearest town or post office*
**Approximately 15 miles South from Hope, NM**

12. County or Parish
**Eddy County**

13. State
**NM**

| 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 | 17. Spacing Unit dedicated to this well |
|---|---|---|
| | **2240 acres** | **320 acres** |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. | 19. Proposed Depth | 20. BLM/BIA Bond No. on file |
| | **4350' TVD 8095' MD** | NM 1104 |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.) | 22. Approximate date work will start* | 23. Estimated duration |
| **4271' GL** | **10/15/2006** | **45 days** |

24. Attachments

Roswell Controlled Water Basin

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.
2. A Drilling Plan.
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).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

| 25. Signature | Name *(Printed/Typed)* | Date |
|---|---|---|
| | **Norvella Adams** | **08/29/2006** |

Title
**Sr. Staff Engineering Technician**

| Approved by *(Signature)* | Name *(Printed/Typed)* | Date |
|---|---|---|
| **/s/ James Stovall** | **/s/ James Stovall** | OCT 0 6 2006 |

| Title | Office |
|---|---|
| ACTING FIELD MANAGER | CARLSBAD FIELD OFFICE |

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

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)*

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

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

SD approval required for more than 1 well in same production unit. producing from same formation Bryan Arrant OCD (Wolfcamp)

## Additional Operator Remarks:

Devon Energy Production Company, LP proposes to drill a horizontal Wolfcamp well to 8095' TMD for commercial quantities of oil and gas. If the well is deemed noncommercial, the wellbore will be plugged and abandoned per Federal regulations. Programs to adhere to onshore oil and gas regulations are outlined in the following exhibits and attachments.

Directions: From Hope go south to the junction of Co. Rd 12 (Armstrong) and Co. Rd. 20 (Bronc), proceed south on Co. Rd. 12 for 6 mile to lease road, on lease road proceed west 1.3 mile to a road LAV and beginning proposed road.

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

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210

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

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources 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 | Pool Name |
|---|---|---|
| | 96086 | Wildcat Wolfcamp (Gas) |

| Property Code | Property Name | Well Number |
|---|---|---|
| | WINGED FOOT "34" FEDERAL COM | 2H |

| OGRID No. | Operator Name | Elevation |
|---|---|---|
| 6137 | DEVON ENERGY PRODUCTION COMPANY LP | 4271' |

### Surface Location

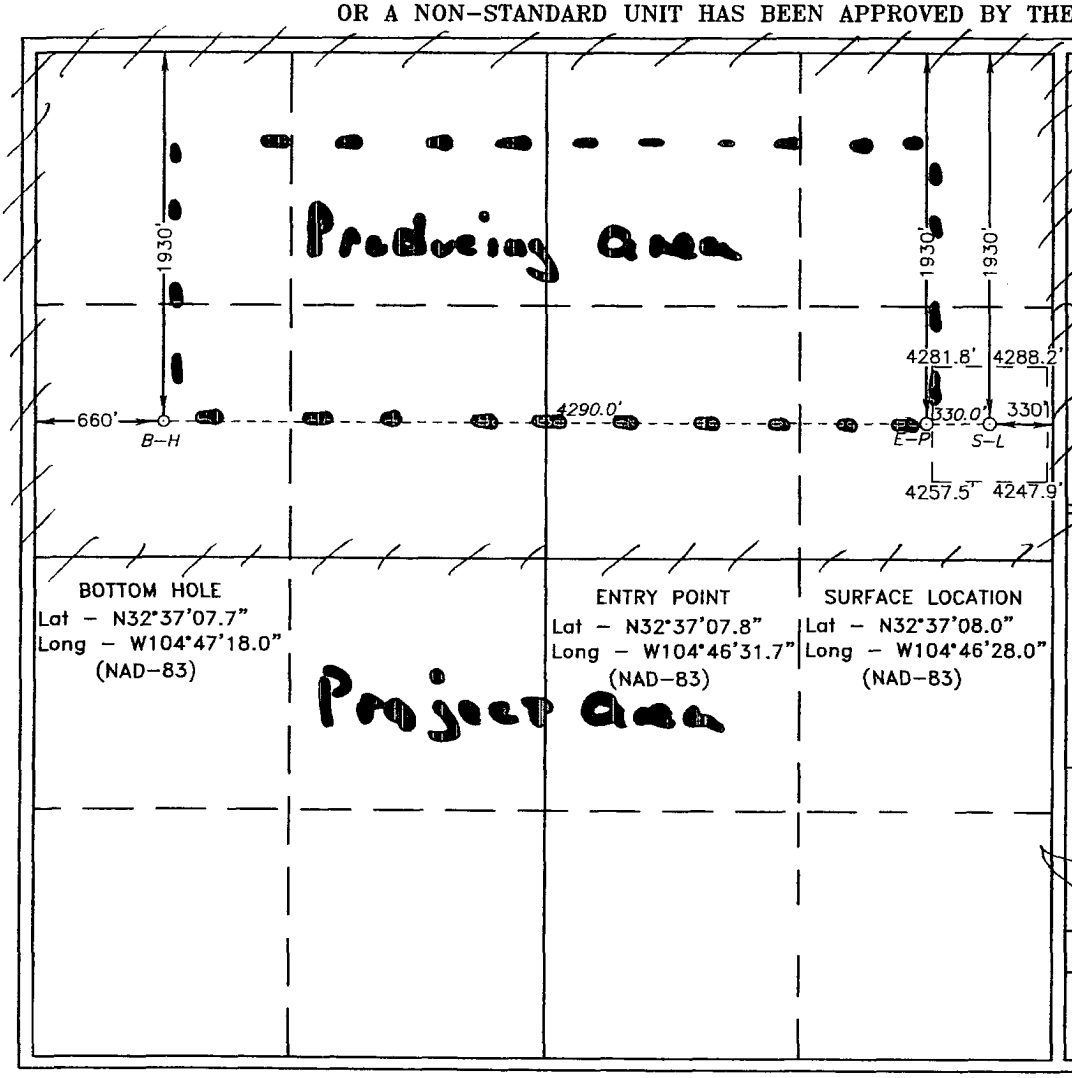
| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| H | 34 | 19 S | 21 E | | 1930 | NORTH | 330 | EAST | EDDY |

### 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 |
|---|---|---|---|---|---|---|---|---|---|
| E | 34 | 19 S | 21 E | | 1930 | NORTH | 660 | WEST | EDDY |

| Dedicated Acres | Joint or Infill | Consolidation Code | Order No. |
|---|---|---|---|
| 320 | | | |

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




### OPERATOR CERTIFICATION

*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.*

7/25/06

Signature Date

Norvella Adams

Printed Name

### SURVEYOR CERTIFICATION

*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 supervison, and that the same is true and correct to the best of my belief.*

JULY 11, 2006

Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES
NEW MEXICO
7977
REGISTERED PROFESSIONAL SURVEYOR

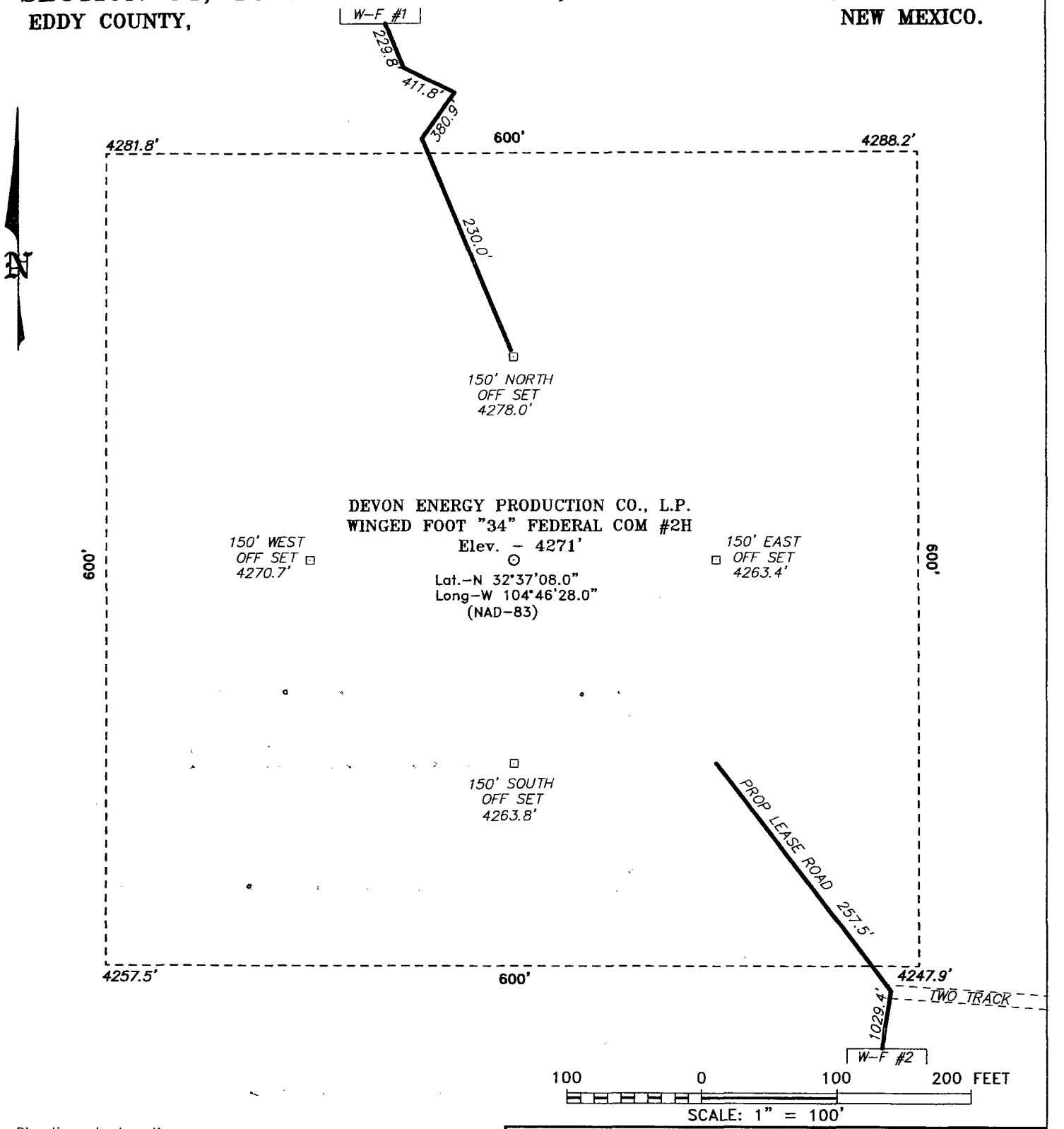
W.O. No. 6688

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

# SECTION 34, TOWNSHIP 19 SOUTH, RANGE 21 EAST, N.M.P.M.,

EDDY COUNTY, NEW MEXICO.




Directions to Location:

FROM THE JUNCTION OF CO. RD. 12 (ARMSTRONG) AND CO. RD. 20 (BRONC), PROCEED SOUTH ON CO. RD. 12 FOR 6.0 MILE TO LEASE ROAD, ON LEASE ROAD PROCEED WEST 1.3 MILE TO A ROAD LAV AND BEGINNING PROPOSED ROAD.

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

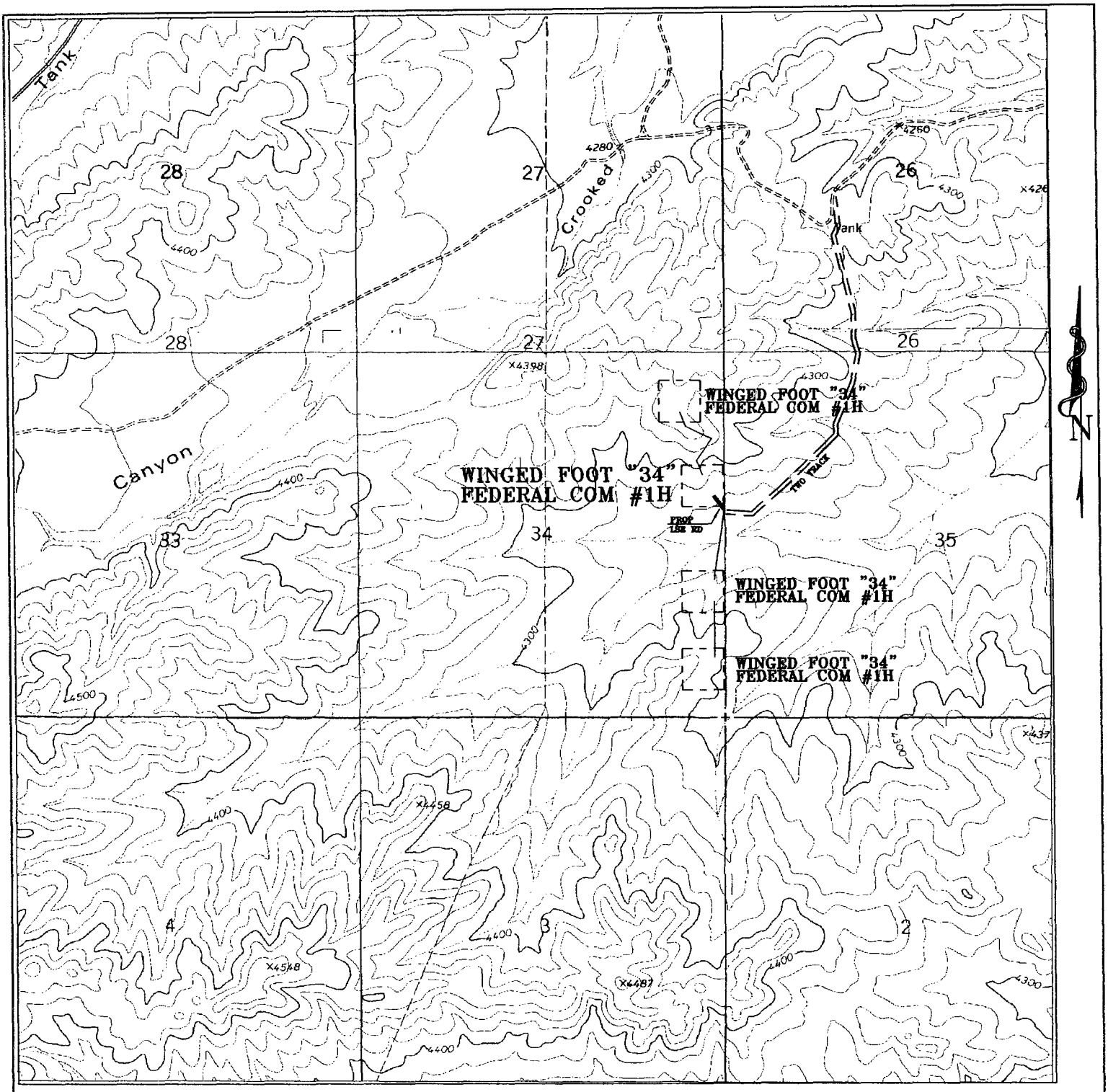
| | |
|---|---|
| W.O. Number: 6885 | Drawn By: J. M. SMALL |
| Date: 07-13-2006 | Disk: 6885W |

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

REF: WINGED FOOT "34" FEDERAL COM #2H / WELL PAD TOPO

THE WINGED FOOT "34" FEDERAL COM No. 2H LOCATED 1930' FROM THE NORTH LINE AND 330' FROM THE EAST LINE OF SECTION 34, TOWNSHIP 19 SOUTH, RANGE 21 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

| | |
|---|---|
| Survey Date: 07-11-2006 | Sheet 1 of 1 Sheets |




# WINGED FOOT "34" FEDERAL COM #2H

Located at 1930' FNL AND 330' FEL
Section 34, Township 19 South, Range 21 East,
N.M.P.M., EDDY County, New Mexico.


basin surveys
focused on excellence in the oilfield

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: | JMS 6885T |
| Survey Date: | 07-11-2006 |
| Scale: | 1" = 2000' |
| Date: | 07-13-2006 |

DEVON ENERGY PROD. CO., L.P.

# DRILLING PROGRAM

Devon Energy Production Company, LP
**Winged Foot 34 Federal Com 2H**
Surface Location: 1930 FNL & 330 FEL, Unit H, Sec 34- T19S R21E, Eddy, NM
Bottom hole Location: 1930 FNL & 660 FWL, Unit E, Sec 34- T19S R21E, Eddy, NM

**1. Geologic Name of Surface Formation**

a. San Andres

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

| | | |
|---|---|---|
| a. | Glorieta | 1630' |
| b. | Abo Shale | 3250' |
| c. | Abo Carbonate | 3400' |
| d. | Wolfcamp | 4200' |

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

| | | | |
|---|---|---|---|
| a. | Wolfcamp | 4200' | Gas |

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 350' and circulating cement back to surface. The 9 5/8" casing will be set at 1600'circulating cement to surface. The 5 ½ "liners will be set and cemented through the Wolfcamp to 8,095' TMD.

**4. Casing Program:**

| Hole Size | Interval | OD Csg | Weight | Grade | Type |
|---|---|---|---|---|---|
| 30" | 0' –40' | 20" | | Conductor | |
| 17 ½ " | 0' – 350' | 13 3/8" | 48 # | H40 | ST&C |
| 12 ¼" | 0' – 1600' | 9 5/8" | 35 # | J55 | LT&C |
| 8 ¾ " | 0'– 4624' MD | 5 ½" | 17 # | P110 | Buttress |
| 7 7/8" | EOB-8095' MD | 5 ½" | 17 # | P110 | Buttress |

**5. Cement & Setting Depth:**

| | | | |
|---|---|---|---|
| a. | 20" | Conductor | Cement with ready-mix to surface. |
| b. | 13 3/8" | Surface | Cement to surface with 385 sx Class C + 2% bwoc Calcium Chloride + 0.25 lbs/sx Cello flake. |
| c. | 9 5/8" | Intermediate | Cement with 180 sx Class H + 10% bwoc A-10 + 1% bwoc Calcium Chloride + 10 lbs/sx LCM-1 + 0.25 lb/sx Cello flake.<br>Spacer: 15 bbls Gel Water + 7.5 gpt XLFC-5<br>Spacer: 15 bbls Water |

Cement to surface with lead slurry: 325 sx (35:65) Poz Class C + 2% bwoc Calcium Chloride + 0.25 lbs/sx Cello Flake + 6% bwoc Bentonite.
Tail slurry: 250 sx Class C + 2% bwoc Calcium Chloride + 0.25 lbs/sx Cello Flake

Whipstock Plug @ 4350'
Cement with 275 sx Class H + 5% bwow Sodium Chloride + 1.2% bwoc CD-31

d. 5 ½" Liner — Cement with lead slurry: 826 sx (35:65) Poz Class C + 0.3% bwoc Fl-52A + 6% bwoc Bentonite + 5% bwow Sodium Chloride + 0.25 lbs/sx Cello Flake
Tail slurry: 846 sx Class H + 0.6% bwoc BA-10A + 1% bwoc FL-62 + 0.4% bwoc CD-32 + 0.1% bwoc ASA-301 + 20 lbs/sx Cacium Carbonate.

The above cement volumes could be revised pending the caliper measurement from the open hole logs.

**6. Pressure Control Equipment:**

The blowout preventor equipment (BOP) shown in Exhibit # B will consist of a (5M system) double ram type (3000 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 ½" drill pipe rams on bottom. Both BOP's will be installed on the 13 3/8" surface casing and utilized continuously until the 9 5/8" casing is set. Upon setting the 9 5/8" casing shoe, an 11" 5000 psi BOP stack and choke manifold will be nippled up. **The 13 3/8" BOP 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).** The 11" BOP 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 System |
|---|---|---|---|---|
| 0' – 350' | 8.4 – 9.0 | | NC | Bentonite/Lime Spud Mud, Fresh / Native |
| 350-1600' | 8.4 – 8.6 | | NC | Fresh Water |
| 1600' – 3100' | 8.9 – 9.2 | 28 – 29 | NC | Cut Brine |
| 3100' – 4350' | 9.2 – 9.4 | 32 – 34 | 12 – 15 cc | Cut Brine |
| 3870'– 4624' MD | 9.3 – 9.4 | 30 - 32 | 10 – 12 cc | Cut Brine / Polymer |
| 4324'– 8095' MD | 9.4 – 9.6 | 36 - 40 | 6 - 8 cc | Cut Brine / 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, Coring, and Testing Program:**
   a. Drill stem tests will be based on geological sample shows.
   b. The open hole electrical logging program will be run through the vertical portion but not through the lateral portion:
      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" liner. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests.

10. **Potential Hazards:**
   a. No abnormal pressures or temperatures are expected. There is no known presence of H2S in this area. If H2S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 2000 psi and Estimated BHT 120°.
   b.

11. **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 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 PLAN**
Devon Energy Production Company, LP
**Winged Foot 34 Federal Com 2H**
Surface Location: 1930 FNL & 330 FEL, Unit H, Sec 34- T19S R21E, Eddy, NM
Bottom hole Location: 1930 FNL & 660 FWL, Unit E, Sec 34- T19S R21E, Eddy, NM

1. **Existing Roads:**
   a. The well site and elevation plat for the proposed are reflected on Exhibit 2. The well was staked by Basin Surveys of Hobbs NM.
   b. All roads into the location are depicted on Exhibit 3.
   c. Directions to Location: From the junction of Co. RD. 12 (Armstrong) and Co. Rd. 20 (Bronc), proceed south on Co. Rd. 12 for 6.0 mile to lease road, on lease road proceed west 1.3 mile to a road LAV and beginning proposed road.
2. **Access Road**
   a. Exhibit #3 shows the existing lease road. Approximately 3273.7' of new access road will be required to access the Winged Foot 34 Federal Com 1H-4H wells (see attached plats). 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.
   b. The tank battery, all connections and all lines will adhere to API standards.
   c. If the well is productive, rehabilitation plans are as follows:
      i. The reserve pit will be closed pursuant to NM 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 Waste Material:**
   a. Drill cuttings will be disposed of in the reserve pits.
   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:**
   a. 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.
   b. 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.
   c. An archaeological survey will be forwarded to the Bureau of Land Management.
   d. There are no dwellings within 2 miles of location.

**Operators Representative:**

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

Chris Singletary
Operations Engineer

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

(405) 288-8552 (office)
(405) 535-5407 (Cellular)

Don Mayberry
Superintendent

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

(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: _____ Date: August 29, 2006

Norvella Adams
Sr. Staff Engineering Technician

Attachment to Exhibit #1

NOTES REGARDING BLOWOUT PREVENTERS

Devon Energy Production Company, LP

**Winged Foot 34 Federal Com 2H**

Surface Location: 1930 FNL & 330 FEL, Unit H, Sec 34- T19S R21E, Eddy, NM

Bottom hole Location: 1930 FNL & 660 FWL, Unit E, Sec 34- T19S R21E, 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 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
Roswell Field Office
2909 West Second Street
Roswell, New Mexico 88201-1287

Statement Accepting Responsibility for Operations

| | |
|---|---|
| Operator Name: | **Devon Energy Production Company, LP** |
| Street or Box: | **20 North Broadway, Suite 1500** |
| 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.: **NM-103572 and NM-~~105598~~** NM105538

Legal Description of Land:
**Lease # NM-103572 - N/2.**
**Lease # NM-~~105598~~ - N/2** NM105538
**320 acres 34-T19S-R21E**

Formation(s): **Wildcat Wolfcamp**

Bond Coverage: **Nationwide**

BLM Bond File No.: **CO-1104**

Authorized Signature:

**Norvella Adams**

Title: **Sr. Staff Engineering Technician**

Date: 8/29/06

# HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

1. If H2S is present in this area the following will apply.
2. 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.

3. 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.

4. 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

5. 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.

6. Well Control Equipment
   a. See Exhibit "B (A)" & "E"

7. 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.

8. 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.

9. 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.

Well name: **Winged Foot** 34 Federal Com 2H
Operator: **N/A**
String type: Surface

**Design parameters:**

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

**Burst**
Max anticipated surface pressure: 140 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 182 psi

No backup mud specified.

**Minimum design factors:**

**Collapse:**
Design factor 1.125

**Burst:**
Design factor 1.00

**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: 299 ft

**Environment:**
H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 80 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 350 ft

Non-directional string.

**Re subsequent strings:**
Next setting depth: 350 ft
Next mud weight: 9.000 ppg
Next setting BHP: 164 psi
Fracture mud wt: 30.000 ppg
Fracture depth: 350 ft
Injection pressure 545 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 ($) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 350 | 13.375 | 48.00 | H-40 | ST&C | 350 | 350 | 12.59 | 4340 |

| 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 | 182 | 740 | 4.07 | 182 | 1730 | 9.51 | 16.8 | 322 | 19.17 J |

Devon Energy

Date: August 29,2006
Oklahoma City, Oklahoma

Remarks:
Collapse is based on a vertical depth of 350 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: **Winged Foot** 34 Federal Com 2H
Operator: **N/A**
String type: Intermediate

**Design parameters:**

**Collapse**
Mud weight: 8.600 ppg
Design is based on evacuated pipe.

**Burst**
Max anticipated surface pressure: 382 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 514 psi

No backup mud specified.

**Minimum design factors:**

**Collapse:**
Design factor 1.125

**Burst:**
Design factor 1.00

**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: 960 ft

**Environment:**
H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 90 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 350 ft

Non-directional string.

**Re subsequent strings:**
Next setting depth: 1,100 ft
Next mud weight: 9.000 ppg
Next setting BHP: 514 psi
Fracture mud wt: 30.000 ppg
Fracture depth: 1,100 ft
Injection pressure 1,714 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 ($) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1100 | 9.625 | 36.00 | J-55 | LT&C | 1100 | 1100 | 8.796 | 8994 |

| 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 | 491 | 2020 | 4.11 | 514 | 3520 | 6.84 | 39.6 | 453 | 11.44 J |

Devon Energy

Date: August 29,2006
Oklahoma City, Oklahoma

Remarks:
Collapse is based on a vertical depth of 1100 ft, a mud weight of 8.6 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: **Winged Foot** 34 Federal Com 2H
Operator: **N/A**
String type: Production

**Design parameters:**

**Collapse**
Mud weight: 9.600 ppg
Design is based on evacuated pipe.

**Burst**
Max anticipated surface pressure: 1,647 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 2,169 psi

No backup mud specified.

**Minimum design factors:**

**Collapse:**
Design factor 1.125

**Burst:**
Design factor 1.00

**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: 3,717 ft

**Environment:**
H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 136 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,000 ft

Directional well information:
Kick-off point 0 ft
Departure at shoe: 3951 ft
Maximum dogleg: 11.93 °/100ft
Inclination at shoe: 90 °

| 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 | 8095 | 5.5 | 17.00 | P-110 | Buttress | 4350 | 8095 | 4.767 | 57060 |

| 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 | 2169 | 7480 | 3.45 | 2169 | 10640 | 4.90 | 74 | 545.9 | 7.38 B |

Devon Energy

Date: August 29,2006
Oklahoma City, Oklahoma

Remarks:
Collapse is based on a vertical depth of 4350 ft, a mud weight of 9.6 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.
Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

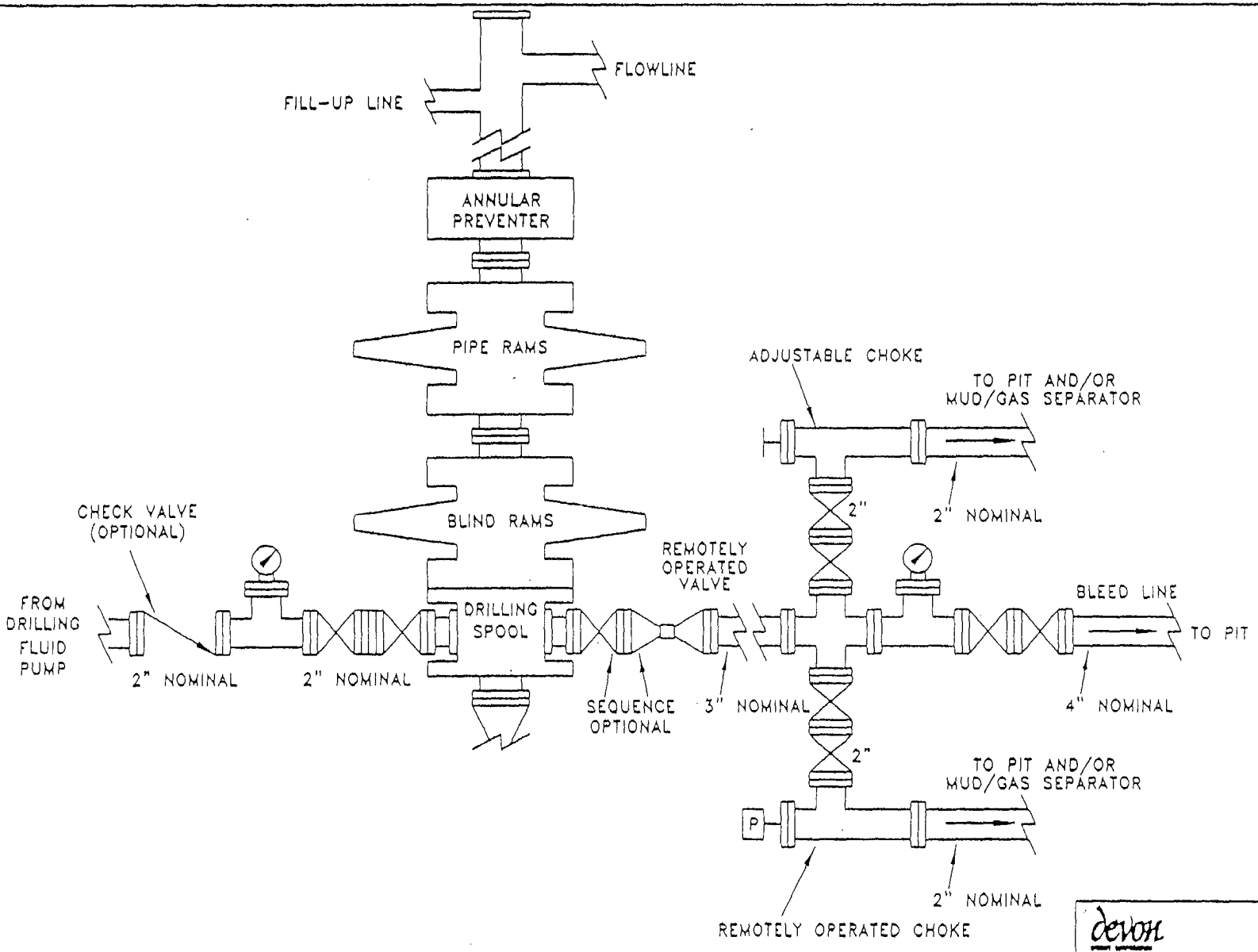



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EXHIBIT 1

# PROPOSED 5-M BOPE AND CHOKE ARRANGEMENT

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5mbope.dwg

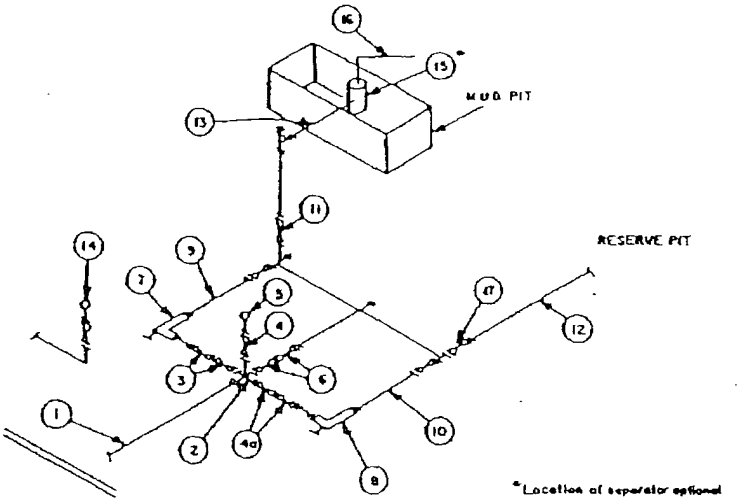
SC

10/00

Exhibit E

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

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




BEYOND SUBSTRUCTURE

| MINIMUM REQUIREMENTS | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 3,000 MWP | | | 5,000 MWP | | | 10,000 MWP | | |
| No. | | 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 ☐ 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 | 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 ☐ Plug ☐(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.

SPECIAL DRILLING STIPULATIONS

THE FOLLOWING DATA IS REQUIRED ON THE WELL SIGN

Operator's Name: Devon Energy Production Company, LP Well Name & #: Winged Foot 34 Federal Com. # 2H
Location Surface Hole: 1930' F N L & 330' F E L; Sec. 34, T. 19 S., R. 21 E.
Bottom Hole: 1930' F N L & 660' F W L; Sec. 34, T. 19 S., R. 21 E.

Lease #: NM-103572 County: Eddy State: New Mexico

The Special stipulations check marked below are applicable to the above described well and approval of this application to drill is conditioned upon compliance with such stipulations in addition to the General Requirements. The permittee should be familiar with the General Requirements, a copy of which is available from a Bureau of Land Management office. EACH PERMITTEE HAS THE RIGHT OF ADMINISTRATIVE APPEAL TO THESE STIPULATIONS PURSUANT TO TITLE 43 CFR 3165.3 AND 3165.4.

This permit is valid for a period of one year from the date of approval or until lease expiration or termination whichever is shorter.

I. SPECIAL ENVIRONMENT REQUIREMENTS

( ) Lesser Prairie Chicken (stips attached)
( ) San Simon Swale (stips attached)
( ) Flood plain (stips attached)
( X ) Other (Aplomado Falcon stips/ Visual Resource III stips attached)

II. ON LEASE - SURFACE REQUIREMENTS PRIOR TO DRILLING

( X ) The BLM will monitor construction of this drill site. Notify the ( X ) Carlsbad Field Office at (505) 234-5972 ( ) Hobbs Office (505) 393-3612, at least 3 working days prior to commencing construction.

( X ) Roads and the drill pad for this well must be surfaced with 6 inches of compacted caliche upon completion of well and it is determined to be a producer.

( ) All topsoil and vegetation encountered during the construction of the drill site area will be stockpiled and made available for resurfacing of the disturbed area after completion of the drilling operation. Topsoil on the subject location is approximately _____inches in depth. Approximately _____cubic yards of topsoil material will be stockpiled for reclamation.

( X ) Other. **Pits North V-Door East**

III. WELL COMPLETION REQUIREMENTS

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

( x ) Surface Restoration: If the well is a producer, the reserve pit(s) will be backfilled when dry, and cut-and-fill slopes will be reduced to a slope of 3:1 or less. All areas of the pad not necessary for production must be re-contoured to resemble the original contours of the surrounding terrain, and topsoil must be re-distributed and re-seeded with a drill equipped with a depth indicator (set at depth of ½ inch) with the following seed mixture, in pounds of Pure Live Seed (PLS), per acre. If broadcasting, the seeding rate must be doubled.

( ) A. Seed Mixture 1 (Loamy Sites)
Side Oats Grama (*Bouteloua curtipendula*) 5.0
Sand Dropseed (*Sporobolus cryptandrus*) 1.0
Plains lovegrass (*Eragrostis intermedia*) 0.5

( ) B. Seed Mixture 2 (Sandy Sites)
Sand Dropseed (*Sporobolus crptandrus)* 1.0
Sand Lovegrass (*Eragostis trichodes*) 1.0
Plains Bristlegrass (*Setaria magrostachya*) 2.0

( ) C. Seed Mixture 3 (Shallow Sites)
Side oats Grama (*Bouteloua curtipendula)* 5.0
Green Spangletop (*Leptochloa dubia*) 2.0
Plains Bristlegrass (*Setaria magrostachya*) 1.0

( ) D. Seed Mixture 4 (Gypsum Sites)
Alkali Sacaton (*Sporobolus airoides*) 1.0
Four-Wing Saltbush (*Atriplex canescens*) 5.0

( X ) OTHER SEE ATTACHED SEED MIXTURE

Seeding should be done either late in the fall (September 15 - November 15, before freeze up, or early as possible the following spring to take advantage of available ground moisture.

( ) Other

RESERVE PIT CONSTRUCTION STANDARDS

The reserve pit shall be constructed entirely in cut material and lined with 6-mil plastic.
Mineral material extracted from within the boundary of the APD during construction of the well pad and reserve pits and be used for the construction of this well pad and its immediate access road only, as long as that portion of the access road it is use on remains on-lease. Removal of any additional material from this location for construction or improvement of other well pads and other access or lease roads must first be purchased from BLM.

Reclamation: Reclamation of this type of deep pit will consist of pushing the pit walls into the pit when sufficiently dry to support track equipment. The pit liner is NOT TO BE RUPTURED to facilitate drying; a ten month period after completion of the well is allowed for drying of the pit contents.
The pit area must be contoured to the natural terrain with all contaminated drilling mud buried with at least 3 feet of clean soil. The reclaimed area will then be seeded as specified in this permit.

OPTIONAL PIT CONSTRUCTION STANDARDS

The reserve pit may be constructed in predominantly fill material if:

(1) Lined as specified above and

(2) A temporary or emergency pit may be constructed immediately adjacent to the reserve pit as long as the pit remains within the APD boundary. Mineral material removed from this pit may be used for the construction of this well pad only and its immediate access road, as long as that portion of the access road the material is used on remains on-lease. Removal of any material from the APD boundary for use on other well locations or roads must first be purchased from BLM.

Reclamation of the reserve pit consists of bulldozing all reserve pit contents and contaminants into the borrow pit and covering with a minimum of 3 feet of clean soil material. The entire area must be re-contoured, all trash removed, and reseeded as specified in this permit.

CULTURAL

Whether or not an archaeological survey has been completed and notwithstanding that operations are being conducted as approved, the lessee/operator/grantee shall notify the BLM immediately if previously unidentified cultural resources are observed during surface disturbing operations. From the time of the observation, the lessee/operator/grantee shall avoid operations that will result in disturbance to these cultural resources until directed to process by BLM.

TRASH PIT STIPS

All trash, junk, and other waste material shall be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not permitted.

# CONDITIONS OF APPROVAL - DRILLING

**Operator's Name: Devon Energy Production Company LLP**
**Well Name & No: Winged Foot 34 Fed Com No 2-H**
**Location: Surface 1930' FNL & 330' FEL, BHL: 1930 FNL & 660 FWL, Sec.34, T. 19 S., R. 21 E.**
**Lease: NM 103572**
**Eddy County, New Mexico**

## I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Roswell Field Office, 2909 West Second St., Roswell, NM 88201, (505) 627-0272 for wells in Chaves and Roosevelt Counties; 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: 13 ⅜ inch; 9 ⅝ inch; 5 ½ inch.

C. BOP Tests

2. A Hydrogen Sulfide (H2S) Drilling Plan is not required for this well bore.

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 NMOCD shall be included on the subsequent report of setting the first casing string.

6. A communitization agreement shall be submitted to this office for approval prior to any sales from this well.

## II. CASING:

1. The 13 ⅜ inch shall be set at **350 Feet** with 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.

2. The minimum required fill of cement behind the 9 ⅝ inch Intermediate casing is to **circulate to surface.** The first two casing hole sections will be drilled with fresh water.

3. The minimum required fill of cement behind the 5 ½ inch Production casing is to **tie back to top of liner.**

## 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 ⅜ 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. A variance to use the rig pumps to test the BOPE on the 13 ⅜ inch to 1200 psig is approved.

**(III Cont):**

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be **2M psi.** The 2 M rating BOPE shall be in operations prior to drilling below the 9 5/8 inch shoe.

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

-The test 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 safe workman-like manner. Hard line connections shall be required.
-Both low pressure and high pressure testing of BOPE is required.

***G. Gourley* RFO 09/18/2006**