

EC

OCD-ARTESIA

Form 3160-3  
(August 1999)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
OMB No. 1004-0136  
Expires November 30, 2000

## APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMLC064050A
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 CO L P		7. If Unit or CA Agreement, Name and No.
Contact: KAREN COTTOM E-Mail: karen.cottom@dvn.com		8. Lease Name and Well No. EAGLE 34F FEDERAL 40
3a. Address 20 NORTH BROADWAY SUITE 1500 OKLAHOMA CITY, OK 73102	3b. Phone No. (include area code) Ph: 405.228.7512 Fx: 405.552.4621	9. API Well No. 30-015-33236
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface SENW 1550FNL 2110FWL At proposed prod. zone SENW 1550FNL 2110FWL		10. Field and Pool, or Exploratory RED LAKE; GLORIETA-YESO
14. Distance in miles and direction from nearest town or post office* APPROX 5 MILES SOUTHEAST OF ARTESIA NM		11. Sec., T., R., M., or Blk. and Survey or Area Sec 34 T17S R27E Mer NMP
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 160.00	12. County or Parish EDDY
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth 4000 MD	13. State NM
21. Elevations (Show whether DF, KB, RT, GL, etc.) 3549 GL	22. Approximate date work will start 12/15/2003	17. Spacing Unit dedicated to this well 40.00
23. Estimated duration 45 DAYS		

RECEIVED

DEC 18 2003

OCD-ARTESIA

## 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.  | 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 (Electronic Submission)	Name (Printed/Typed) KAREN COTTOM	Date 11/06/2003
Title ENGINEERING TECHNICIAN		
Approved by (Signature) /s/ Joe G. Lara	Name (Printed/Typed) /s/ Joe G. Lara	Date 18 DEC 2003
Title ACTING FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

Application approval does not warrant or certify 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.

## Additional Operator Remarks (see next page)

Electronic Submission #24846 verified by the BLM Well Information System  
For DEVON ENERGY PRODUCTION CO L P, sent to the Carlsbad  
Committed to AFMSS for processing by ARMANDO LOPEZ on 11/06/2003 (04AL0096AE)APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED

Witness Surface Casing

\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\*

**Additional Operator Remarks:**

Devon Energy Production Company, LP proposes to drill a San Andres, Glorieta Yeso well per the approved Master Drilling and Surface Use Plan for the Red Lake Field Area to 4000' TD for commercial quantities of oil and gas. If the well is deemed noncommercial the well bore will be plugged and abandoned per Federal regulations.

Directions: From the junction of US Hwy 82 and Co. Rd. 204, go south 0.1 mile to Co. Rd. 225; thence South on 225 for approx. 1.5 mile to lease road; thence northerly on lease road for 1.0 mile to the lease.

Please see attached MDSUP.

DISTRICT I  
1625 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	Pool Code 96836	Pool Name RED LAKE GLORIETA YESO, NE
Property Code	Property Name EAGLE "34F" FEDERAL	Well Number 40
OGRID No. 6137	Operator Name DEVON ENERGY PRODUCTION CO., L.P.	Elevation 3549'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	34	17 S	27 E		1550	NORTH	2110	WEST	EDDY

Bottom Hole Location If Different From Surface

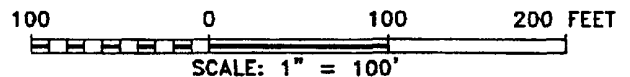
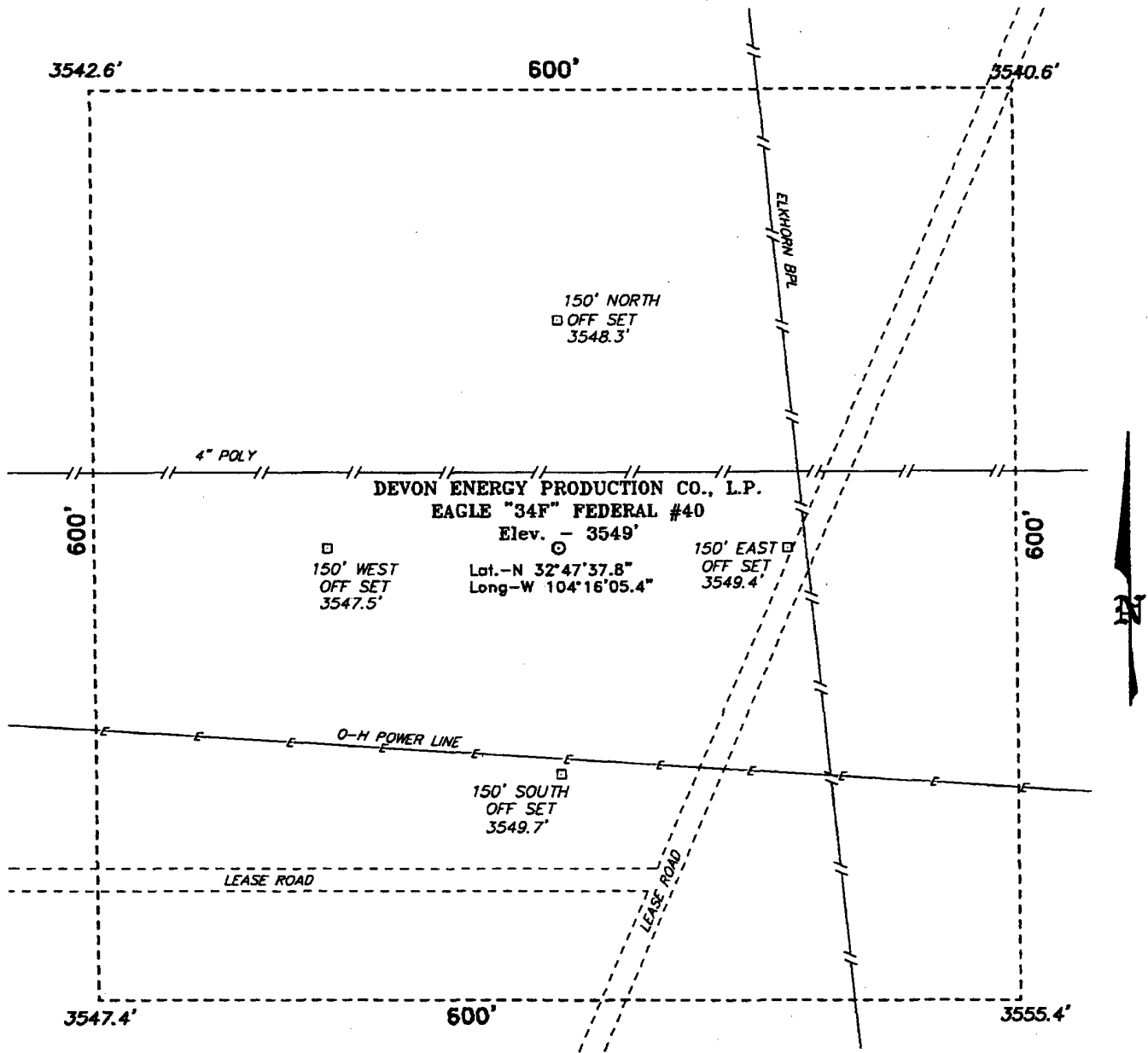
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40			

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 the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Karen Cottom</i> Signature</p> <p>Karen Cottom Printed Name</p> <p>Operations Technician Title</p> <p>November 5, 2003 Date</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>OCTOBER 08, 2003</p> <p>Date Surveyed</p> <p><i>[Signature]</i> Signature of Seal of Professional Surveyor</p> <p>NEW MEXICO 7977 W.D. No. 3672</p> <p>Certificate No. Gary L. Jones 7977</p>

**SECTION 34, TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.**



**Directions to Location:**

FROM THE JUNCTION OF US HWY 82 AND CO. RD. 204, GO SOUTH 0.1 MILE TO CO. RD. 225; THENCE SOUTH ON 225 FOR APPROX. 1.5 MILE TO LEASE ROAD; THENCE NORTHERLY ON LEASE ROAD FOR 1.0 MILE TO THE PROPOSED LEASE ROAD.

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

REF: EAGLE "34F" FED. No. 40 / Well Pad Topo

THE EAGLE "34F" FED. No. 40 LOCATED 1550' FROM  
THE NORTH LINE AND 2110' FROM THE WEST LINE OF  
SECTION 34, TOWNSHIP 17 SOUTH, RANGE 27 EAST,

N.M.P.M., EDDY COUNTY, NEW MEXICO.

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

W.O. Number: 3672

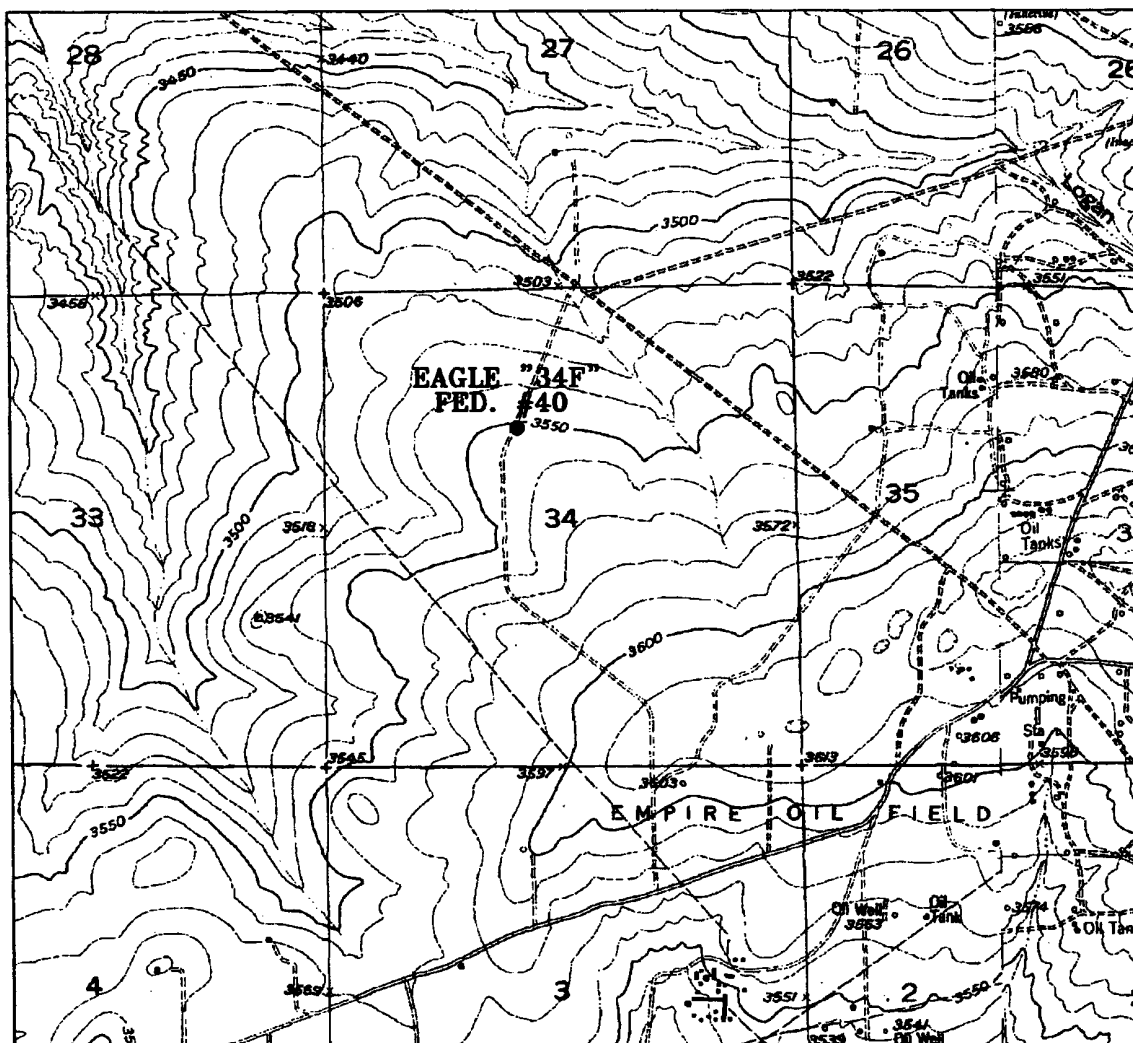
Drawn By: K. GOAD

Date: 10-10-2003

Disk: KJG CD#4 - 3672A.DWG

Survey Date: 10-08-2003

Sheet 1 of 1 Sheets



**EAGLE "34F" FEDERAL #40**  
 1550' FNL AND 2110' FWL  
 Section 34, Township 17 South, Range 27 East,  
 N.M.P.M., Eddy 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

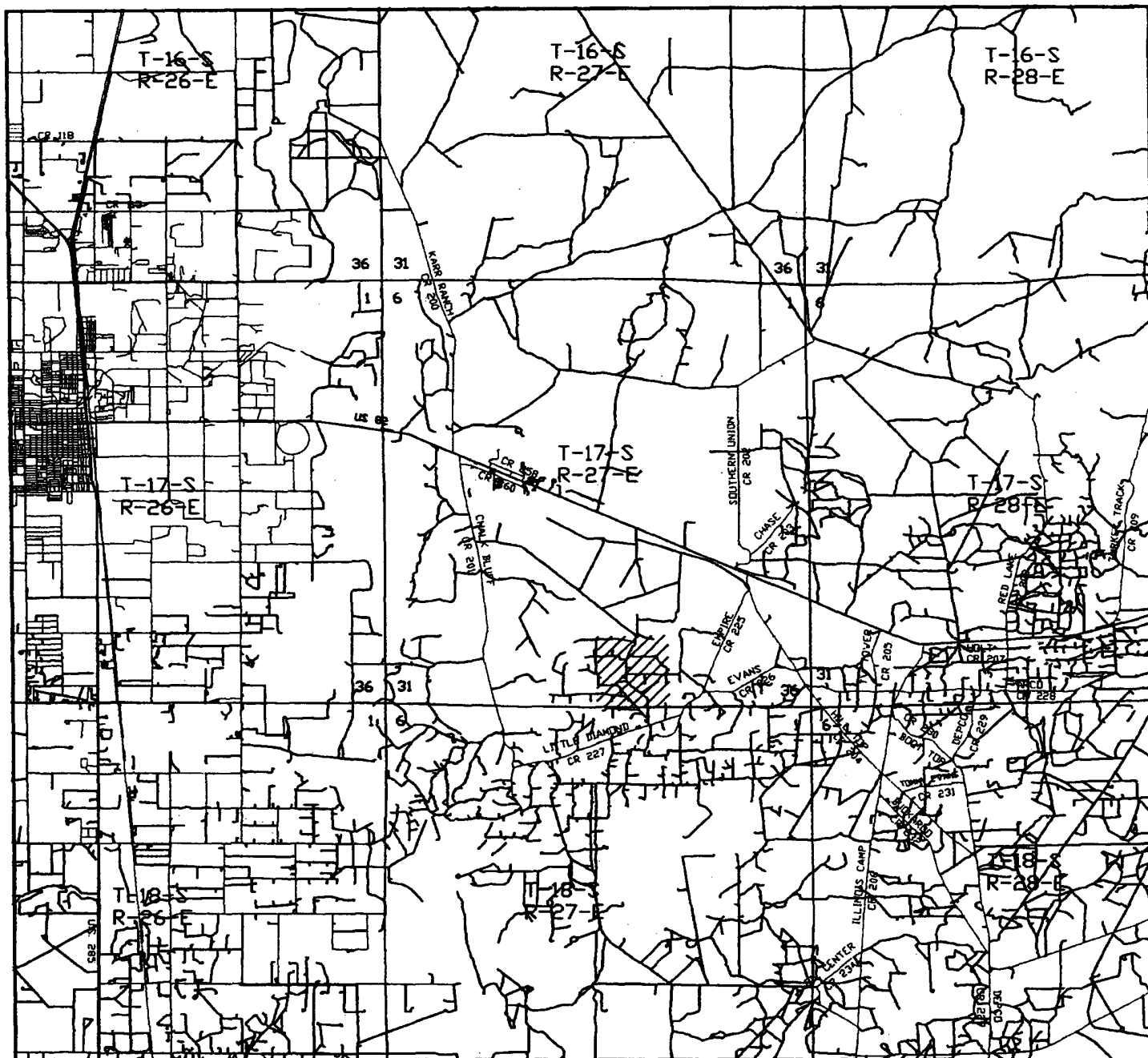
W.O. Number: 3672AA - KJG CD#4

Survey Date: 10-08-2003

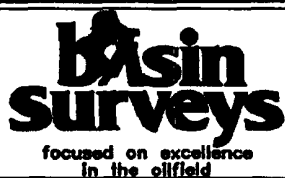
Scale: 1" = 2000'

Date: 10-10-2003

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



**EAGLE "34F" FEDERAL #40**  
**1550' FNL AND 2110' FWL**  
**Section 34, Township 17 South, Range 27 East,**  
**N.M.P.M., Eddy 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: 3672AA - KJG CD#4

Survey Date: 10-08-2003

Scale: 1" = 2 miles

Date: 10-10-2003

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



United States Department of the Interior

**BUREAU OF LAND MANAGEMENT**

Roswell Field Office  
2909 West Second Street  
Roswell, New Mexico 88201

IN REPLY REFER TO:

**JUN 05 2003**

Devon Energy Production Company, L.P.  
Attn. Ms Karen Cottom  
20 North Broadway, Suite 1500  
Oklahoma City, Oklahoma 73102-8260

Re: Red Lake Field Area  
Master Drilling and Surface Use Plan  
Eddy County, New Mexico

The master drilling and surface use plan, dated May 6, 2003, for the Red Lake Field Area in Townships 17 and 18 South, Range 27 East, Eddy County, New Mexico, is now approved. Several corrections have been made to the attached list describing the field area. An approved copy is attached for your records.

Please note that the surface casing setting depth may change in individual APD (Form 3160-4) submittals because the depth of the expected fresh water varies across this area.

If you have any questions, please contact Alexis C. Swoboda, P.E. at 505-627-0228.

Sincerely,

Larry D. Bray  
Assistant Field Manager  
Lands and Minerals

devon

20 North Broadway, Suite 1500  
Oklahoma City, Oklahoma 73102-8260

Telephone: (405) 228-7512  
Fax: (405) 552-4621

May 6, 2003

Bureau of Land Management  
Attn Armando Lopez  
2909 West Second Street  
Roswell, NM 88201

Re: Master Drilling and Surface Use Program  
Red Lake Field

Dear Armando:

Per our conversation, we are submitting a Master Drilling and Surface Use Program, one original and three copies, for the Red Lake Field. I have enclosed the program and a map detailing the area for which we intend to use the program. It is my understanding that we submit the MDSUP for approval first and then submit the 3160-3 forms as they are needed.

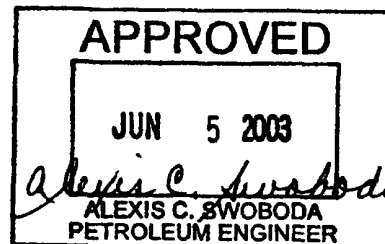
Please contact me should there be any additional information required. Thanks for your help.

Sincerely,



Karen Cottom  
Engineering Technician  
Devon Energy Production Company, L.P.

kc  
Enclosure





**Master Drilling Program**  
**Red Lake Field**

To be attached to Form 3160-3

UNIT AREA: Leases in the following sections, Townships and Ranges that are operated by Devon Energy Production Company, LP.

Lease Numbers as follows but not limited to:

<b>Section 2</b>	NMNM 2029-634 NMNM-B-1483	NE4/NW4, NW4/NE4	<b>T18S-R27E</b>
<b>Section 3</b>	NMLC 065478-B NMNM 015605 NMLC 061783-B	All of Section 3 except <del>S2/N24W4</del>	<b>T18S-R27E</b>
<b>Section 4</b>	NMNM 033825 NMLC 055465-A NMNM 29278 NMNM 025530 NMLC 070937 NMLC 061783-A NMNM 7720	All of Section 4 except N2/NW4 and NW4/SW4	<b>T18S-R27E</b>
<b>Section 25</b>	NMNM 0558679	W2NW4	<b>T17S-27E</b>
<b>Section 26</b>	NMNM 0557370	E2 NE/4, E2SE/4, S/2 SW/4	<b>T17S-R27E</b>
	NMNM 0558679	SW4NW4, NW4SW4	
<b>Section 27</b>	NMLC 067849 NMNM 0557370	N2, N2/S2 S/2S/2,	<b>T17S-R27E</b>
<b>Section 28</b>	NMLC 067849	NE4/NE4	
<b>Section 33</b>	NMLC 026874-F NMLC 026874-B NMLC 049648-B NMNM 025528 NMNM 056122 NMNM 033865 NMNM 025528	NW4, NW4SW4 SE4SW4 NE4SW4 N2NE4, SW4NE4 SE4NE4 N2SE4 S2SE4	<b>T17S-R27E</b>
<b>Section 34</b>	NMLC 064050-A NMLC 067849 NMNM 0557370	E2, NW4, NE/4 SE/4 W2 NW4, SW4 NE/4, NW/4SE/4,	<b>T17S-R27E</b>
<b>Section 35</b>	NMLC 064050-A NMLC 067849 NMLC 057798 NMLC 028755-A NMNM 0557370 NMLC050158	NW4SW4 NW/4NW/4 SW4SW4, N/2SE4 NE/4SW/4, SE/4,SE/4 SE/4SW/4, SW/4SE/4 SW/4NW/4 E/2NE/4, E/2NW/4	<b>T17S-R27E</b>

If drilling is proposed on additional leases, the BLM will be advised when they are proposed.

NM 29270

SESE

2

1. Geologic Name of Surface Formation:

Permian

2. Estimated Tops of Important Geologic Markers:

Queen	879'
Grayburg	1330'
San Andres	1610'
Glorieta-Yeso	2960'

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

Water

Possible small amounts of fresh water from surface to 1130'.

Oil

Grayburg:	1330'
San Andres:	1610'
Glorieta-Yeso	2960'

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 8 5/8" casing at approximately 1150' and circulating cement back to surface. A shallower setting depth may be required to prevent the surface casing from being set through the Premier Sand. The Grayburg and San Andres intervals will be isolated by setting 5-1/2" casing to total depth (4000'±) and circulating cement to surface.

4. Casing Program:

<u>Hole Size</u>	<u>Interval</u>	<u>Csg OD</u>	<u>Weight, Grade, Type</u>
17 1/2"	0- 40'	14"	Conductor, 0.30" wall
12-1/4"	0-1150' ±	8-5/8"	24#, J-55 ERW or seamless ST&C R-3
7-7/8"	0-TD	Jss 5-1/2"	15.5# J-55, ERW, FBN or seamless LT&C, R-3

5. Cementing Program:

13 3/8" Conductor Casing: Cemented with redimix to surface.

8 5/8" Surface Casing: Cemented to surface with 350 sks Lite + 5% salt + 1/4 lb/sk cellophane flakes and 200 sks Class C + 2% CaCl<sub>2</sub> + 1/4 lb/sk cellophane flakes. Circulate to surface.

WITNESS

5-1/2" Production: Cemented to surface with 380 sks Lite + 5#/sx salt + 1/4 lb/sk cellophane flakes and 370 sks 50:50 Pos 'C' w/3% salt, Fluid loss, 1/4#/sx flake.

The above cement volumes could be revised pending the caliper measurement from the open hole logs. The top of cement is designed to reach surface.

6. Minimum Specifications for Pressure Control:

The blowout preventor equipment (BOP) shown in Exhibit #1 will consist of either a single annular preventor or a double ram type preventor (2000 psi WP). The unit will be hydraulically operated and will be equipped with either a single annular preventor or a set of double rams (blind rams and 4-1/2" drill pipe rams). The BOP will be installed on the 8 5/8" surface casing and utilized continuously until total depth is reached. Prior to drilling out the 8 5/8" casing shoe, the BOP's will be tested with the rig pump to 1000 psi.

The BOP system will be function tested 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 driller's log. A 2" kill line and 3" choke line will be incorporated in the drilling spool below the BOP. Other accessory BOP equipment will include a Kelly cock, floor safety valve, choke lines and choke manifold.

6. Types and Characteristics of the Proposed Mud System:

The well will be drilled to total depth using a fresh water mud system. Depths of systems are as follows:

<u>Depth</u>	<u>Type</u>	<u>Weight (ppg)</u>	<u>Viscosity (1/sec)</u>	<u>Water Loss (cc)</u>
0 - 1150'	Fresh Water	8.4-8.8	34-38	No Control
1150' - TD	Fresh Water/Cut Brine	8.4-8.6	28-32	No Control

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

7. Auxiliary Well Control and Monitoring Equipment:

- A. A Kelly cock will be in the drill string at all times.
- B. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.

8. Logging, Testing and Coring Program:

- A. No drill stem tests are planned.
- B. The open hole electrical logging program will be:
  - T. D. to 1150': Dual Induction-Micro SFL with Gamma Ray, and Caliper
  - T. D. to 1150': Compensated Neutron-Litho Density with Gamma Ray and Caliper
  - T. D. to surface: Gamma Ray/Neutron
- C. No cores are planned.

9. Abnormal Pressures, Temperatures and Potential Hazards:

No abnormal pressures or temperatures are foreseen. The anticipated bottom hole temperature at total depth is 90 degrees and maximum bottom hole pressure is 800 psi. No major loss circulation intervals have been encountered in adjacent wells. An H<sub>2</sub>S Drilling Operations Plan is included as Exhibit #6.

10. Anticipated Starting Date and Duration of Operations:

Road and location preparation will not be undertaken until approval has been received from the BLM. The anticipated spud date will be provided with each well application. The drilling operation should require approximately 10 days. If the well is deemed productive, completion operations will require, at minimum, an additional 30 days of testing to ascertain whether the well will be connected to an existing production facility.

**MASTER SURFACE USE AND OPERATING PLAN**  
**Red Lake Field**

This plan will be submitted with Form 3160-3, Application for Permit to Drill. The purpose of this plan is to describe the location of the proposed wells, the proposed construction activities and operations plan, the magnitude of necessary surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operations. This plan will allow a complete appraisal to be made of the environmental effects associated with the proposed operations.

**UNIT AREA:** Leases in the following Sections, Townships and Ranges that are Operated by Devon Energy Production Company, LP.

Lease Numbers as follows but not limited to:

<b>Section 2</b>	NMNM 2029-634 NMNM-B-1483	NE4/NW4, NW4/NE4	<b>T18S-R27E</b>
<b>Section 3</b>	NMLC 065478-B NMNM 015605 NMLC 061783-B	All of Section 3 except S2/N24	<b>T18S-R27E</b>
<b>Section 4</b>	NMNM 033825 NMLC 055465-A NMNM 29278 NMNM 025530 NMLC 070937 NMLC 061783-A NMNM 7720	All of Section 4 except N2/NW4 and NW4/SW4	<b>T18S-R27E</b>
<b>Section 25</b>	NMNM 0558679	W2NW4	<b>T17S-27E</b>
<b>Section 26</b>	NMNM 0557370	E2 NE/4, E2SE/4, S/2 SW/4	<b>T17S-R27E</b>
	NMNM 0558679	SW4NW4, NW4SW4	
<b>Section 27</b>	NMLC 067849	N2, N2/S2	<b>T17S-R27E</b>
	NMNM 0557370	S/2S/2,	
<b>Section 28</b>	NMLC 067849	NE4/NE4	
<b>Section 33</b>	NMLC 026874-F	NW4, NW4SW4	<b>T17S-R27E</b>
	NMLC 026874-B	SE4SW4	
	NMLC 049648-B	NE4SW4	
	NMNM 025528	N2NE4, SW4NE4	
	NMNM 056122	SE4NE4	
	NMNM 033865	N2SE4	
	NMNM 025528	S2SE4	
<b>Section 34</b>	NMLC 064050-A	E2, NW4, NE/4 SE/4	<b>T17S-R27E</b>
	NMLC 067849	W2 NW4, SW4	
	NMNM 0557370	NE/4, NW/4SE/4,	
<b>Section 35</b>	NMLC 064050-A	NW4SW4	<b>T17S-R27E</b>
	NMLC 067849	NW/4NW/4	
	NMLC 057798	SW4SW4, N/2SE4 NE/4SW/4, SE/4,SE/4	
	NMLC 028755-A	SE/4SW/4, SW/4SE/4	
	NMNM 0557370	SW/4NW/4	
	NMLC050158	E/2NE/4, E/2NW/4	

If drilling is proposed on additional leases, the BLM will be advised when they are proposed.

1. Existing Roads:

- A. The well site and elevation plat for each well will be provided with the 3160-3 when proposed.
- B. All roads to the location are shown on Exhibit #2 of each individual application. The existing roads are illustrated in red and are adequate for travel during drilling and production operations. Upgrading of the roads prior to drilling will be done where necessary as determined during the onsite inspections.
- C. Directions to location will be provided for each individual well application.
- D. Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as any operations continue on the lease.

2. Proposed Access Road

Exhibit #3 of each application will show the new access road (if necessary) to be constructed and will be illustrated in yellow. The road will be constructed as follows:

- A. The maximum width of the road will be fifteen (15) feet.
- B. It will be crowned and made of 6 inches 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.
- D. The average grade will be approximately 1%.
- E. No cattle guards; grates or fence cuts will be required
- F. No turnouts are planned.

4. Location of Existing and/or Proposed Facilities:

- A. In the event the well is found productive, the collection facilities will be noted on the Application to Permit. We believe that existing facilities will be sufficient unless otherwise stated in the individual APD form. Existing facilities are listed below:

Malco Batt NE / SW OF SEC 6  
 CARTER COLLIER NE / SW OF SEC 5  
 WRL BATT AND INJ. ST. 1 NE / NW OF SEC 7  
 JOHNSTON BATT SW / NW SEC 7  
 JACKSON BATT SW / SW SEC 7  
 KAISER B 6 BATT NW / SE OF SEC 18  
 KAISER BATT NE / SE OF SEC 18  
 HAWK 8 BATT IN SW / SE OF SEC 8  
 WRL SATALITE BATT. NE / NE OF SEC 8  
 WRL INJ ST 2 NW / NE OF SEC 9  
 HAWK 9 BATT NW / SE OF SEC 9  
 HONDO BATT NE / SW OF SEC 4  
 WINDFOHR BATT SE / NE OF SEC 4  
 FALCON BATT NE / SW OF SEC 3  
 COMPTON 33 BATT SW / NE OF SEC 33  
 EAGLE BATT SW / NE OF SEC 34  
 LOGAN ST 2 BATT NW / NE OF SEC 2  
 LOGAN 35 BATT SE / SW OF SEC 35

EALGLE 27 BATT NW / SE OF SEC 27  
ASAU SE / SE OF SEC 13

- B. If the well is productive, rehabilitation plans are as follows:
- a. The reserve pit will be back-filled after the contents of the pit are dry (within 120 days after completion, weather permitting).
  - b. The drill site will then be contoured to the original natural state.

5. Methods of Handling Water Disposal:

- A. Drill cuttings will be disposed into the reserve pit.
- B. Drilling fluids will be contained in steel mud tanks or lined earthen pits and the reserve pit. The reserve pit will contain excess drilling fluid or fluid from the well during drilling, cementing, and completion operations. The reserve pit will be an earthen pit roughly 70' x 70' x 5', or smaller, in size.
- C. The reserve pit will be fenced on three sides throughout drilling operations and will be totally isolated upon removal of the rotary rig. The pit will be lined using a 5-7 mil plastic to minimize loss of drilling fluids.
- D. Water produced from the well during completion operations will be disposed into a steel tank or reserve pit, if volumes prove excessive. After placing the well on production through the production facilities, all water will be collected in tanks and injected into the water injection system. Produced oil will be separated into steel stock tanks until sold.
- E. A portable chemical toilet will be available on the location for human waste during the drilling operations.
- F. Garbage, trash and waste paper produced during drilling operations will be collected in a contained trailer and disposed at a approved landfill. All waste material will be contained to prevent scattering by the wind. All water, fluids, salt or other chemicals will be disposed into the reserve pit. No toxic waste or hazardous chemicals will be generated by this operation.
- G. All waste material will be removed within 30 days after the well is either completed or abandoned. The reserve pit will be completely fenced until it has dried. At the point the reserve pit is found sufficiently dry, it will be backfilled and reclaimed. The portion of the drilling pad used by the production equipment (pumping unit) will remain in use.

6. Well Site Layout:

- A. The drill pad layout will be shown on Exhibit 4 for each individual well.  
Dimensions

8

- B. No permanent living facilities are planned, but temporary trailers for the tool pusher, drilling foreman and mud logger may be on location throughout drilling operations.
- C. The reserve pit and earthen pits will be lined using plastic sheeting of 5-7 mil thickness.

7. Surface Ownership:

The well site is owned by the Bureau of Land Management.

8. Other Information:

- A. The project area is classified as vegetations consisting of thick grasses, isolated creosote, and shallow silty sandy soil over gypsum.
- B. There is permanent water (Pecos River) to the west of the area covered by the Master Drilling and Surface use plan.
- C. A Cultural Resources Examination for each APD will be completed by Southern New Mexico Archeological Services, Inc. and forwarded to the Carlsbad, New Mexico BLM office.

9. Lessee's and Operator's Representative:

The Devon Energy Corporation representatives responsible for assuring compliance of the surface use plan are:

Gerald T. (Tom) Pepper  
Operations Engineering Advisor

Don Mayberry  
Superintendent

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

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

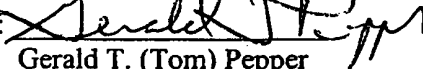
(405) 552-4513 (office)  
(405) 728-8641 (home)

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

Certification:

I hereby certify 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 Corporation (Nevada) and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

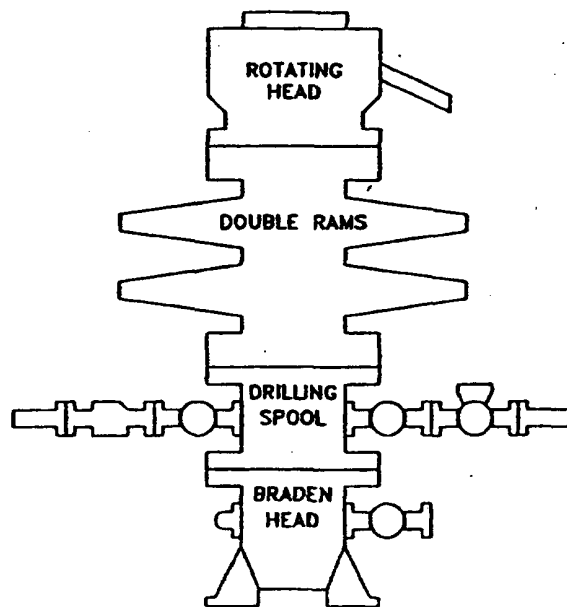
Date: 5/6/03

Signed:   
Gerald T. (Tom) Pepper  
Operations Engineering Advisor

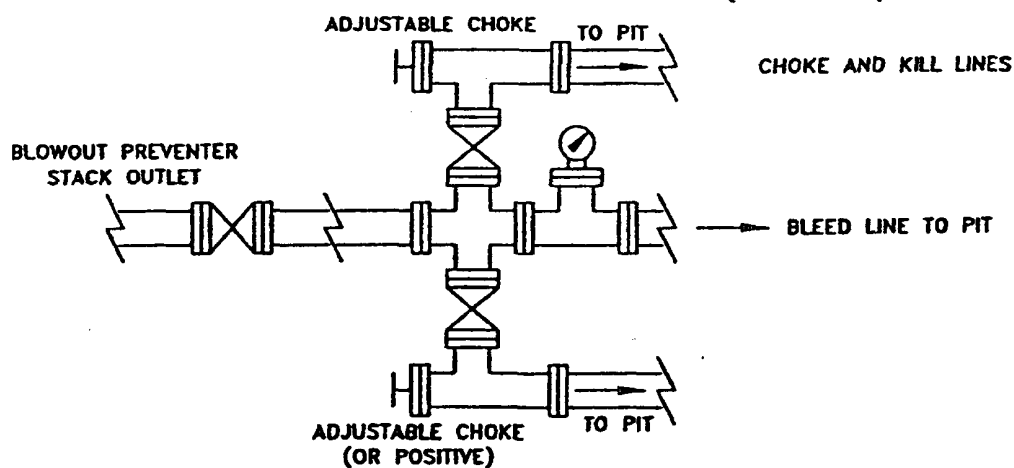


**Attachment to Exhibit #1**  
**NOTES REGARDING BLOWOUT PREVENTORS**  
**West Red Lake Area**  
**Eddy County, New Mexico**

1. Drilling nipple will be constructed so it can be removed mechanically without the aid of a welder. The minimum internal diameter will equal BOP bore.
2. Wear ring will be properly installed in head.
3. Blowout preventor and all associated fittings will be in operable condition and tested to 1000 psi with the rig pump.
4. All fittings will be flanged.
5. A full bore safety valve 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. All BOP equipment will meet API standards and include a minimum 40 gallon accumulator having two independent means of power to initiate closing operation.
11. **BOP will consist of either a single annular preventor or a set of double rams as shown in Exhibit #1.**



# CHOKE MANIFOLD REQUIREMENT (2000 psi WP)



**devon**  
ENERGY SERVICES

**WEST RED LAKE AREA**  
EMERY COUNTY, NEW MEXICO

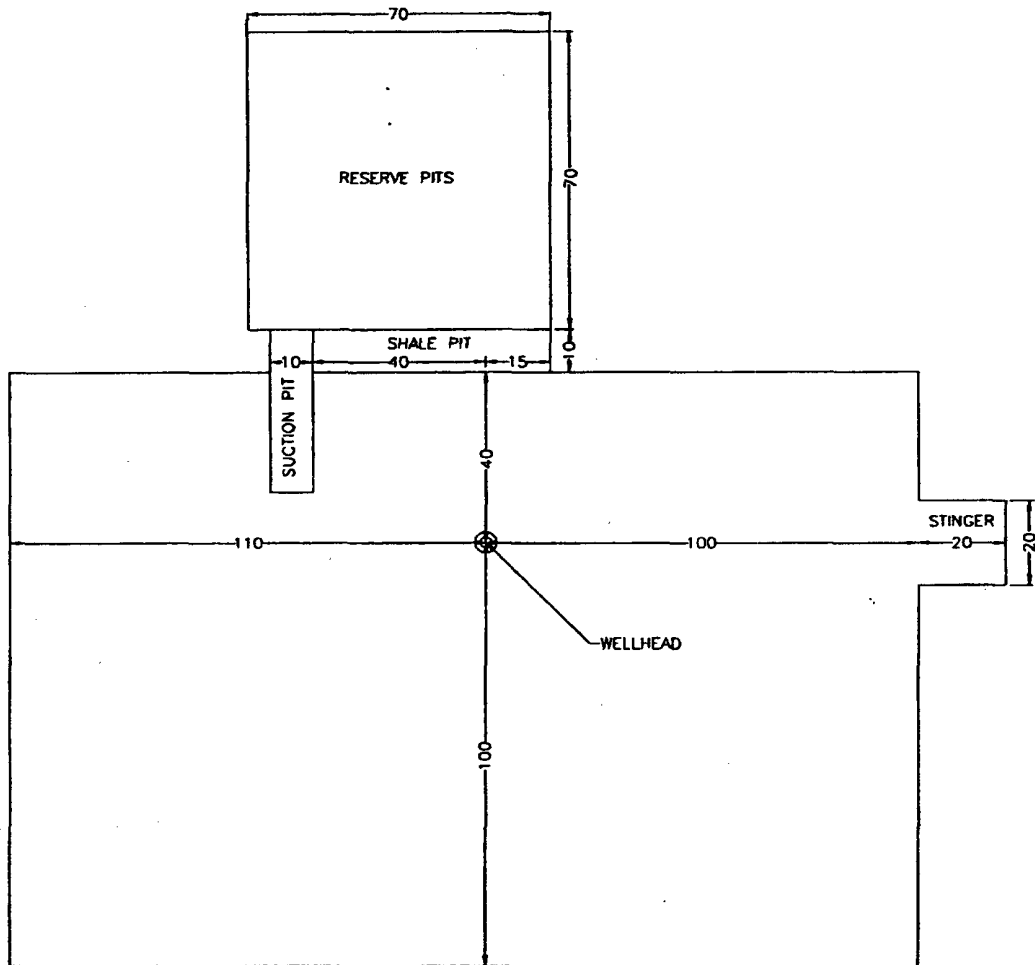
SCHEMATIC  
**BLOWOUT PREVENTOR**  
(2000 PSI WORKING WP)

C:\PROJECTS\EXPANDED

WRLBOP	

CB

8/98



FILE:



## WEST RED LAKE AREA

EDDY COUNTY, NEW MEXICO

DRILLING PAD

### EXHIBIT 5

Scale in Feet  
25 0 25 50 75 100

EB

6/96

# DEVON ENERGY CORPORATION

## HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

### A. Hydrogen Sulfide Training

All rig crews and company personnel will receive training from a qualified instructor in the following areas prior to penetrating any hydrogen sulfide bearing formations during drilling operations:

1. The hazards and characteristics of hydrogen sulfide (H<sub>2</sub>S).
2. The proper use and maintenance of the H<sub>2</sub>S safety equipment and of personal protective equipment to be utilized at the location such as H<sub>2</sub>S detection monitors, alarms and warning systems, and breathing equipment. Briefing areas and evacuation procedures will also be discussed and established.
3. Proper rescue techniques and procedures will be discussed and established.

In addition to the above, supervisory personnel will be trained in the prevention of oil and gas well blowouts in accordance with Minerals Management Service Standards Subpart - 0 - 250 - 212.

Prior to penetrating any known H<sub>2</sub>S bearing formation, H<sub>2</sub>S training will be required at the rig sight for all rig crews and company personnel that have not previously received such training. This instruction will be provided by a qualified instructor with each individual being required to pass a 20 question test regarding H<sub>2</sub>S safety procedures. All contract personnel employed on an unscheduled basis will be required to have received appropriate H<sub>2</sub>S training.

This Hydrogen Sulfide Drilling And Operations Plan shall be available at the wellsite during drilling operations.

### B. H<sub>2</sub>S Safety Equipment And Systems

All H<sub>2</sub>S safety equipment and systems will be installed, tested, and operational when drilling operations reach a depth approximately 500' above any known or probable H<sub>2</sub>S bearing formation. The safety systems to be utilized during drilling operations are as follows:

**1. Well Control Equipment**

- (a) Double ram BOP with a properly sized closing unit and pipe rams to accommodate all pipe sizes in use.
- (b) A choke manifold with a minimum of one remote choke.

**2. H2S Detection And Monitoring Equipment**

- (a) Three (3) H2S detection monitors will be placed in service at the location. One monitor will be placed near the bell nipple on the rig floor, one will be placed at the rig substructure; and, one will be at the working mud pits or shale shaker. This monitoring system will have warning lights and audible alarms that will alert personnel when H2S levels reach 10 ppm.
- (b) One (1) Sensidyne Pump with the appropriate detection tubes will also be available to perform spot checks for H2S concentrations in any remote or isolated areas.

**3. Protective Equipment For Essential Personnel**

Protective equipment will consist of the following:

- (a) Four (4) - five minute escape packs located at strategic points around the rig.
- (b) Two (2) - thirty minute rescue packs to be located at the designated briefing areas.

**4. Visual Warning System**

Visual warning system will consist of the following:

- (a) Two wind direction indicators.
- (b) One condition / warning sign which will be posted on the road - providing direct access to the location. The sign will contain lettering of sufficient size to be readable at a reasonable distance from the immediate location. The sign will inform the public that a hydrogen sulfide gas environment could be encountered at the location.

**5. Mud Program**

- (a) The mud program has been designed to minimize the volume of H<sub>2</sub>S circulated to surface. Proper mud weight and safe drilling practices (for example, keeping the hole filled during trips) will minimize hazards when drilling in H<sub>2</sub>S bearing formations.

**6. Metallurgy**

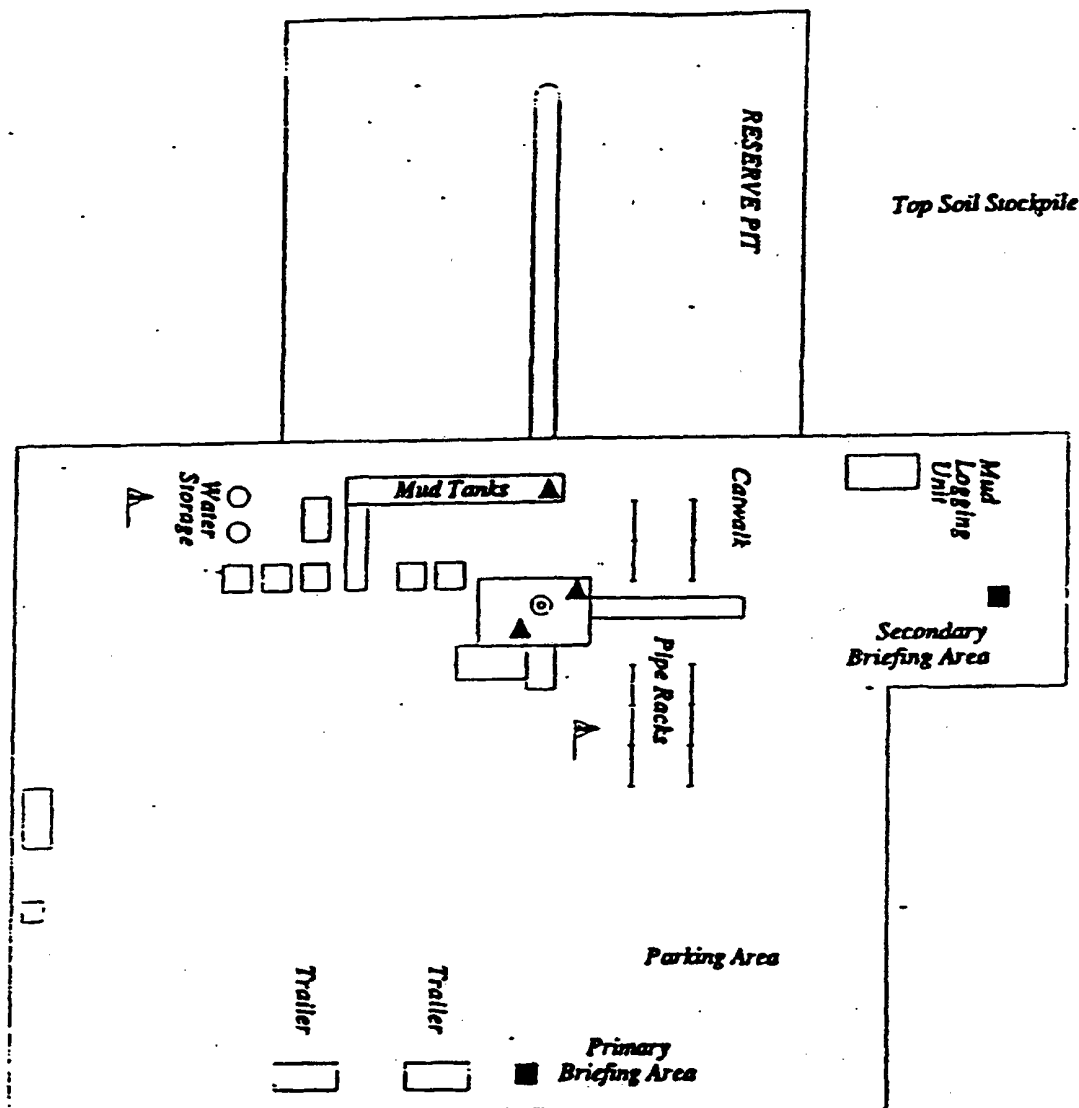
- (a) All drill strings, casings, tubing, wellhead, blowout preventers, drilling spools, kill lines, choke manifold and lines, and valves shall be suitable for H<sub>2</sub>S service.

**7. Communication**

- (a) Two way radio and cellular telephone communication will be available in company vehicles.

**C. Diagram of Drilling Location**

- 1. Attached is a diagram representing a typical location layout as well as the location of H<sub>2</sub>S monitors, briefing areas, and wind direction indicators.



- ▲ H2S MONITORS WITH ALARMS AT THE BELL NIPPLE, SUBSTRUCTURE, AND SHALE SHAKER
- ┼ WIND DIRECTION INDICATORS
- SAFE BRIEFING AREAS WITH CAUTION SIGNS AND PROTECTIVE BREATHING EQUIPMENT



<i>devon</i>	
WEST RED LAKE AREA	
DEVON COUNTY, NEW MEXICO	
H2S PLAN	
Scale in Feet 25      0      25      50      75      100	

File 0111001/H2S-PLAN 9/75

Well name:	West Red Lake Area
Operator:	Devon Energy Corporation
String type:	Surface
Location:	Eddy County, NM

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

Mud weight: 9.630 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: 77 °F  
Temperature gradient: 0.20 °F/100ft  
Minimum section length: 1,150 ft

**Burst:**

Design factor 1.00

**Burst**

Max anticipated surface pressure: 717 psi  
Internal gradient: 0.000 psi/ft  
Calculated BHP 717 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: 1.50 (B)

Non-directional string.

Tension is based on buoyed weight.  
Neutral point: 984 ft

**Re subsequent strings:**

Next setting depth: 4,000 ft  
Next mud weight: 9.630 ppg  
Next setting BHP: 2,001 psi  
Fracture mud wt: 12.000 ppg  
Fracture depth: 1,150 ft  
Injection pressure 717 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)	Internal Capacity (ft³)
1	1150	8.625	24.00	J-55	ST&C	1150	1150	7.972	55.4
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	575	1370	2.38	717	2950	4.12	24	244	10.33 J

Prepared by: Jim Linville  
Devon Energy

Phone: (405) 228-4621  
FAX: (405) 552-4621

Date: March 12, 2001  
Oklahoma City, Oklahoma

**Remarks:**

Collapse is based on a vertical depth of 1150 ft, a mud weight of 9.63 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: **West Red Lake Area**  
 Operator: **Devon Energy Corporation**  
 String type: **Production**  
 Location: **Eddy County, NM**

**Design parameters:**

**Collapse**

Mud weight: 9.630 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: 95 °F  
 Temperature gradient: 0.50 °F/100ft  
 Minimum section length: 1,500 ft

**Burst**

Max anticipated surface pressure: 2,001 psi  
 Internal gradient: 0.000 psi/ft  
 Calculated BHP 2,001 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: 1.50 (B)

Non-directional string.

Tension is based on buoyed weight.  
 Neutral point: 3,417 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)	Internal Capacity (ft³)
1	4000	5.5	15.50	J-55	LT&C	4000	4000	4.825	125.4
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	2001	4040	2.02	2001	4810	2.40	53	217	4.10 J

Prepared by: **Jim Linville**  
**Devon Energy**

Phone: (405) 228-4621  
 FAX: (405) 552-4621

Date: **March 12, 2001**  
**Oklahoma City, Oklahoma**

**Remarks:**

Collapse is based on a vertical depth of 4000 ft, a mud weight of 9.63 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.*

# RED LAKE AREA APD

