

**EXXON** COMPANY, U.S.A.

POST OFFICE BOX 1600 • MIDLAND TEXAS 79702 1600

July 25, 1988

PRODUCTION DEPARTMENT  
SOUTHWESTERN DIVISION

Unorthodox Well Location and  
Simultaneous Acreage Dedication  
New Mexico K State - Well No. 34  
Unit L, Section 28, T17S, R35E  
Vacuum Glorieta Pool  
Lea County, New Mexico

RECEIVED

Mr. William J. LeMay, Director  
New Mexico Oil Conservation Division  
State Land Office Building, Room 206  
310 Old Santa Fe Trail  
Santa Fe, New Mexico 87504

JUL 26 1988

*Case 9460*  
OIL CONSERVATION DIVISION

Dear Mr. LeMay:

Exxon Corporation requests permission to drill the captioned well as an unorthodox oil well location in the Vacuum Glorieta Pool, and to simultaneously dedicate Unit L to this well and to the existing New Mexico K State Well No. 31. In addition, we request permission to directionally drill from a surface location in Unit N of Section 28. All locations are shown on the attached Form C-102.

The proposed bottom hole location (BHL) is within a window bounded by lines 10' and 150' FSL and FEL of Unit L. This location area is unorthodox because it is too close to interior quarter-quarter section lines and to other wells on the same lease.

The New Mexico K State #34 is a replacement well for Unit L, Section 28, T17S, R35E, of the Vacuum Glorieta Pool. The proposed unorthodox bottom hole location in the southeast corner of unit L is necessary to capture the maximum possible remaining reserves on this proration unit. The natural water drive in this pool is watering out this proration unit from the northwest; the southeast corner will be the last portion of this proration unit to water out. Therefore the southeast corner is the best location for a replacement well. Furthermore, it is anticipated that the Vacuum Glorieta Pool will someday be CO2 flooded on 20-acre well spacing. The proposed unorthodox location for well #34 is an exact 20-acre infill location and ideal for any future CO2 project. Simultaneous dedication is requested since well No. 31 continues to produce.

Due to pipelines and other surface facilities, the surface location of the well will be in a different proration unit. The well will be directionally controlled to bottom into proration unit "L" within the bottom hole tolerance window shown on the attached Form C-102.

We are notifying offset operators by copy of this letter. A list of those operators is attached. Please set this request for hearing on August 17, 1988.

Sincerely,

A handwritten signature in cursive script that reads "Charlotte Harper".

Charlotte Harper  
Permits Supervisor

CHH:djr  
Attachments

Certified Mail - Return Receipt Requested

c: NMOCD District I, P. O. Box 1980, Hobbs, NM 88240 - w/attach.  
Offset Operators - w/attach.

Offset Operators  
New Mexico K State #34

Phillips Petroleum Company  
4001 Pembroke  
Odessa, TX 79762

Attn: Larry Sanders

Shell Western E&P, Inc.  
P.O. Box 1950  
Hobbs, NM 88240

Exxon Corporation  
P. O. Box 1600  
Midland, TX 79702

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FILE	
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LAND OFFICE	
OPERATOR	

P. O. BOX 2088  
SANTA FE, NEW MEXICO 87501

5A. Indicate Type of Lease  
STATE  FEE

5. State Oil & Gas Lease No.  
A-1320

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work

b. Type of Well  
 DRILL  DEEPEN  PLUG BACK   
 OIL WELL  GAS WELL  OTHER \_\_\_\_\_ SINGLE TONE  MULTIPLE TONE

7. Unit Agreement Name

8. Form or Lease Name  
New Mexico "K" State

2. Name of Operator  
Exxon Corp.

9. Well No.  
34

3. Address of Operator  
P. O. Box 1600, Midland, Texas 79702

10. Field and Pool, or Wildcat  
Vacuum Glorieta

4. Location of Well  
 UNIT LETTER \_\_\_\_\_ LOCATED \_\_\_\_\_ FEET FROM THE \_\_\_\_\_ LINE  
 \*See below  
 AND \_\_\_\_\_ FEET FROM THE \_\_\_\_\_ LINE OF SEC. 28 TWP. 17S REC. 35E NMPM



12. County  
Lea

19. Proposed Depth 6300'  
 19A. Formation Glorieta, Paddock  
 20. Rotary or C.T. Rotary  
 21. Elevations (Show whether DF, KT, etc.) GR. 3951  
 21A. Kind & Status Plug. Bond Blanket  
 21B. Drilling Contractor Unknown  
 22. Approx. Date Work will start Upon approval

23. PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
17 1/2"	13 3/8"	48	400'	300 CLC	Surf.
12 1/4" or 11"	8 5/8"	32, 24	4800'	1300 CLC	Surf.
7 7/8"	5 1/2"	14	6300'	380 CLC	4300'

\*Surface location: Unit N, 1286' FSL & 1333' FWL. Proposed bottom hole location will fall in the window depicted in unit L on the attached C-102.

This location is both unorthodox and simultaneous dedication.

This well will be allowed to drift naturally towards the bottom hole window. A multishot survey will be run at the 8 5/8" casing point. If necessary, the well will then be directionally drilled to the bottom hole window.

A sketch of the blow out preventing and component specifications are attached.

4. ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

hereby certify that the information above is true and complete to the best of my knowledge and belief.

Signed Charlotte Harper Title Permits Supervisor Date 7-25-88

Charlotte Harper

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

Exxon Lse. No. \_\_\_\_\_

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-102  
Supersedes C-128  
Effective 1-4-65

State Lse. No. \_\_\_\_\_

WELL LOCATION AND ACREAGE DEDICATION PLAT

Federal Lse. No. \_\_\_\_\_

All distances must be from the outer boundaries of the Section.

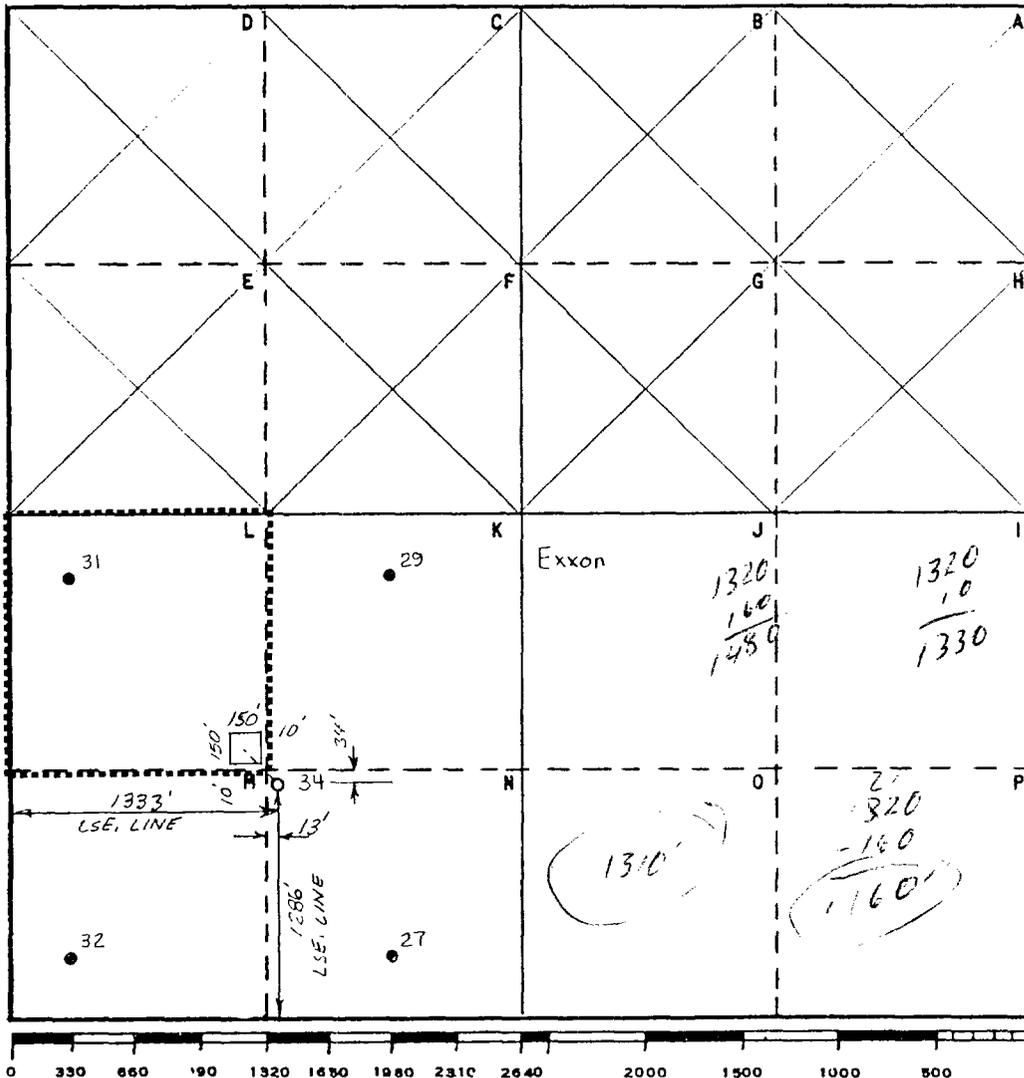
Operator <b>Exxon Corporation</b>		Lease <b>NEW MEXICO "K" STATE</b>			Well No. <b>34</b>
Unit Letter <b>BH "L" SUR "N"</b>	Section <b>28</b>	Township <b>17S</b>	Range <b>35E</b>	County <b>LEA</b>	
Actual Footage Location of Well: BH. LOCATION WINDOW - MIN. 10' FSL & MAXIMUM 150' FSL PLUS A MINIMUM OF 10' FEL & MAX. 150' FEL UNIT "L" 1286 feet from the SOUTH line and 1333 feet from the WEST line					
Ground Level Elev. <b>3951</b>	Producing Formation <b>GLORIETTA / PADDOCK</b>		Pool <b>VACUUM GLORIETTA</b>	Dedicated Acreage: <b>40</b> Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.  
SIMULTANEOUS DEDICATION WITH WELL No. 31
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

Yes  No If answer is "yes," type of consolidation \_\_\_\_\_

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

*Charlotte Harper*  
Name Charlotte Harper

Position  
Permits Supervisor

Company Exxon Corporation  
Box 1600 Midland, Texas

Date 7-22-88

*Bruce R. Pennell*  
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 knowledge and belief.

Date Surveyed 7-21-88

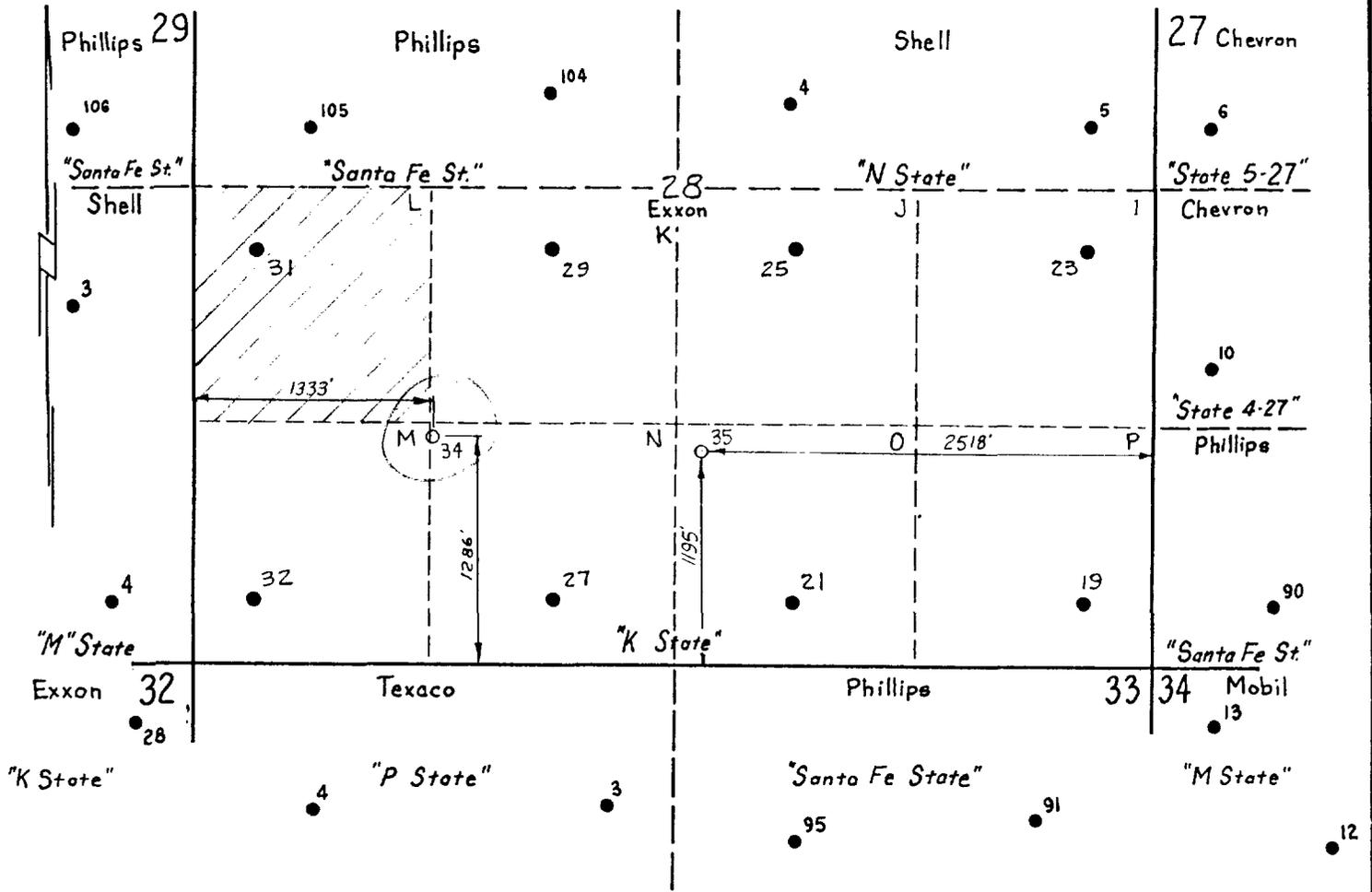
Registered Professional Engineer and/or Land Surveyor

*Bruce R. Pennell*

Certificate No. 9062

28 Miles WEST of HOBBS, New Mexico

C.E. Sec. File No. 10126-A



/// - Proration Unit - Well 34

18 mi. West of Hobbs, N.M.

Application for well no. 34

PORTION OF N. MEXICO STATE "K" LSE.  
 SEC. 28, T17S, R35E  
 VACUUM GLORIETA FLD. LEACO, N.M.

**EXXON COMPANY, U.S.A.**  
 A DIVISION OF EXXON CORPORATION  
**PRODUCTION DEPARTMENT**

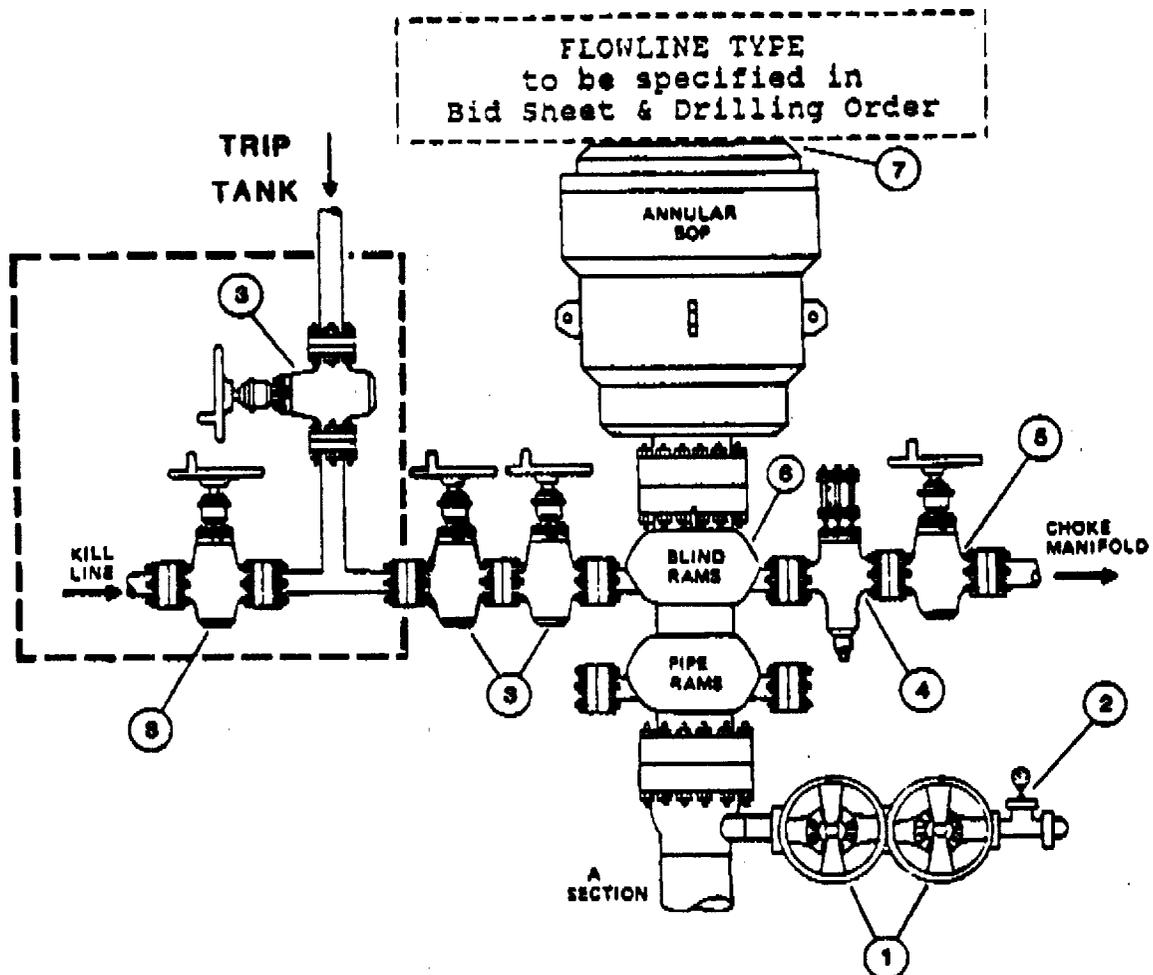
DRAWN Derek Cobb  
 CHECKED \_\_\_\_\_

ENGR. SECTION \_\_\_\_\_ REVISED \_\_\_\_\_  
 APPROVED \_\_\_\_\_

SCALE  $1"=1000'$   
 DATE 7-22-88

JOB NO. \_\_\_\_\_ FILE NO. W-A-10126

## TYPE-RRR BOP STACK THREE PREVENTERS



### COMPONENT SPECIFICATIONS

1. Screwed or flanged plug or gate valves -- 2" minimum nominal dia. -- same working pressure as "A" section.
2. Tee with tapped bullplug, needle valve, and pressure gauge.
3. Flanged plug or gate valve -- 2" minimum nominal dia. -- same working pressure as BOP stack. NOTE: Outer valves are optional if pump type trip tank is tied into Flowline Type.
4. Flanged hydraulically controlled gate valve -- 3" minimum nominal dia. -- same working pressure as BOP stack.
5. Flanged plug or gate valve -- 3" minimum nominal dia. -- same working pressure as BOP stack.
6. BOP outlets must be 2" minimum nominal dia. for kill line and 3" minimum dia. for choke line.
7. Top of annular preventer must be equipped with an API flange ring gasket. All flange studs must be in place or holes filled in with screw type plugs.

#### NOTE:

- A. Unless specified otherwise in the Bid Letter and/or Contract, the contractor will furnish and maintain all components shown above Exxon's wellhead.
- B. The choke line between the drilling spool and choke manifold should not contain any bend or turn in the pipe body. Any bend or turn required should be made with a running tee with a blind flange or welded bullplug. All connections should be flanged or welded. All fabrications requiring welding must be done by a certified welder. Welds should be stress relieved when required.
- C. Plug valves should be equivalent to the Howco Lo-Torc and gate valves equivalent to the Cameron Type 'F'.

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

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U.S.G.S.	
LAND OFFICE	
OPERATOR	

5A. Indicate Type of Lease  
STATE  FEDERAL

5. State Oil & Gas Lease No.  
A-1320

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work

1b. Type of Well  
 OIL WELL  GAS WELL  OTHER \_\_\_\_\_  
 DRILL  DEEPEN  PLUG BACK   
 SINGLE ZONE  MULTIPLE ZONE

7. Unit Agreement Name

8. Form or Lease Name  
New Mexico "K" State

2. Name of Operator  
Exxon Corp.

9. Well No.  
34

3. Address of Operator  
P. O. Box 1600, Midland, Texas 79702

10. Field and Pool, or Wildcat  
Vacuum Glorieta

4. Location of Well  
 UNIT LETTER \_\_\_\_\_ LOCATED \_\_\_\_\_ FEET FROM THE \_\_\_\_\_ LINE  
 \*See below  
 AND \_\_\_\_\_ FEET FROM THE \_\_\_\_\_ LINE OF SEC. 28 TWP. 17S RGE. 35E NMPM

12. County  
Lea

19. Proposed Depth 6300'	18A. Formation Glorietta, Paddock	18. Rotary or C.T. Rotary
-----------------------------	--------------------------------------	------------------------------

20. Elevations (show whether DF, RT, etc.)  
GR. 3951

21A. Kind & Status Plug. Bond  
Blanket

21B. Drilling Contractor  
Unknown

22. Approx. Date Work will start  
Upon approval

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
17 1/2"	13 3/8"	48	400'	300 CLC	Surf.
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Signed Charlotte Harper Title Permits Supervisor Date 7-25-88

Charlotte Harper

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

Exxon Lse No. \_\_\_\_\_

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-102  
Supersedes C-128  
Effective 1-1-65

State Lse No. \_\_\_\_\_

WELL LOCATION AND ACREAGE DEDICATION PLAT

Federal Lse No. \_\_\_\_\_

All distances must be from the outer boundaries of the Section.

Operator <b>Exxon Corporation</b>		Lease <b>NEW MEXICO "K" STATE</b>			Well No. <b>34</b>
--------------------------------------	--	--------------------------------------	--	--	-----------------------

Unit Letter <b>BH "L" SUR "N"</b>	Section <b>28</b>	Township <b>17S</b>	Range <b>35E</b>	County <b>LEA</b>
--------------------------------------	----------------------	------------------------	---------------------	----------------------

Actual Footage Location of Well:  
 BH. LOCATION WINDOW - MIN. 10' FSL & MAXIMUM 150' FSL PLUS A MINIMUM OF 10' FEL & MAX. 150' FEL UNIT "L"  
 1286 feet from the SOUTH line and 1333 feet from the WEST line

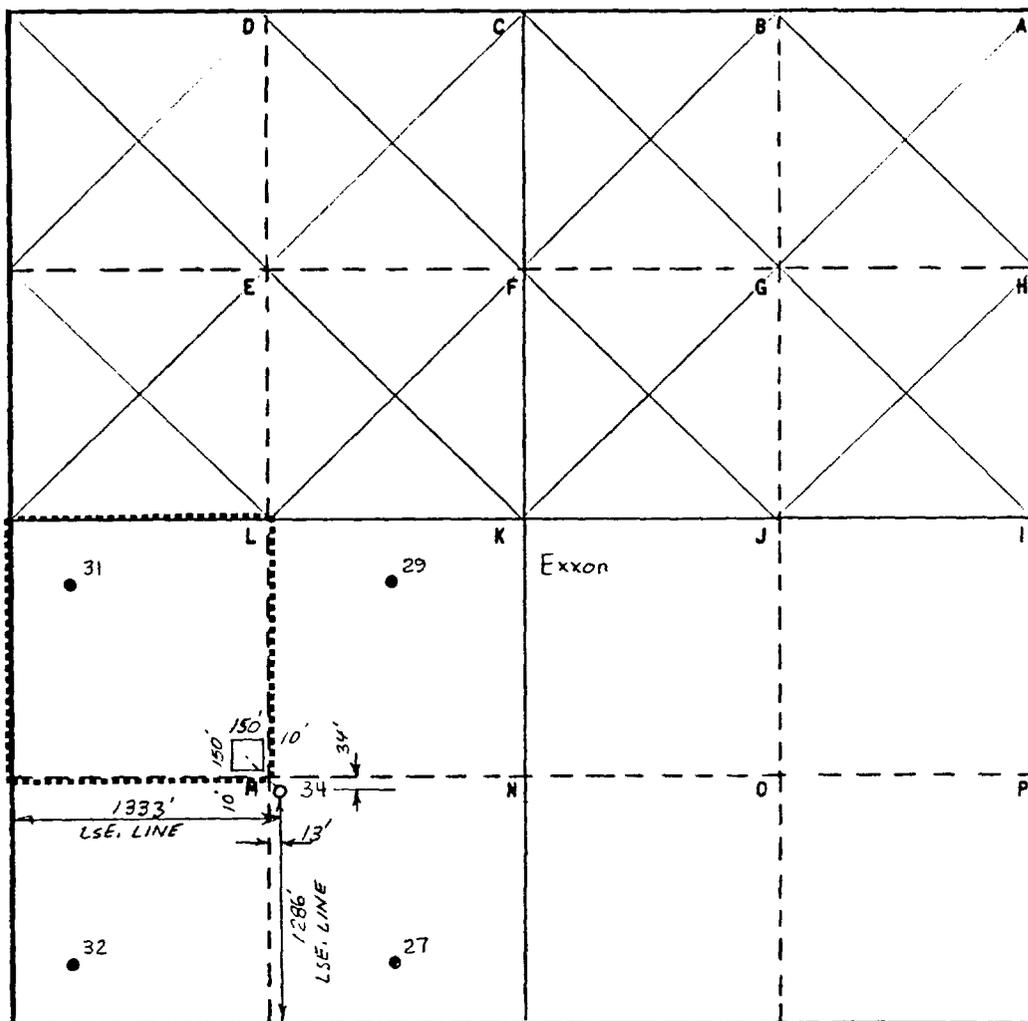
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I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

*Charlotte Harper*  
 Name Charlotte Harper

Position  
 Permits Supervisor

Company Exxon Corporation  
 Box 1600 Midland, Texas

Date  
 7-22-88

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 knowledge and belief.

Date Surveyed  
 7-21-88

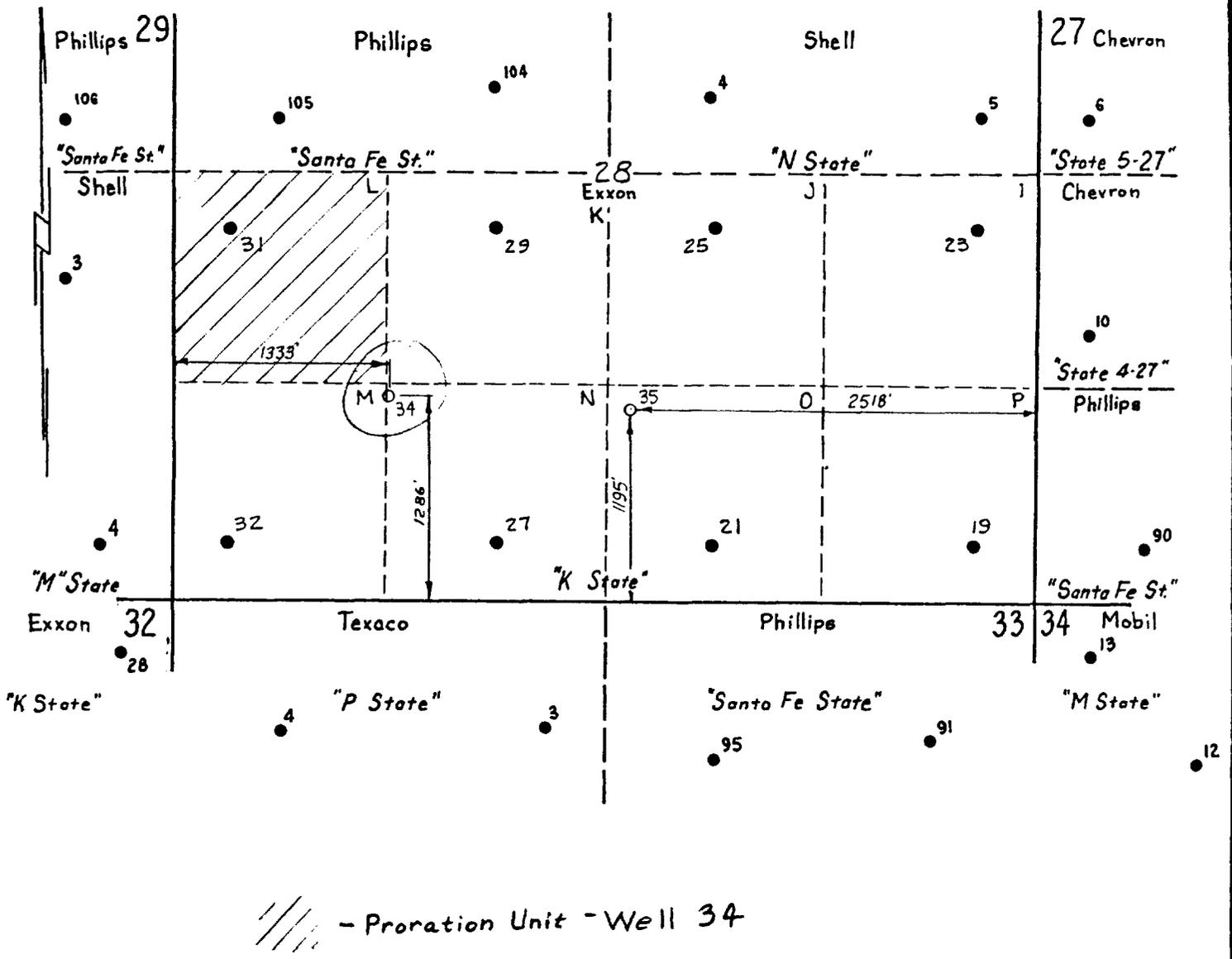
Registered Professional Engineer and/or Land Surveyor

*Bruce R. Pennell*  
 Certificate No.

9062

28 Miles WEST of HOBBS, New Mexico

C.E. Sec. File No. 10126-A



18 mi. West of Hobbs, N.M.

Application for well no. 34

PORTION OF N. MEXICO STATE "K" LSE.  
 SEC. 28, T17S, R35E  
 VACUUM GLORIETA FLD. LEA CO., N.M.

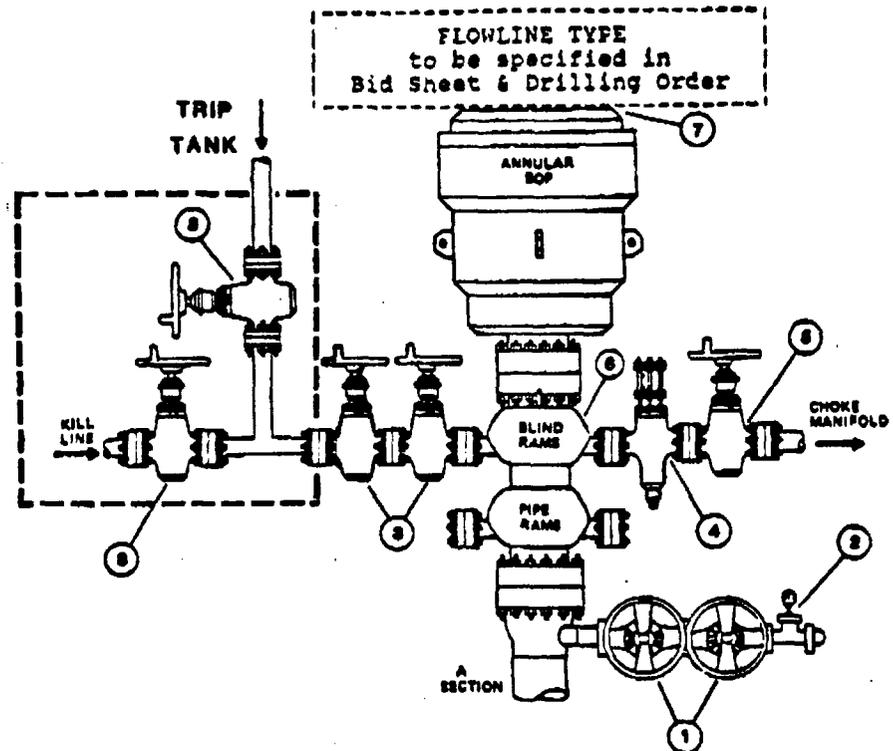
**EXXON COMPANY, U.S.A.**  
 A DIVISION OF EXXON CORPORATION  
**PRODUCTION DEPARTMENT**

DRAWN Derek Cobb ENGR. SECTION \_\_\_\_\_ REVISED \_\_\_\_\_  
 CHECKED \_\_\_\_\_ APPROVED \_\_\_\_\_

SCALE  $1"=1000'$   
 DATE 7-22-88

JOB NO. \_\_\_\_\_ FILE NO. W-A-10126

**TYPE-RRA BOP STACK  
THREE PREVENTERS**



**COMPONENT SPECIFICATIONS**

1. Screwed or flanged plug or gate valves -- 2" minimum nominal dia. -- same working pressure as "A" section.
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3. Flanged plug or gate valve -- 2" minimum nominal dia. -- same working pressure as BOP stack. NOTE: Outer valves are optional if pump type trip tank is tied into Flowline Type.
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**NOTE:**

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- B. The choke line between the drilling spool and choke manifold should not contain any bend or turn in the pipe body. Any bend or turn required should be made with a running tee with a blind flange or welded bullplug. All connections should be flanged or welded. All fabrications requiring welding must be done by a certified welder. Welds should be stress relieved when required.
- C. Plug valves should be equivalent to the Howco Lo-Torc and gate valves equivalent to the Cameron Type 'F'.

STATE OF NEW MEXICO  
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:

CASE NO. 9460  
Order No. R-873664

~~THE~~ APPLICATION OF EXXON COMPANY,  
USA, FOR AN UNORTHODOX OIL WELL  
LOCATION, DIRECTIONAL DRILLING,  
AND SIMULTANEOUS DEDICATION, LEA  
COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on August  
17, 1988, at Santa Fe, New Mexico, before Examiner David R.  
Catanach.

NOW, on this \_\_\_\_\_ day of September, 1988, the  
Division Director, having considered the testimony, the <sup>hearing</sup>  
record, and the recommendations of the Examiner, and ~~having~~  
~~been~~ fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by  
law, the Division has jurisdiction of this cause and the  
subject matter thereof.

(2) Division Case Nos. 9459 and 9460 were consolidated  
at the time of the hearing for the purpose of testimony.

(3) The applicant, Exxon Company, U.S.A., seeks  
authority to directionally drill its New Mexico "K" State  
Well No. 34 from a surface location 1286 feet from the South  
line and 1333 feet from the West line (Unit N) of Section  
28, Township 17 South, Range 35 East, NMPM, Lea County, New  
Mexico, wherein the applicant proposes to deviate said well  
to the Vacuum-Glorieta Pool within a window bounded by lines  
1330 feet and 1470 feet from the South line and 1170 feet  
and 1310 feet from the West line (Unit L) of said Section  
28, being an unorthodox oil well location.

*File  
8-2-88  
M.S. 8/31/88  
8/2/88  
nrh 9/2  
WJW 9/2*

(4) The applicant further proposes to simultaneously dedicate the NW/4 SW/4 of said Section 28 to the proposed well and to its existing New Mexico "K" State Well No. 31 located at a standard oil well location 2310 feet from the South line and 330 feet from the West line (Unit L) of said Section 28.

(5) Geologic and engineering testimony presented by the applicant at the hearing indicate that the Vacuum-Glorieta Pool is a water drive reservoir and further that water encroachment is approaching the NW/4 SW/4 of said Section 28 from a northwesterly direction.

(6) The evidence further indicates that the New Mexico "K" State Well No. 31 is currently producing at a 60 percent water cut and has exhibited a steadily increasing oil-water ratio during the past several years of production.

(7) The applicant proposes to drill the subject well as an eventual replacement for the above described New Mexico "K" State Well No. 31 which will be plugged and abandoned at such time as the oil-water ratio becomes excessive.

(8) Geological and engineering data presented by the applicant further indicate that a well at the proposed unorthodox bottomhole location, which will be the last portion of the proration unit to experience water encroachment, should allow the applicant to recover an additional 99,600 barrels of oil which would otherwise not be recovered by the existing New Mexico "K" State Well No. 31, thereby preventing waste.

(9) The unorthodox surface location is necessitated by pipelines and various other surface obstructions.

(10) The applicant is the operator of all affected offset acreage, and the entire S/2 of said Section 28 ~~is~~ is a common lease, being the New Mexico "K" State Lease.

(11) The applicant should be required to determine the subsurface bottomhole location by means of a multi-shot directional survey conducted subsequent to completion of drilling operations.

(12) Approval of the subject application will afford the applicant the opportunity to produce its just and equitable share of the oil in the subject pool, will result in the recovery of additional reserves, thereby preventing waste, and will protect correlative rights.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Exxon Company, USA, is hereby authorized to directionally drill its New Mexico "K" State Well No. 34 from an unorthodox surface location 1286 feet from the South line and 1333 feet from the West line (Unit N) of Section 28, Township 17 South, Range 35 East, NMPM, Lea County, New Mexico, to an unorthodox bottomhole location within the Vacuum-Glorieta Pool within a window bounded by lines 1330 feet and 1470 feet from the South line and 1170 feet and 1310 feet from the West line (Unit L) of said Section 28.

(2) Subsequent to completion of drilling operations, should said well be a producer, the applicant shall determine the bottomhole location of the subject well by means of a multi-shot directional survey; A copy of said survey shall be submitted to the Santa Fe office of the Division.

(3) The NW/4 SW/4 of said Section 28 shall be simultaneously dedicated to the subject well and to the existing New Mexico "K" State Well No. 31 located 2310 feet from the South line and 330 feet from the West line (Unit L) of said Section 28.

(4) The applicant may produce the oil allowable assigned to the subject proration unit from either well in any proportion.

(5) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY  
Director

S E A L