



# GREENHILL PETROLEUM CORPORATION

OIL CONSERVATION DIVISION  
RECEIVED

12777 JONES ROAD, SUITE 375  
HOUSTON, TEXAS 77070  
TELEPHONE (713) 955-1146  
FAX (713) 955-5105

Incorporated in Delaware, U.S.A.

'90 APR 27 AM 9 14

April 24, 1990

Oil Conservation Division  
State of New Mexico  
Energy, Minerals and Natural Resources Department  
P.O. Box 2088  
Santa Fe, NM 87504-2088

ATTN: Mike Stogner

RE: Unorthodox Location and Drilling Permit  
Proposed Well No. 47  
North Benson Queen Field  
Eddy County, New Mexico

Greenhill Petroleum Corporation respectfully requests the State of New Mexico Oil Conservation Division grant approval of the proposed unorthodox location and the attached permit to drill Well No. 47 in the North Benson Queen Field, North Benson Queen Unit, located in Eddy County, New Mexico.

The North Benson Queen Unit is presently developed and being waterflooded utilizing a 40-acre well density. It is believed that infill development using a 20-acre well density will improve waterflood sweep efficiency and will increase secondary oil recovery. The proposed location for Well No. 47 is located in the interior of the unit and is not competitive with offset wells outside the unit. Information gathered as a result of drilling this infill well will be utilized in evaluating additional infill development potential in the unit and ultimately may be used to evaluate the feasibility of tertiary recovery.

Greenhill Petroleum Corporation wishes to commence drilling operations on the two proposed wells as soon as possible and would appreciate a response to this request at your earliest convenience.

Very truly yours,

*Michael J. Newport*  
Michael J. Newport  
Landman

MJN:SKG

Enclosure

cc: Mike Williams  
P.O. Drawer DD  
Artesia, NM 88210

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK  
 DRILL       DEEPEN       PLUG BACK

b. TYPE OF WELL  
 OIL WELL       GAS WELL       OTHER       SINGLE ZONE       MULTIPLE ZONE

2. NAME OF OPERATOR  
 Greenhill Petroleum Corporation

3a. Area Code & Phone No.  
 713 955-1146

3. ADDRESS OF OPERATOR  
 12777 Jones Road, Suite 375, Houston, TX 77070

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)  
 At surface: 10' FSL & 1250' FWL  
 At proposed prod. zone: Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
 Approximately 7 1/2 miles South of Loco Hills

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)      10

16. NO. OF ACRES IN LEASE      800

17. NO. OF ACRES ASSIGNED TO THIS WELL.      40

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.

19. PROPOSED DEPTH      3700

20. ROTARY OR CABLE TOOLS      Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
 3438.1' GR

22. APPROX. DATE WORK WILL START\*  
 As soon as possible

5. LEASE DESIGNATION AND SERIAL NO.  
 NM 033775

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
 -----

7. UNIT AGREEMENT NAME  
 North Benson Queen

8. FARM OR LEASE NAME  
 North Benson Queen Unit

9. WELL NO.  
 47

10. FIELD AND POOL, OR WILDCAT  
 Queen

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
 Sec 27, T18S-R30E

12. COUNTY OR PARISH      13. STATE  
 Eddy Co.      NM

PROPOSED CASING AND CEMENTING PROGRAM

HOLE SIZE	CASING SIZE	WEIGHT/FOOT	GRADE	THREAD TYPE	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4	8 5/8	24#	K55	STC	+600'	See below
7 7/8	5 1/2	14#	K55 or J55	STC	3600'	See below

8 5/8" Surface Lead: 200 sx Howco Light Cmt Premium Plus + 1/4 PPS Flocele + 2% CaCl<sub>2</sub> @ 12.4 ppg.  
 Tail: 100 sx Premium Plus + 2% CaCl<sub>2</sub> @ 14.8 ppg

5 1/2" Production  
 Spacer - 10 bbls 2% KCL water  
 750 gal Superflush 201  
 5 bbls 2% KCL water

Lead - 275 sx Howco Light Premium Plus + 15 PPS Salt + 1/4 PPS Flocele @ 12.4 ppg.

Tail - 275 sx 50/50 Poz mix Premium Plus + 2% Total Gel + 3 PPS Salt + .5% Halad-332 + 10 PPS Microbond @ 14.4 ppg.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED Richard J. Hempt TITLE Landman DATE 3/19/90

(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

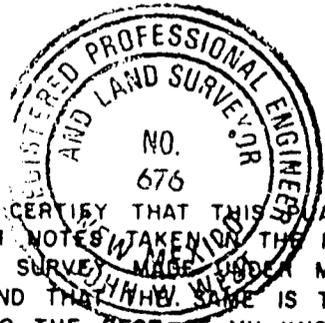
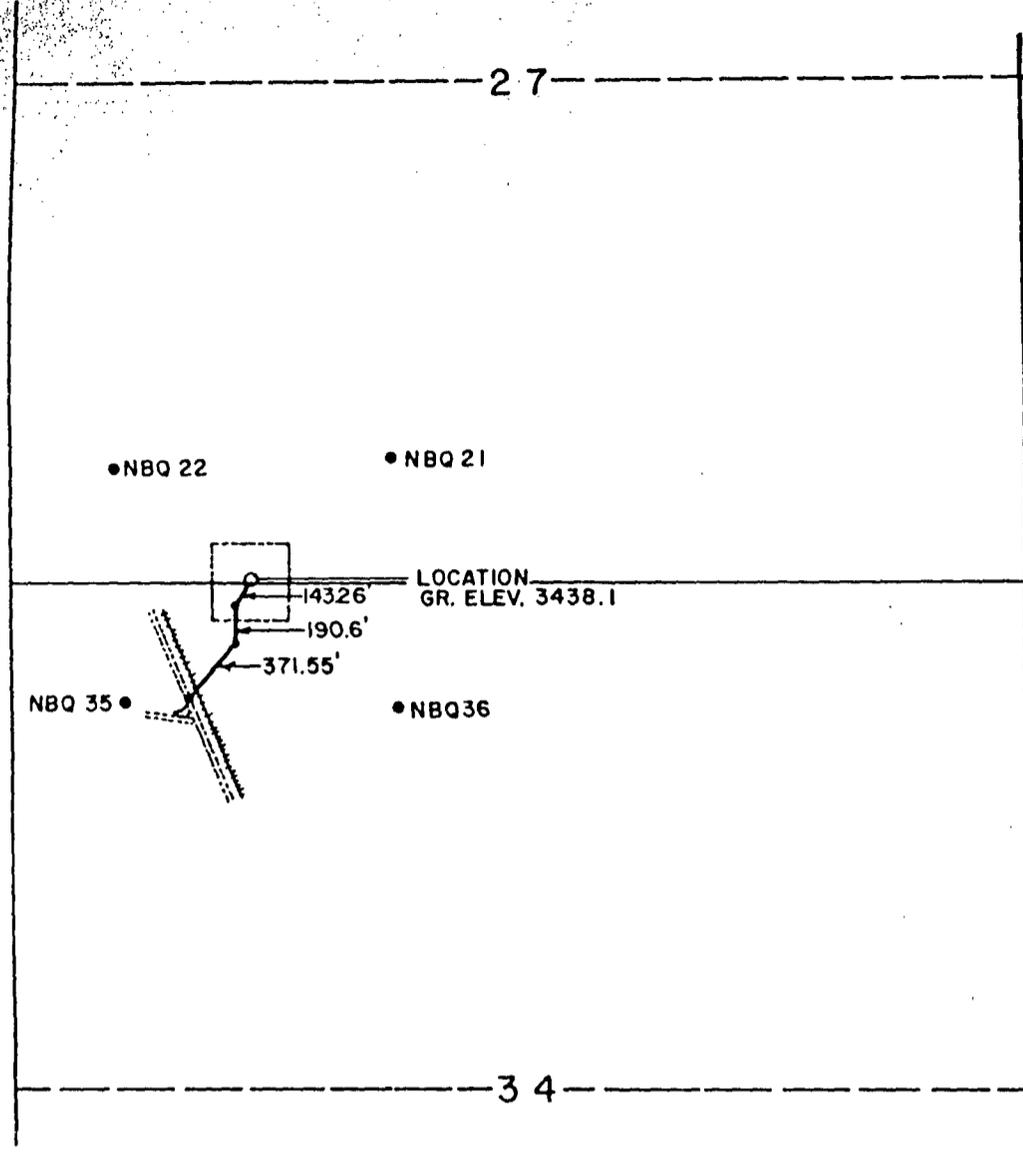
APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes 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 records.

SECTIONS 27 & 34, TOWNSHIP 18 SOUTH, RANGE 30 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO



I HEREBY CERTIFY THAT THIS PLAN WAS MADE FROM NOTES TAKEN IN THE FIELD IN A BONA FIDE SURVEY MADE UNDER MY SUPERVISION, AND THAT THE SAME IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

*John W. West*  
 JOHN W. WEST, N.M. P.E. & L.S. No. 676  
 TEXAS R.P.S. No. 1138  
 RONALD J. EIDSON, N.M. L.S. No. 3239  
 TEXAS R.P.S. No. 1883

GREENHILL PETROLEUM CORP.			
A Proposed Road To North Benson Queen Unit No. 47, Crossing Sections 27 & 34, Township 18 South, Range 30 East, N.M.P.M., Eddy County New Mexico.			
JOHN W. WEST ENGINEERING COMPANY CONSULTING ENGINEERS			
HOBBS, NEW MEXICO			
Scale: 1" = 1000'		Drawn By: Presley	
Date: 2/10/90	Ck.	Sheet 1	of 1 Sheets

Submit to: Appropriate District Office  
 State Lease - 4 copies  
 Fee Lease - 3 copies

**OIL CONSERVATION DIVISION**

DISTRICT I  
 P.O. Box 1980, Hobbs, NM 88240

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

DISTRICT II  
 P.O. Drawer DD, Artesia, NM 88210

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

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

All Distances must be from the outer boundaries of the section

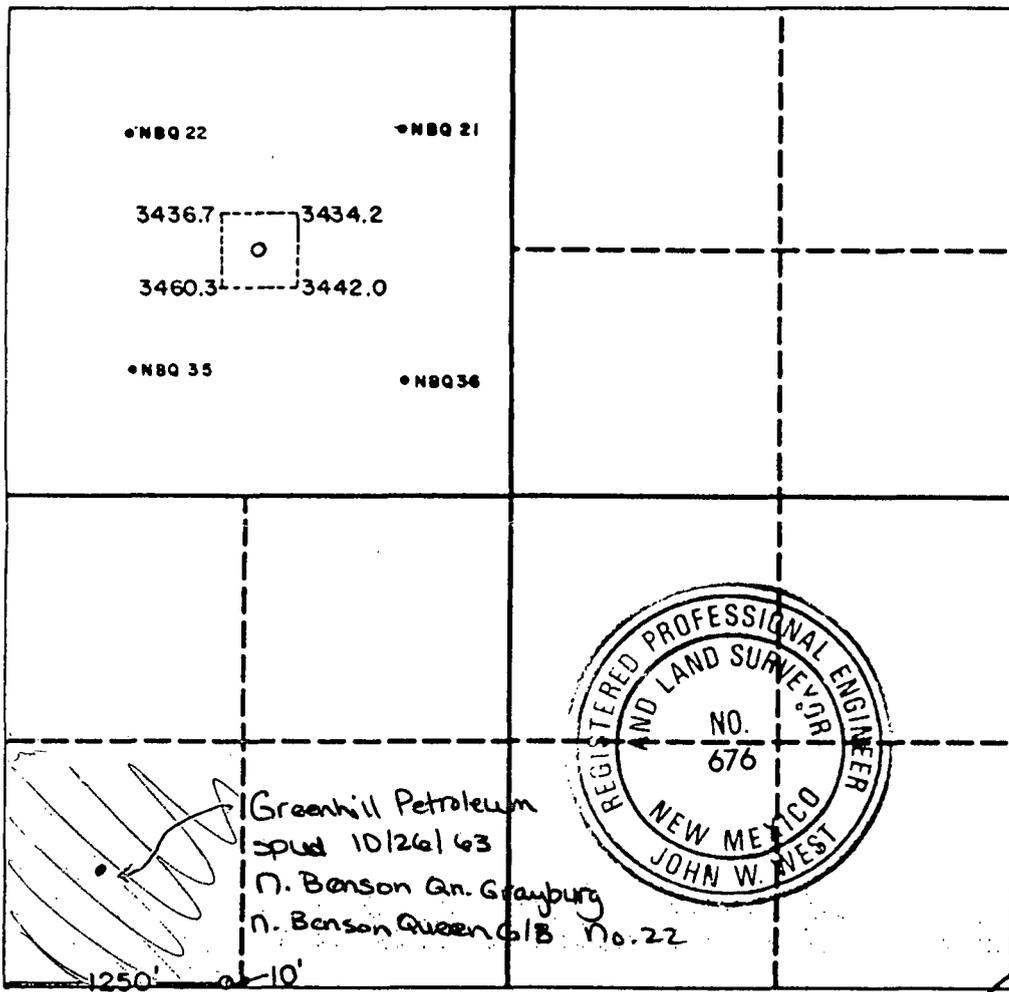
Operator GREENHILL PETROLEUM CORP.			Lease NORTH BENSON QUEEN UNIT		Well No. 47
Unit Letter M	Section 27	Township 18 South	Range 30 East	County Eddy	
Actual Footage Location of Well: 10 feet from the South line and 1250 feet from the West line					
Ground level Elev. 3438.1	Producing Formation		Pool	Dedicated Acreage: Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- 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 interest 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 interest, 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.

Signature

Printed Name

Position

Company

Date

**SURVEYOR CERTIFICATION**

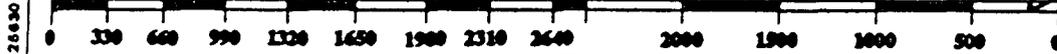
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

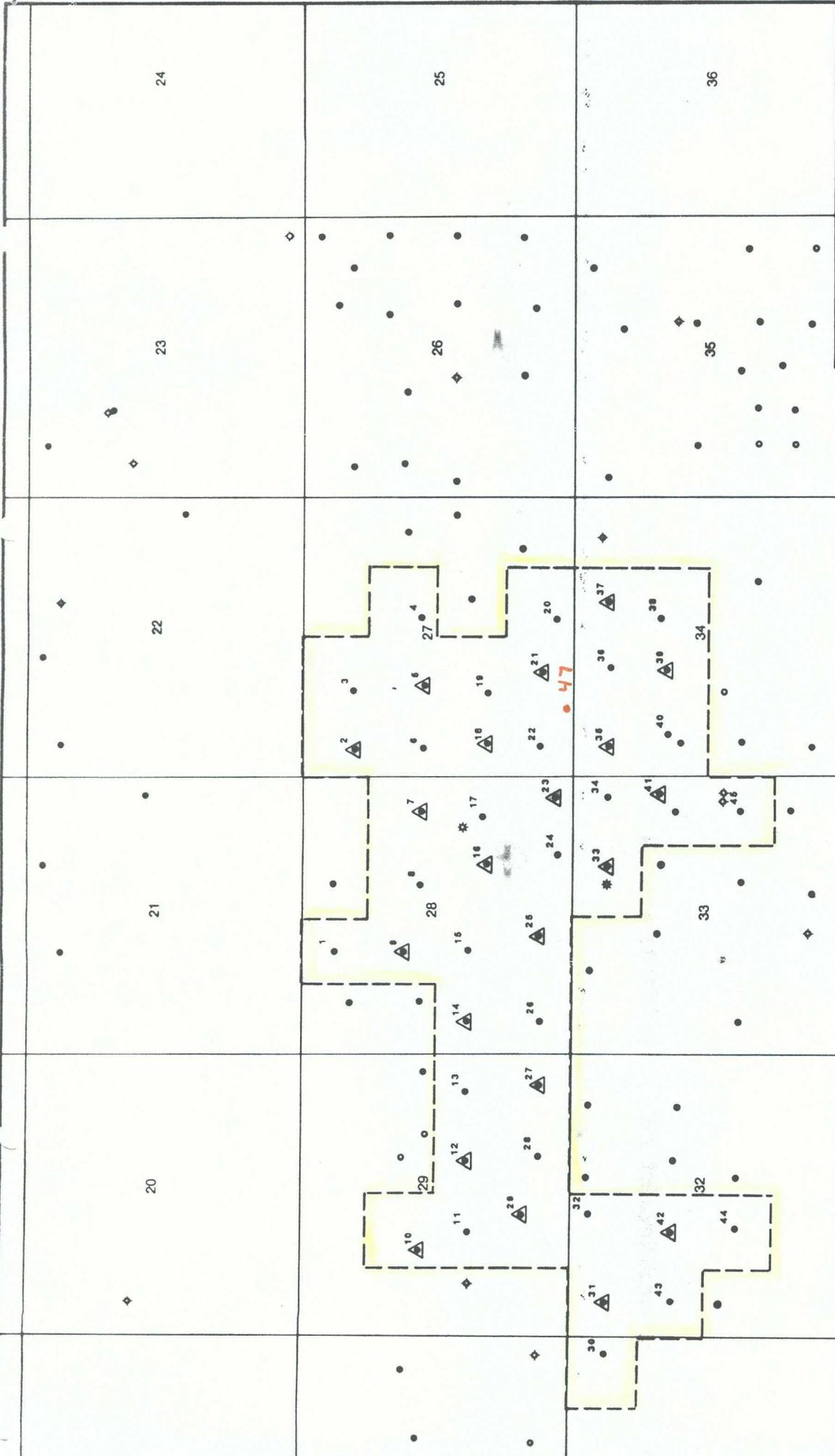
February 8, 1990

Signature & Seal of Professional Surveyor

*John W. West*  
 Certificate No. JOHN W. WEST, 676  
 RONALD J. EIDSON, 3239

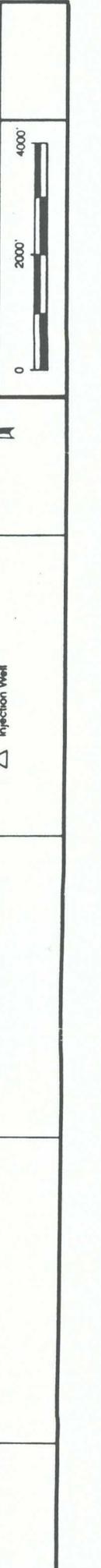


126630



**CYPRESS PETROLEUM CONSULTANTS**  
**RICHARDSON, SANGREE AND SNEIDER**  
 N. BENSON QUEEN UNIT  
 Eddy County, New Mexico

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**NORTH BENSON-QUEEN POOL**  
(Texaco Waterflood)  
Eddy County, New Mexico

Order No. R-4537, Authorizing Texaco Inc. to Institute a Waterflood Project in the North Benson-Queen Pool, Eddy County, New Mexico, May 17, 1973.

Application of Texaco Inc. for a Waterflood Project, Eddy County, New Mexico.

CASE NO. 4964  
Order No. R-4537

**ORDER OF THE COMMISSION**

BY THE COMMISSION: This cause came on for hearing at 9 a.m. on May 9, 1973, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 17th day of May, 1973, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

**FINDS:**

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

(2) That the applicant, Texaco Inc., seeks authority to institute a waterflood project in the North Benson Queen Unit Area, North Benson-Queen Pool, by the injection of water into the Queen formation through 21 injection wells in Sections 27, 28, 29, 32, 33, and 34, Township 18 South, Range 30 East, NMPM, Eddy County, New Mexico.

(3) That the wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(4) That the proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(5) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

**IT IS THEREFORE ORDERED:**

(1) That the applicant, Texaco Inc., is hereby authorized to institute a waterflood project in the North Benson Queen Unit Area, North Benson-Queen Pool, by the injection of water into the Queen formation through the following-described wells in Township 18 South, Range 30 East, NMPM, Eddy County, New Mexico:

LEASE	WELL NO.	LOCATION
Elliott Federal	3	660' FSL & 660' FEL of Sec. 29
Holt Federal	1	990' FSL & 2310' FWL of Sec. 29
Simms and Reese Federal	2	660' FNL & 1650' FEL of Sec. 33
E. M. Elliott	2	1980' FSL & 1980' FEL of Sec. 29
E. M. Elliott	3	2310' FNL & 1650' FWL of Sec. 29
McClay	5	1650' FNL & 330' FEL of Sec. 33
Jones Federal	1	1980' FEL & 660' FNL of Sec. 34
Simms Federal	2	1650' FNL & 1980' FWL of Sec. 34
Simms Federal	4	660' FNL & 610' FWL of Sec. 34
L. R. Manning "B" Federal (NCT-1)	1	660' FSL & 1980' FWL of Sec. 27
L. R. Manning "B" Federal (NCT-1)	3	330' FSL & 330' FEL of Sec. 28
L. R. Manning "B" Federal (NCT-1)	5	1650' FSL & 1651' FEL of Sec. 28
L. R. Manning Federal (NCT-1)	8	1650' FSL & 660' FWL of Sec. 27
L. R. Manning Federal (NCT-1)	9	1980' FSL & 660' FNL of Sec. 28
L. R. Manning Federal (NCT-1)	10	660' FSL & 2310' FWL of Sec. 28
L. R. Manning Federal (NCT-1)	12	2310' FNL & 660' FEL of Sec. 28
L. R. Manning Federal (NCT-1)	14	1980' FNL & 1980' FWL of Sec. 28
L. R. Manning Federal (NCT-1)	18	2310' FNL & 1750' FWL of Sec. 27
L. R. Manning Federal (NCT-1)	19	990' FNL & 560' FWL of Sec. 27
New Mexico "CY" State (NCT-1)	2	660' FNL & 660' FWL of Sec. 32
New Mexico "CY" State (NCT-1)	3	1980' FNL & 1980' FWL of Sec. 32

(2) That injection into each of the aforesaid wells shall be through 2-3/8-inch plastic-lined tubing and the annulus of each of said wells shall be loaded with an inert liquid and equipped with a pressure gauge at the surface. The appropriate District Office of the Commission shall be notified upon completion of the well for injection purposes prior to the commencement of actual injection.

(3) That the subject waterflood project is hereby designated the Texaco North Benson Queen Unit Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(4) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(5) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

NORTH BENSON QUEEN

No. 14-08-001-12410

APPROVED: September 14, 1973

EFFECTIVE: October 1, 1973

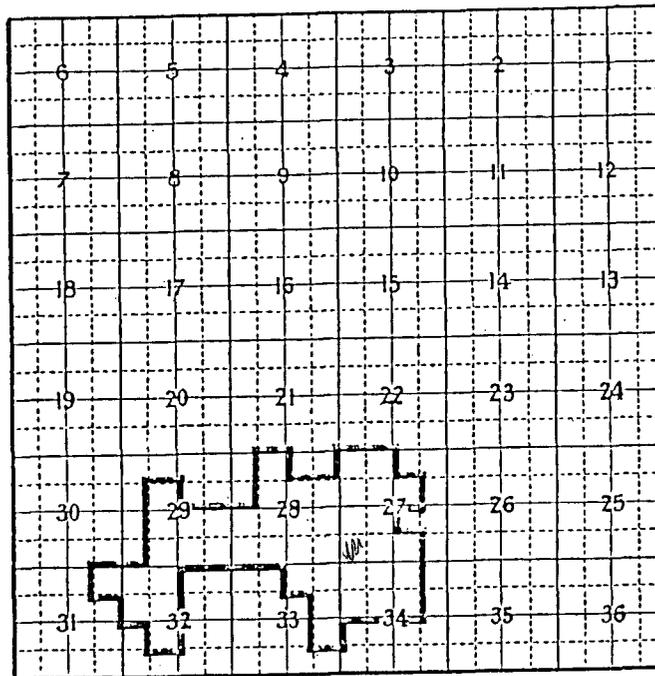
WATERFLOOD

Queen Formation

Eddy County, New Mexico

Texaco, Inc., Operator

 **Gulram, inc.**  
petroleum engineering and government regulation consultants



T  
18  
S

R 30 E

Federal Lands	1600.00 acres
State Lands	<u>200.00</u> acres
Total	1800.00 acres

## (ROBINSON-JACKSON UNIT - Cont'd.)

(2) That the plan contained in said unit agreement for the development and operation of the unit area is hereby approved in principle as a proper conservation measure; provided however, that notwithstanding any of the provisions contained in said unit agreement, this approval shall not be considered as waiving or relinquishing, in any manner, any right, duty, or obligation which is now, or may hereafter be, vested in the Commission to supervise and control operations for the exploration and development of any lands committed to the unit and production of oil or gas therefrom.

(3) That the unit operator shall file with the Commission an executed original or executed counterpart of the unit agreement within 30 days after the effective date thereof; that in the event of subsequent joinder by any party or expansion or contraction of the unit area, the unit operator shall file with the Commission within 30 days thereafter counterparts of the unit agreement reflecting the subscription of those interests having joined or ratified.

(4) That this order shall become effective upon the approval of said unit agreement by the Director of the United States Geological Survey; that this order shall terminate ipso facto upon the termination of said unit agreement; and that the last unit operator shall notify the Commission immediately in writing of such termination.

(5) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

NORTH BENSON QUEEN UNIT  
Eddy County, New Mexico

Order No. R-4535, Approving the North Benson Queen Unit Agreement, Eddy County, New Mexico, May 17, 1973.

Application of Texaco Inc. for Approval of the North Benson Queen Unit Agreement, Eddy County, New Mexico.

CASE NO. 4963  
Order No. R-4535

## ORDER OF THE COMMISSION

BY THE COMMISSION: This cause came on for hearing at 9 o'clock a.m. on May 9, 1973, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 17th day of May, 1973, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

## FINDS:

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

(2) That the applicant, Texaco Inc., seeks approval of the North Benson Queen Unit Agreement covering 1800 acres, more or less, of State and Federal lands described as follows:

EDDY COUNTY, NEW MEXICO  
TOWNSHIP 18 SOUTH, RANGE 30 EAST, NMPM  
Section 27: W/2, SW/4 NE/4 and SW/4 SE/4  
Section 28: S/2, S/2 NE/4 and E/2 NW/4  
Section 29: SE/4, E/2 SW/4 and SE/4 NW/4  
Section 31: NE/4 NE/4  
Section 32: NW/4 and NE/4 SW/4  
Section 33: N/2 NE/4, SE/4 NE/4 and NE/4 SE/4  
Section 34: NW/4 and W/2 NE/4

(3) That approval of the proposed unit agreement should promote the prevention of waste and the protection of correlative rights within the unit area.

## IT IS THEREFORE ORDERED:

(1) That the North Benson Queen Unit Agreement is hereby approved.

(2) That the plan contained in said unit agreement for the development and operation of the unit area is hereby approved in principle as a proper conservation measure; provided however, that notwithstanding any of the provisions contained in said unit agreement, this approval shall not be considered as waiving or relinquishing, in any manner, any right, duty, or obligation which is now, or may hereafter be, vested in the Commission to supervise and control operations for the exploration and development of any lands committed to the unit and production of oil or gas therefrom.

(3) That the unit operator shall file with the Commission an executed original or executed counterpart of the unit agreement within 30 days after the effective date thereof; that in the event of subsequent joinder by any party or expansion or contraction of the unit area, the unit operator shall file with the Commission within 30 days thereafter counterparts of the unit agreement reflecting the subscription of those interests having joined or ratified.

(4) That this order shall become effective upon the approval of said unit agreement by the Commissioner of Public Lands for the State of New Mexico and the Director of the United States Geological Survey; that this order shall terminate ipso facto upon the termination of said unit agreement; and that the last unit operator shall notify the Commission immediately in writing of such termination.

(5) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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