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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-101
Revised 1-1-65

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1. Type of Work DRILL ☒ DEEPEN ☐ PLUG BACK ☐		5A. Indicate Type of Lease STATE ☒ FEDERAL ☐
2. Type of Well OIL WELL ☒ GAS WELL ☐ OTHER ☐		5. State Oil & Gas Lease No. B-235
3. Name of Operator TENNECO OIL COMPANY		7. Unit Agreement Name
4. Address of Operator Box 1031 MIDLAND, TEXAS		8. Farm or Lease Name STATE K
6. Location of Well UNIT LETTER <u>I</u> LOCATED <u>1980</u> FEET FROM THE <u>1000</u> LINE		9. Well No. 16
10. <u>1000</u> FEET FROM THE <u>1000</u> LINE OF SEC. <u>16</u> TWP. <u>17-S</u> RGE. <u>29-E</u> NMPM		16. Field and Pool, or Wildcat 2nd GRAYBORG JACKSON
11. Elevation (Show whether O.G., etc.) 3550 GL		12. County Eddy
19. Proposed Depth 2900		19A. Formation SAN ANDRES
20. Rotary or C.T. Rotary		21A. Kind & Status Plug. Bond IN EFFECT
21B. Drilling Contractor LEATHERWOOD DRILLING		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
11"	8 5/8"	28 #	360	SUFF. TO CIRCULATE	
6 3/4"	4 1/2"	10.5 #	2900	SUFF. TO COVER ZONES OF INT.	

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MAY 20 1966

O. C. C.
ARTESIA, OFFICE

SEE ATTACHED PROGNOSIS

APPROVAL VALID
FOR 90 DAYS UNLESS
DRILLING COMMENCED,

EXPIRES 8-17-66

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 GLOW-OUT PREVENTER PROGRAM, IF ANY.

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

Signed A.W. Lang Title DIST PROD SUPT Date May 12, 1966
(This space for State Use)

APPROVED BY M.L. Armstrong TITLE OIL AND GAS INSPECTOR DATE May JUN 20 1966
CONDITIONS OF APPROVAL, IF ANY:

**NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT**

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

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

Operator TENNECO OIL COMPANY			Lease STATE "K"		Well No. 16
Unit Letter I	Section 16	Township 17 SOUTH	Range 29 EAST	County EDDY	
Actual Footage Location of Well: 1980 feet from the SOUTH line and 660 feet from the EAST line					
Ground Level Elev.	Producing Formation SA	Pool <i>Und. Mr. Jackson</i>	Dedicated Acreage: 40 Acres		

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. 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.) _____

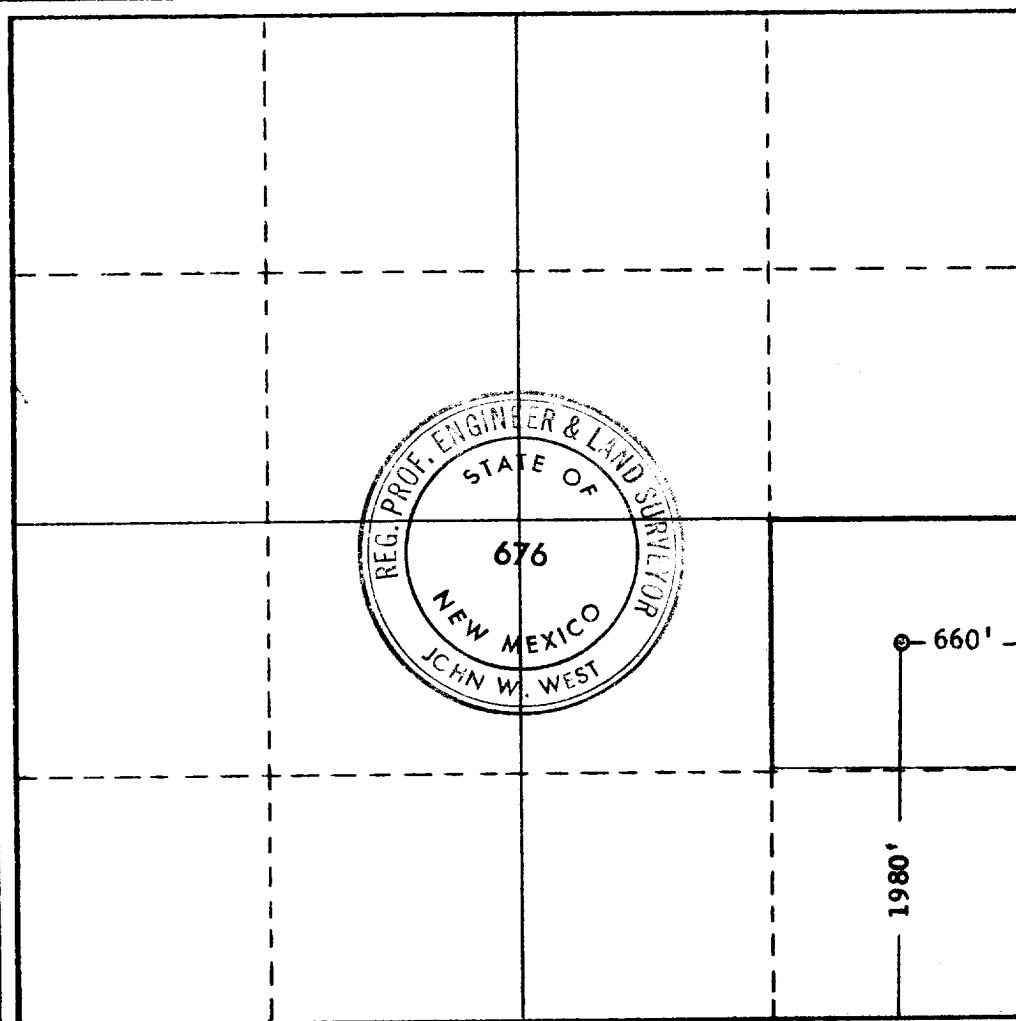
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.

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CERTIFICATION

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

Name *A. W. Lang*
Position *Dist. Prod. Supt.*
Company *Tenneco Oil Co.*
Date *May 18, 1966*

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 **MAY 16, 1966**

Registered Professional Engineer and/or Land Surveyor

John W. West
Certificate No.

N.M.P.E. & L.S. 676

TENNECO OIL COMPANY

DRILLING PROCEDURE

MIDLAND DISTRICT

SOUTHWESTERN DIVISION

LEASE: State "K"

WELL: No. 16

FIELD: Grayburg-Jackson

STATE: New Mexico

LOCATION: 660' FEL & 1980' FSL, Section 16
T-17-S, R-29-E, Eddy County, New Mexico

PROJECTED TD: 2900'

TYPE OF WELL: Oil, Pumping

EST. ELEV.: 3550 GL

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DRILLING, CASING AND CEMENTING PROGRAM

O. C. C.
ARTESIA, OFFICE

1. Drill 11" hole to 360' with OSC or equivalent.
2. Run and cement 8-5/8", 24#/ft., H-40, ST&C casing to T.D. Cement with class A saturated salt cement. If surface hole is dry drilled because of lost circulation, run a cement basket above the lost circulation zone and fill from the top. Run bar centralizers on guide shoe and bottom two joints. Use guide shoe and insert float.
3. If float holds, release pressure immediately. Center 8-5/8" casing, nipple up and install rotating head and BOP. After 12 hrs. from plug down, go in hole with drill pipe and bit, test casing to 800 psi for 30 min. Drill float collar and cement with water to guide shoe. Blow hole dry with air and drill with air and/or mist to T.D.
4. Drill 6-3/4" hole to T.D. Use W7R-2 or equivalent for first two bits, then run RG7AJ's or equivalents to T.D. Run insert-type reamer at 30' above bit to T.D. Complete drilling program to be furnished to rig.
5. Hole may become wet below 1700' $\frac{1}{2}$. Be prepared to mist at this depth.
6. Run 4-1/2", 10.5# casing to T.D. Use guide shoe and float collar. Use centralizers through productive zone.
7. Cement with sufficient class C with 16% gel and 3% salt to reach 2000' (no excess) and tail in with latex-class C to reach 100' above top productive zone (consult Geologist).
8. If float holds, release pressure, set slips & release rig. Run temperature survey after 8 hrs.

in. O.D.

c. CONTACT

Interval

Length

Height

Grade

Joint

Orig. Cost/Ft.

Cum. Cost

b. SURFACE

Length of Int. #/Ft.

Interval

Height

Grade

Design Factor

Cum. Cost

Interval

Length of Int. #/Ft.

Interval

Height

Grade

Design Factor

Cum. Cost

0-360

360

28

H-40

ST&C

Design Factor

Cum. Cost

c. INTERMEDIATE

Length of Int. #/Ft.

Interval

Height

Grade

Design Factor

Cum. Cost

Interval

Length of Int. #/Ft.

Interval

Height

Grade

Design Factor

Cum. Cost

0-2900

2900

10.5

J-55

8rd.

Design Factor

Cum. Cost

d. ZILIER

Length of Int. #/Ft.

Interval

Height

Grade

Design Factor

Cum. Cost

Interval

Length of Int. #/Ft.

Interval

Height

Grade

Design Factor

Cum. Cost

C-360

Spud mud of bentonite, lime for viscosity as needed. If circulation is lost dry drill to casing point.

360-T.D.

Air and/or mist as needed.

- Notes:
- 1) In the event that hole conditions necessitate going to fluid - brine will be used.
 - 2) Several air or CO₂ blows may occur in the salt section and to a depth of 1400'.
 - 3) Water may occur at 1700' $\frac{1}{2}$ and misting may be necessary below this depth.
 - 4) Gas may be encountered in Metex sand at 2280' $\frac{1}{2}$.

WELL HEAD EQUIPMENT

1. Use Jarda 900 Blowout preventers as per Company specifications.
2. When rigging up, test blowout preventer and manifold to full working pressure with cold water, or as specified by Company representative.
3. Operate blowout preventers at least once each day, or as Company representative requires.
4. An entire set of drill pipe rams will be required on location at all times while drilling or completing.
5. All choke manifolds, lines and valves will be located at the side of and away from substructure.

WELL PIPE REQUIREMENTS

1. Drill pipe will be tallied at all coring, testing, logging and casing points.

DEVIATION

1. Deviation surveys shall be taken on every trip or every 500', whichever is first. All straight hole surveys will accompany AAGEG tour sheet reports.
2. Deviation should not change more than $1\frac{1}{2}^{\circ}$ in any 100'. If deviation exceeds 2° per 100', hole shall be plugged back and straightened.
3. Maximum deviation shall be allowed as follows:

0 - 500	1°	4000 - 6000	1°
500 - 1000	$1\frac{1}{2}^{\circ}$	6000 - 8000	$1\frac{1}{2}^{\circ}$
1000 - 2000	2°	8000 - 10000	2°
2000 - 4000	3°	12000 - 14000	3°

DRILLING TIME

1. A recorder with torque, hook load, and rate of penetration will be used.
2. Record 1' drilling time on recorder from 0 to T.D.
3. Record 10' drilling time from 1800 to T.D. on Company forms. Mail each sheet as soon as recorded with Daily Drilling Reports.

LOGGING

1. Sonic or density T.D. to surface.

SAMPLES

As directed by geologist

CORES

None

DRILL STEM TESTS

None

Salt Top	238	Premier Sand	2420
Salt Base	688	San Andres	2443
Yates	688	Oolitic	2618
Queen	1758		
Metex	2280		

RECEIVED BY:
DATE:

1. The AMCO Daily Drilling Report will be filled out completely and neatly each 8-hour tour. One clear and legible copy will be mailed daily to Tenneco Oil Company. Mail Company drilling sheets as soon as each sheet is finished with Daily Drilling Report.
2. A daily report sheet and a cost sheet will be furnished by the operator for the well. The contractor's tool pusher will keep these forms current and complete. The daily cost, total cumulative cost and cumulative mud cost will be given daily along with the Tenneco morning report. At the conclusion of the well, the cost forms will be mailed to Tenneco Oil Company, P. O. Box 1031, Midland, Texas.
3. The morning report shall be called to Tenneco's Midland office as soon after 8:00 A.M. each weekday morning as practical. Phone number is MW 3-4621, area code 915.
4. For notifications at other than office hours, call:

LOCATIONS:

EMERGENCIES:

James Eaton OX 4-7668

A. R. Gibson MU 4-7545

B. E. Desadier MU 4-5390

A. W. Lang MU 2-3010

PREPARED BY:

APPROVED BY:

A. R. Gibson

A. R. Gibson

B. E. Desadier

A. W. Lang

J. F. Carnes