

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TR. DATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

copy [initials]

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

Tenneco Oil Company

3. ADDRESS OF OPERATOR

Box 1031, Midland, Texas

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*

At surface

1980' FNL & 660' FEL of Section 22

At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

10. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)

16. NO. OF ACRES IN LEASE

160

17. NO. OF ACRES ASSIGNED TO THIS WELL

160

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.

19. PROPOSED DEPTH

11,500'

20. ROTARY OR CABLE TOOLS

Rotary

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

3540' GL Estimated

22. APPROX. DATE WORK WILL START*

Upon Approval

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT

See prognosis and plats attached

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MAY 7 1965

O. C. C.
ARTESIA, OFFICE

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MAY 6 1965
U. S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

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

[Signature]

A. W. Lang

TITLE

Dist. Prod. Supt.

DATE

May 4, 1965

(This space for Federal or State office use)

MAY 6 1965

PERMIT NO.

APPROVAL DATE

APPROVED BY

[Signature]

TITLE

DISTRICT ENGINEER

DATE

MAY 6 1965

CONDITIONS OF APPROVAL, IF ANY:

1. Communitization of NE 1/4
2. Cover shallow pay zone with cement

*See Instructions On Reverse Side

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

FORM C-128
Revised 5/1/57

SEE INSTRUCTIONS FOR COMPLETING THIS FORM ON THE REVERSE SIDE

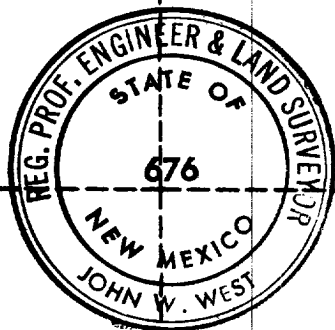
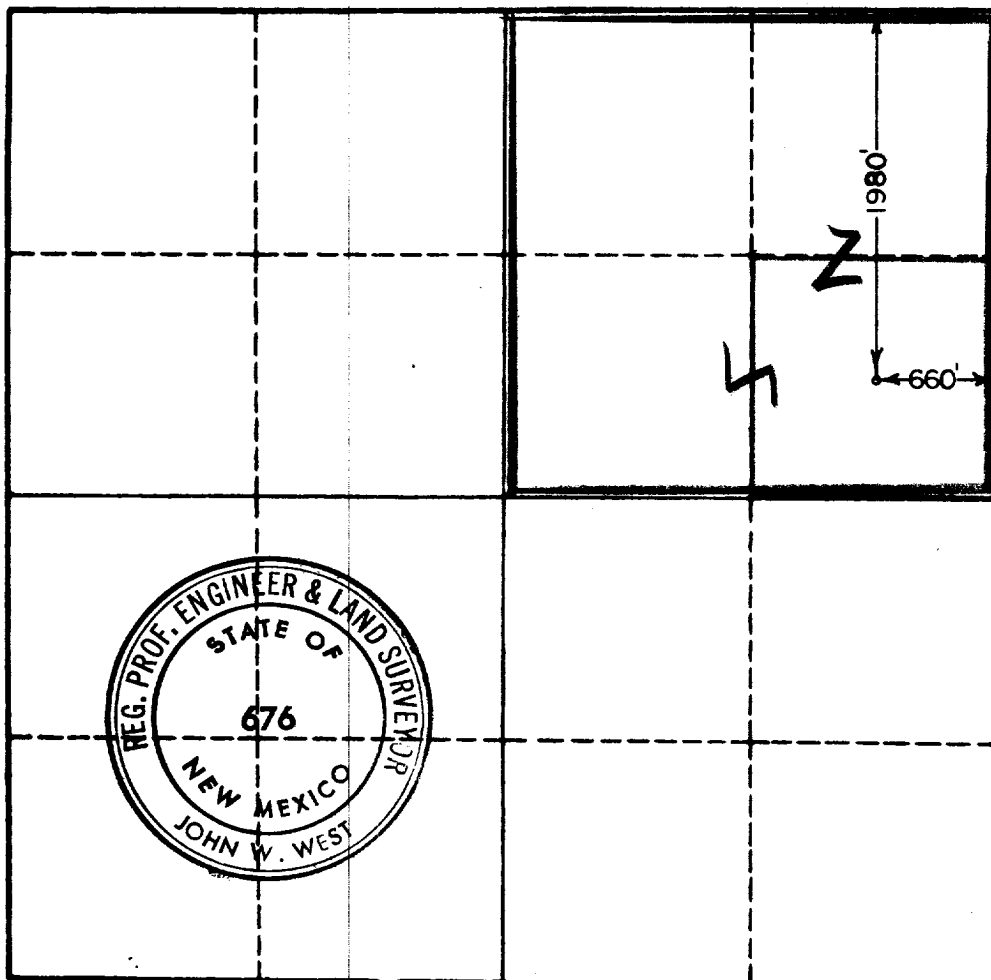
SECTION A

Operator TENNECO OIL COMPANY			Lease BARTON "B" FEDERAL		Well No. 1
Unit Letter H	Section 22	Township 19 SOUTH	Range 31 EAST	County EDDY	
Actual Footage Location of Well: 1930 feet from the NORTH line and 660 feet from the EAST line					
Ground Level Elev. 3540 Est.	Producing Formation Strawn Reef		Pool Undesignated Lusk Strawn EXT.		Dedicated Acreage: 40 1/60 Acres

1. Is the Operator the only owner in the dedicated acreage outlined on the plat below? YES ☒ NO ☐ ("Owner" means the person who has the right to drill into and to produce from any pool and to appropriate the production either for himself or for himself and another. (65-3-29 (e) NMSA 1935 Comp.)
2. If the answer to question one is "no," have the interests of all the owners been consolidated by communitization agreement or otherwise? YES ☐ NO ☐ If answer is "yes," Type of Consolidation **RECEIVED**
3. If the answer to question two is "no," list all the owners and their respective interests below:

Owner	Land Description
	MAY 7 1965

SECTION B



O. C. C. ARTESIA, OFFICE CERTIFICATION

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

Name <i>A.W. Lang</i>	A.W. Lang
Position Dist. Prod. Supt.	
Company Tenneco Oil Company	
Date May 4, 1965	

I hereby certify that the well location shown on the plat in SECTION B 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 5-1-65
Registered Professional Engineer and/or Land Surveyor, JOHN W. WEST
<i>John W. West</i>
Certificate No. N. M. - P. E. & L. S. NO. 676

0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500 0

TENNECO OIL COMPANY
DRILLING PROGNOSIS

LEASE: Barton "B" Federal

WELL NO.: 1

DISTRICT: Midland

FIELD: Lusk Strawn

PROJECTED T.D.: 11,500'

ESTIMATED ELEV.: 3540' GL

LOCATION: 1980' FNL & 660' FEL, Sec. 22, T-19-S, R-31-E
Eddy County, New Mexico

R E C E I V E D

MAY 7 1965

DRILLING, CASING AND CEMENTING:

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1. Drill 17 1/2" hole to 700'±.
2. Cement 13 3/8", 48 #/ft., H-40, ST&C casing at 700' with sufficient 50-50 Incor Pozmix containing 2% CaCl₂ to circulate. Run bar centralizers on guide shoe and bottom two joints. Use a guide shoe and insert float valve.
3. If float holds, release pressure immediately. WOC 6 hrs., nipple up and install BOP.
4. After 12 hrs. WOC, pressure test casing to 1000 psi for 30 min. and if o.k., drill out.
5. Drill 11" hole to 4000'±.

NOTE: Do not exceed 20000 # weight and 60 RPM until first three drill collars are below casing shoe. Loss of circulation may be encountered between 2800' and 3500'. If severe at this location, hole may be dry drilled to intermediate point.

6. At intermediate point, run 8 5/8" casing as follows:

0 - 4000'±: 32 #/ft., J-55, ST&C casing

Use guide shoe with insert float valve in second collar. Use weld-on bar type centralizers on guide shoe and first two joints. Run a DV Packer cementing tool at a point 100' below the base of the salt section. The base of the salt is estimated at 2250' in this well.

7. Cement in two stages as follows: 1st Stage - 200 sx Incor containing 2% CaCl₂
2nd Stage - 200 sx 50-50 Pozmix-Incor containing 6% gel
8. Run temperature survey after 8 hrs.
9. If DV tool holds, land casing as cemented, release pressure, and nipple up. Install BOP. WOC 8 hrs. and run temperature survey. Pressure test DV tool to 1000 psi for 30 min. If o.k., after a total of 12 hrs. WOC, drill out with 7 7/8" bit. Do not exceed 20000 # weight and 60 RPM until first three collars are below casing shoe.
10. Drill 7 7/8" hole to 11,600'±.
11. Run 4 1/2" casing as follows:

0 - 3300': 11.6 #/ft., N-80, LT&C
3300 - 8000': 11.6 #/ft., J-55, ST&C
8000 - 11600: 11.6 #/ft., N-80, LT&C

DRILLING PROGNOSIS

Barton "B" Federal No. 1

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Use float shoe, differential fill-up collar. Use reciprocating scratchers and centralizers to cover productive interval.

12. Cement with sufficient 50-50 Pozmix S cement with 0.4% HR-4 to cover zones of interest. Tail in with enough Latex cement to 100' above pay zones. Use 2 sx of line in 10 bbls water ahead of cement. Add 2 sx sodium bichromate to mud system prior to running casing. Be sure paddle mixer truck is available for mixing Latex cement. Use 3 plugs in cementing operations.
13. If float holds, land casing as cemented, release pressure immediately, nipple up, WOC 8 hrs., run temperature survey, and release rig.

DRILLING FLUIDS PROGRAM:

1. Surface Hole: 0 - 700' \pm - Spud with viscosity as needed to clean hole. Use fiber for loss of circulation, if needed.
2. Intermediate: 700-4000' \pm - Use saturated brine water. Add water to maintain minimum viscosity needed. If hole gives trouble, lower water loss to 20 cc to run casing.

NOTE: If severe loss of circulation is encountered below 2800', hole will be dry drilled using fresh water to intermediate point. Drilling should not be stopped to combat loss of circulation. If necessary to clean hole before running casing, hole can be cleaned using a slug of mud with sufficient viscosity to move cuttings into caverns.

3. Below intermediate: 4000 - 11300' \pm - Clear water treated with surfactant, some treatment with paper may be required to reduce losses. Lime should be added to keep pH above 10 for corrosion control. If necessary to weight up to control any kicking formation, use brine water to weight up system. Do not mud up until 11,300' is reached.
4. 11,300 - T.D.: Use low solids, CMC system with the following properties:

Weight: 9.5 to 9.8 lbs./gal. as needed

Viscosity: 38-42 seconds

Water Loss: 20-25 cc

Add chemicals and materials as needed to maintain good hole condition to T.D.

DRILLING TIME:

1. A recorder with torque, hook load and rate of penetration will be used.
2. Record 10' drilling times from surface to T.D. on company forms.

DRILL PIPE MEASUREMENTS: Strap drill pipe at all casing, testing, coring, logging points, and at T.D.

DRILLING SAMPLES:

1. Two sets of 10' samples will be caught, washed, sacked, and labeled in bundles of 100' from surface to T.D.
2. Circulating and additional samples will be obtained as directed.
3. Quart samples will be obtained of all fluids recovered on DST.

DRILLING PROGNOSIS

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CORES: None Anticipated

DST: Tests to be taken at direction of wellsite geologist

LOGGING:

1. Gamma-Ray Sonic Caliper from T.D. to base of intermediate casing.
2. Dual induction-laterolog through sections as specified by wellsite geologist.

G

BLOW OUT PREVENTORS:

1. Series 900 or better, double ram with manual and remote control preventors shall be used from base of surface to T.D.
2. BOP shall be checked daily and reported on drilling report.
3. A rotating drilling head shall be used during any air or gas drilling.

DAILY DRILLING REPORTS:

1. The AAODC report will be used.
2. This report will be filled out in detail and mailed to Midland District Office four times per week.
3. Morning reports shall be made to the Midland District Office each day morning between 8:00 and 8:30 a.m., CST
4. The company forms for daily drilling report and daily cost report will be prepared each day and delivered to the drilling section at the end of each well.

DEVIATION:

1. Deviation in the surface hole shall not exceed 1° .
2. Deviation surveys shall be taken on every trip or every 500', whichever is first.
3. Deviation shall not change more than $1\frac{1}{2}^{\circ}$ in any 100' interval. If deviation exceeds $1\frac{1}{2}^{\circ}$ per 100', a reamer shall be run to wipe out dogleg. If deviation exceeds 2° per 100', the hole shall be plugged back and straightened.
4. Maximum deviation shall be allowed as follows:

0 - 2000'	2°	6000 - 8000'	5°
2000 - 4000'	3°	8000 - 10000'	6°
4000 - 6000'	4°	10000 - T.D.	7°

DRILLING PROGNOSIS
Baton "B" Federal No. 1
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FORMATION TOPS:

Top Anhydrite	700'
Top Salt	850'
Base Salt	2230'
Top Yates	2430'
Top Seven Rivers	2660'
Delaware	4700'
Bone Springs	7090'
1st Sand	8340'
2nd Sand	9100'
3rd Sand	9890'
Wolfcamp Lime	10520'
Cisco Shale	10700'
Strawn Lime	11400'
T.D.	11600'

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MAY 7 1965

O. C. C.
ARTEZIA, OFFICE

APPROVED:

A. R. Gibson
A. R. Gibson

B. E. Desadier
B. E. Desadier

A. W. Lang
A. W. Lang