

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

COPY TO U. S. GEOLOGICAL SURVEY
(Other instructions on reverse side)

Budget Bureau No. 42-R1425.

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 ☐ X OTHER Water Supply Well SINGLE ZONE ☒ MULTIPLE ZONE ☐

2. NAME OF OPERATOR
Tenneco Oil Company

3. ADDRESS OF OPERATOR
720 South Colorado Blvd., Denver, Colorado 80222

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*
At surface 2514' FEL and 2068' FSL
At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
Sec. 1B Surface Use Plan

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

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

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
2988.7' G.L.

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
13 -3/4"	9-5/8"	36#	500'	Sufficient to circulate to surface
8-3/4"	7"	23#	4600'	Sufficient to circulate to surface

1. The Geologic name of the surface formation is the Ogallala Lime.

2&3 Estimated Formation Tops

Top Salt 1180'
Bottom Salt 2450'
Queen 3300'
Penrose 3500'
San Andres 4020'
T.D. 4600'

"APPROVAL TO FLARE GRANTED
WHILE DRILLING AND TESTING."

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

4. Run 9-5/8" O.D. new casing to + 500' and circulate cement to surface. Run 7" O.D. new casing to T.D. and cement with sufficient amount to curculate to surface. Casinghead will be API rated standard type.
5. Blowout Preventors: Hydraulic, double ram, 10". One set of rams will be provided for each size drill pipe in the hole. One set of blind rams at all times. Fill line will be 2", kill line will be 2", choke relief line will be 2" with ariable choke. BOP's will be installed, tested and in working order before drilling below surface casing and shall be maintained ready for use until drilling operations are completed. BOP's, drills, and tests will be recorded in the drillers logs.
6. We will use gel and chemical as needed to maintain hole to + 500'. From 500' to + 4600', brine water with gel and chemical will be used as needed to maintain hole.
7. Auxiliary Equipment
- a. Kelly cock will be in use at all times.
- b. Stabbing valve to fit drill pipe will be present on floor at all times.
- c. Mud monitoring will be visual, no abnormal pressures are anticipated in this area.
- d. Floats at bits.
- e. Drill string safety valve(s) to fit all pipe in the drill string will be maintained on the rig floor while drilling operations are in progress.
8. No cores will be taken. Samples will be taken 30' from 3400' to T.D. Well surveys will consist of FDC-CNL/GR/Caliper DLL-micro lateralog/GR Caliper. (GR to surface, caliper to base of surface casing. All other logs to 150' above bottom of salt.)
9. No abnormal pressures or temperatures are anticipated. See point #5 for blowout prevention equipment.
10. The drilling of this well will take approximately 10 days.
11. Your office (telephone 505/393-3612) will be notified of spudding in sufficient time to witness cementing operations. Immediate notice will be given on blowouts, fires, spills, and accidents involving life-threatening injuries or loss of life. Prior approval will be obtained before appreciably changing drilling program or commencing plugging operations, plug back work, casing repair work or corrective cementing operations.

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 R. D. Myers TITLE Division Production Manager

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED
AMENDED
SEP 26 1978
G. C. L.
ACTING DISTRICT ENGINEER