

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEYSUBMIT BY THE APPLICANT
(Other instructions on
reverse side)Form approved.
Budget Bureau No. 42-R1425.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

| | | | | |
|--|--|--|---|--|
| 1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> | | | 5. LEASE DESIGNATION AND SERIAL NO. NM 7951 | |
| b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> | | | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME | |
| 2. NAME OF OPERATOR Tenneco Oil Company | | | 7. UNIT AGREEMENT NAME | |
| 3. ADDRESS OF OPERATOR 720 South Colorado Blvd, Denver, CO 80222 | | | 8. FARM OR LEASE NAME Leonard Brothers | |
| 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)* At surface 1980' FNL and 660' FEL At proposed prod. zone | | | 9. WELL NO. 27 | |
| 14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* Sec. 1 B+C Surface Use Plan | | | 10. FIELD AND POOL, OR WILDCAT South Leonard Queen Penrose | |
| 15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) | | | 11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 14, T26S, R37E | |
| 16. NO. OF ACRES IN LEASE 2560 | | | 12. COUNTY OR PARISH Lea | |
| 17. NO. OF ACRES ASSIGNED TO THIS WELL 40 | | | 13. STATE New Mexico | |
| 18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. | | | 20. ROTARY OR CABLE TOOLS Rotary | |
| 21. ELEVATIONS (Show whether DF, RT, GR, etc.) 3010 K.B. | | | 22. APPROX. DATE WORK WILL START* July 10, 1978 | |

PROPOSED CASING AND CEMENTING PROGRAM

| SIZE OF HOLE | SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH | QUANTITY OF CEMENT |
|--------------|----------------|-----------------|---------------|---|
| 12 1/4" | 8-5/8" | 24# | + 500' | Sufficient to circulate to surface |
| 7-7/8" | 5 1/2" | 15.5# | + 3600' | Sufficient to circulate back into surface casing. |

1- The geologic name of the surface formation is Ogallala Lime.

2&3-Estimated Formation Tops

| | |
|------------------|---------|
| Salt | + 1050' |
| Base Salt | + 2420' |
| Yates | + 2580' |
| Rhodes Marker | + 2850' |
| Queen (Main Pay) | + 3350' |
| Penrose | + 3450' |

SEE ATTACHED FOR
CONDITIONS OF APPROVAL"APPROVAL TO FLARE GRANTED
WHILE DRILLING AND TESTING"

- 4- Set and cement 8-5/8" OD, 24#, K-55 surface casing to +500', with sufficient cement to circulate to surface. Run 5 1/2" OD, 15.5#, K-55 new casing to T.D. and cement with a sufficient amount to circulate up into surface casing. Casinghead will be a 10" 900 Series with a 3000 psi rating.
- 5- Blowout Preventors: Hydraulic, double ram, 10". One set of rams will be provided for each size drill pipe in the hole. One line 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- 0-+500' spud mud. 500'-3300' Low solids, viscosity as needed to clean hole. 3300' - T.D. get water, viscosity as needed to log hole, 10 lb. brine water is used.
- 7- Auxillary Equipment
- Kelly cock will be in use at all times.
 - Stabbing valve to fit drill pipe will be present on floor at all times.
 - Mud monitoring will be visual, no abnormal pressures are anticipated in this area.
 - Floats at bits.
 - 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- This well will be pump tested after recovery of any load oil or water. No cores will be taken Logs: DLL-Micro-SFL-GR, CNL-FDC-GR caliper, run GR to surface, run all other logs 100' into salt.
- 9- No abnormal temperatures or pressures are anticipated.
- 10- Anticipated starting date will be contingent upon rig availability, approximately July 10, 1978. The drilling of this well will take approximately 10 days. The gas is dedicated to El Paso Natural Gas Company.
- 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.

Unless Drilling Operations have
Commenced, this drilling approval
Expires 9-20-78

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.

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|--|--|---|
| SIGNED <u>A. D. Myers</u> | TITLE <u>Division Production Manager</u> | APPROVED AS AMENDED JUN 20 1978 A. A. Z. |
| (This space for Federal or State office use) | | ACTING DISTRICT ENGINEER |
| PERMIT NO. _____ | APPROVAL DATE _____ | |