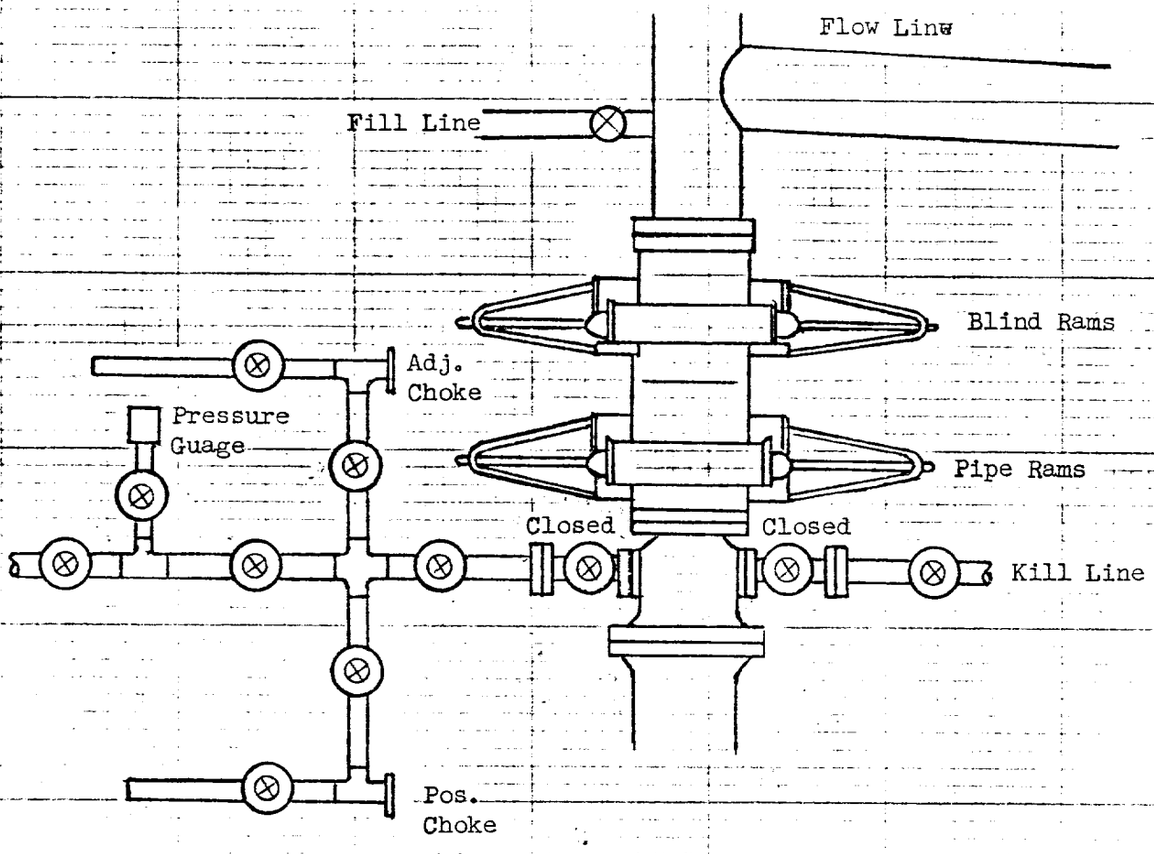

All valves 2"

All BOPs, flanges, spools, valves, & lines must be series 900 or 3000 psi working press.

Choke manifold must be at ground level and extended out from under substructure.

TENNECO OIL COMPANY

REQUIRED MINIMUM BLOWOUT PREVENTOR HOOKUP

Denver, Colorado

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] OTHER — SINGLE ZONE [ ] MULTIPLE ZONE [ ]

2. NAME OF OPERATOR: TENNECO OIL COMPANY

3. ADDRESS OF OPERATOR: 1860 Lincoln St., Suite 1200, Denver, Colorado 80295

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*) At surface: 660'FSL and 1980'FEL, Unit O. At proposed prod. zone:

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Leonard Bros.

9. WELL NO: 5

10. FIELD AND POOL, OR WILDCAT: Leonard Queen, South

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec13, T26S, R37E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: See Point 1:b of Surface Use Plan

12. COUNTY OR PARISH: Lea — 13. STATE: New Mexico

15. 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: 2520

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: +4000'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 3005.3'GL

22. APPROX. DATE WORK WILL START*: 6-25-77

23. 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'	Suff. to circulate to surface.
7-7/8"	5-1/2"	15.5#	+4000'	Suff. to circulate back up into surface casing.

1. The geologic name of this surface formation is the Ogallala Lime (Miocene).

2&3. Formation Tops (Estimated)

Salado	± 1190'	Salt
Yates	± 2610'	Possible oil or gas producer
7 Rivers	± 2875'	Possible oil or gas producer
Queen	± 3415'	Oil and gas
Penrose	± 3490'	Oil and gas

SEE ATTACHED FOR CONDITIONS OF APPROVAL

4. Run 8-5/8" OD, K-55 new casing to ±500' and circulate cement to surface. Run 5½" OD, 15.5#, K-55 new casing to T. D. and cement with a sufficient amount to circulate up into surface casing in two stages. Casinghead will be a 10" 900 series w/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 set of blind rams at all times. Fill line will be 2", kill line will be 2", choke relief line will be 2" with variable 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; spud mud = 0-±500'. (8.5 - 9.0 lb. per gallon) Bring gel = 500'-TD. (9.0 - 10.0 lb. per gallon)
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 ares.
   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. This well will be pump tested after recovery of any load oil or water. No cores will be taken. DLL-GR, CNL-FDC-GR caliper, and BHC Sonic logs will be taken. Any other evaluation that may be necessary during the drilling of this well will be conducted as needed.
9. No abnormal pressures or temperatures are anticipated. See point #5 for blowout prevention equipment.
10. The drilling of this well will take approximately eight days. The gas is not dedicated to any purchaser as of this date.
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 A. A. Myers TITLE Div. Production Manager DATE APR 14 1977

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY: "APPROVAL TO FLARE GRANTED WHILE DRILLING AND TESTING."

APPROVED AS AMENDED
JUN 9 1977
BERNARD MOROZ
ACTING DISTRICT ENGINEER