Form 9-331 C
(May 1963)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

30-045-24161

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: SF 080245

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Hamner

9. WELL NO.: 2A

10. FIELD AND POOL, OR WILDCAT: Blanco M.V. / Basin Dakota

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 28, T29N, R9W

12. COUNTY OR PARISH: San Juan

13. STATE: NM

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

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

2. NAME OF OPERATOR: Tenneco Oil Company

3. ADDRESS OF OPERATOR: 720 S. Colorado Blvd., Denver, CO 80222

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 825' FNL, 1660' FWL
At proposed prod. zone:

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 2.7 miles Southeast of Blanco, NM

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 825'

16. NO. OF ACRES IN LEASE: 928.45

17. NO. OF ACRES ASSIGNED TO THIS WELL: W/320

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

19. PROPOSED DEPTH: 6710'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 5721 GR

22. APPROX. DATE WORK WILL START*: ASAP

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 3/4"	9 5/8" new	36#, K-55	± 200'	Circulate to surface
8 3/4"	7" new	23#, K-55	±4775'	Circulate to surface
6¼"	4½" new	10.5#, 11.6#	±6710'	Circulate through liner hanger

THE GAS IS DEDICATED

RECEIVED
U. S. GEOLOGICAL SURVEY
FARMINGTON, N. M.

DEC 27 1979
OIL CON. COM.
DIST. 3

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 M. Lee Freeman TITLE Staff Production Analyst DATE December 21, 1979

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

NMOCC

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-102
Revised 10-1-78

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

Operator	Lease	Well No.
TENNECO OIL COMPANY	HAMNER	4-E

Unit Letter	Section	Township	Range	County
C	28	29N	9W	San Juan

Actual Footage Location of Well:
825 feet from the ~~South~~ North line and 1660 feet from the West ~~line~~

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
5721	~~Dakota~~ Mesaverde	~~Basin Dakota~~ Blanco	320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

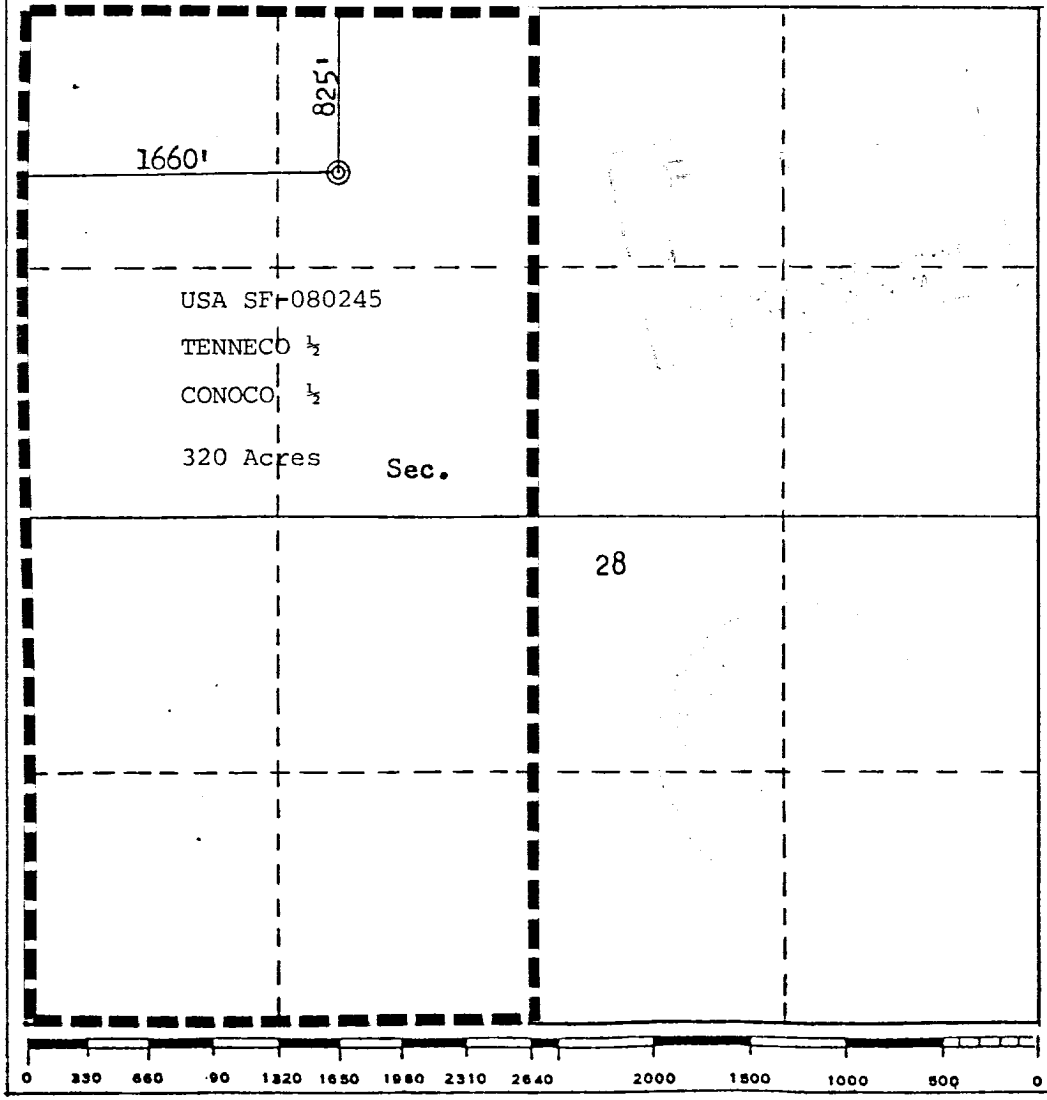
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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.



CERTIFICATION

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

Name M. L. Freeman
Staff Production Analyst
Position
Tenneco Oil Company
Company
December 21, 1979
Date

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
October 31, 1979
Registered Professional Engineer and/or Land Surveyor
Fred B. Kerr Jr.
Certificate No.
3950

REGISTERED LAND SURVEYOR
FRED B. KERR JR.
P.O. 3950

TENNECO OIL COMPANY
ROCKY MOUNTAIN DIVISION
PENTHOUSE, 720 SOUTH COLORADO BOULEVARD
DENVER, COLORADO 80222

DRILLING PROCEDURE

DATE: November 19, 1979

LEASE: Hamner WELL NO.: 4

LOCATION: 825' FNL, 1660' FWL
Sec. 28, T 29N, R 9W
San Juan County, New Mexico

FIELD: Basin Dakota

ELEVATION: 5700' Est. G.L. - 5711' Est. K.B.

TOTAL DEPTH: 6710'

PROJECTED HORIZON: Dakota/Mesa Verde

SUBMITTED BY: D.J. Kardash

APPROVED BY:

DK/ms

1st Rev.

ESTIMATED FORMATION TOPS

OJO Alamo	1025	(Water)
Pictured cliffs	2070	(Gas)
Lewis Shale	2125	
Cliffhouse	3820	(Gas)
Menefee	3885	(Gas)
Point Lookout	4395	(Gas)
Mancos	4575	
Gallup	5590	(Oil)
Greenhorn	6330	
Dakota	6445	(Gas)
T.D.	6710	

Surface Formation: Nacimiento

No abnormal temperatures or pressures are expected.

1. MIRURT.

2. Drill a 12 3/4" hole to ± 200'.

3. RU and run 9 5/8", 36#, K-55, ST&C casing.

4. Cement with 150 sx Class B + 2% $CaCl_2$.

5. WOC a minimum of 12 hours. Nipple up BOP's, choke manifold, and kill line. Pressure test rams, lines and casing to 600 psi for 30 minutes. Record test on IADC Drilling Report.

6. Drill an 8 3/4" hole 150-200' into the Mancos Shale. Treat mud system for possible lost circulation before penetrating the Mesa Verde.

7. RU and run 7", 23#, K-55, ST&C casing to 6710'

8. Cement in two stages with sufficient volume to circulate cement to surface. Use 50/50 pozmix, 4% gel tailed by 150 sx of Class B + 2% $CaCl_2$. Precede cement with a chemical preflush. Place DV at top of MV and use cement baskets in first stage.

9. WOC a minimum of 18 hours. Pick up 3 1/2" drill string and drill to within 5' of shoe. Displace water with N_2 and soap. Drill shoe and 5' of formation. Blow hole with gas until dusting.

10. Drill a 6 1/4" hole to T.D.

11. Log open hole as directed by G.E. Department.

12. RU and run 4 1/2", 10.5#/11.6#, K-55, LT&C liner to T.D. leaving 150' of overlap.

13. Set liner and cement with 50/50 pozmix, 2% gel tailed by 100 sx Class B. Use a chemical preflush ahead of cement.

14. Reverse out excess cement, LDDP and install X-mas tree.

15. MORT.
16. If well is non-productive, P & A as per regulatory agency specifications.

CASING PROGRAM

0-200	9 5/8", 36#, K-55 ST&C
0-4800	7", 23#, K-55, ST&C
4650-6710	(2060') 4 1/2", 10.5#, K-55, LT&C

MUD PROGRAM

0-200	Native solids. Have sufficient viscosity to clean hole and run casing.
200-4800	Benex and water. Have sufficient viscosity to run casing.
4800-T.D.	Pretreat for lost circulation in Mesa Verde. Gas.

EVALUATION

Cores and DST's:

No cores or DST's are anticipated.

Deviation Surveys:

1. Survey surface every 100'. Maximum allowable deviation at surface is 1^{o}.
2. From surface to T.D., surveys must be taken every 500', or each trip, whichever is first. This may entail running the TOTCO on wireline. Record surveys on IADC Drilling Report. Maximum allowable change is 1^{o} per 100'.

Samples:

Logs: Two logging runs.

1. GR/IND: T.D. to surface; Comp Neutron Density through M V only.
2. GR/IND: T.D. to intermediate; Comp Density with GR T.D. to B/Pt. Lookout.

BLOWOUT EQUIPMENT

10", 3000 psi, double ram hydraulic operated with closing unit and 40 gallon accumulator.

10", 150 psi, rotating head and 7" blooie line.

REPORTS

Drilling reports for the past 24 hours will include depth, footage, time distribution, activity breakdown, mud properties, bit record, bottom hole assembly, daily and cumulative mud costs, plus any other pertinent information, will be called into Tenneco Oil Company, Denver, Colorado, between 7:30 a.m. and 8:00 a.m.

1. 303-758-7130 (office) Don Barnes.
   303-758-7287 (office) Don Barnes' private line, Monday-Friday (before 7:45 a.m.)
2. 303-936-0704 (home) Don Barnes, weekends and holidays.
3. 303-795-0221 (home) John Owen, if Don Barnes is not available.

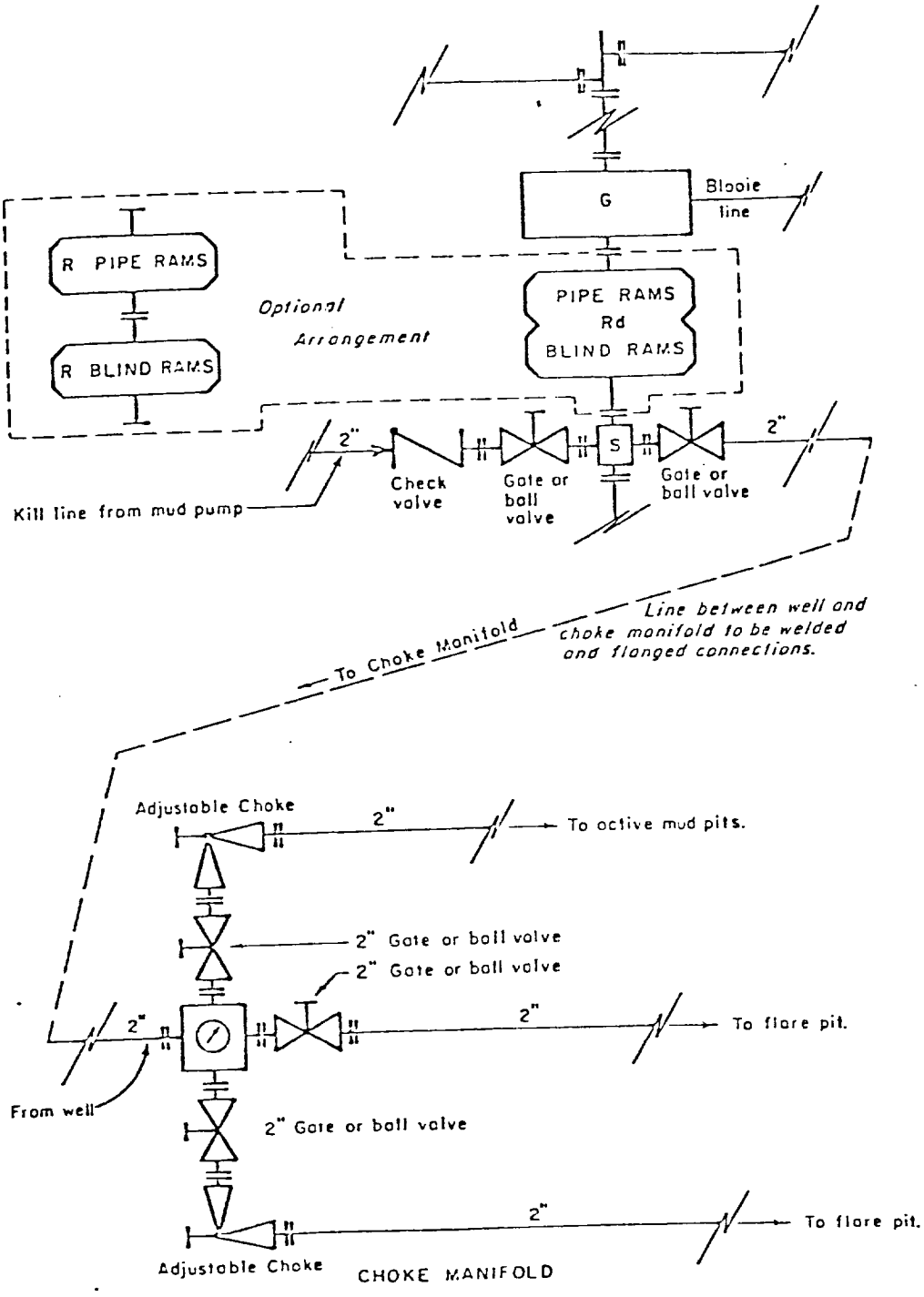
The yellow sheet of the IADC Report to be filled out completely, the original copy of the drilling time recorder, and copies of any invoices from this well, signed and received for Tenneco Oil Company will be mailed daily to:

TENNECO OIL COMPANY
ROCKY MOUNTAIN DIVISION
PENTHOUSE, 720 SOUTH COLORADO BOULEVARD
DENVER, COLORADO 80222

ATTENTION: Drilling Department

In case of emergency, notify the following:

1. Mr. Don Barnes, Division Drilling Engineer - 303-936-0704
2. Mr. John Owen, Project Drilling Engineer - 303-795-0221
3. Mr. Mike Lacey, Division Production Manager - 303-979-0509



All equipment to be 3,000 psi working pressure except as noted.

Rd Double ram type preventer with two sets of rams.

R Single ram type preventer with one set of rams.

S Drilling spool with side outlet connections for choke and kill lines.

G Rotating head 150 psi working pressure minimum

ARRANGEMENT C

TENNECO OIL COMPANY
ROCKY MOUNTAIN DIVISION

REQUIRED MINIMUM
BLOWOUT PREVENTER AN
CHOKE MANIFOLD

J. MAGILL 10-26-79 EVI

SURFACE USE PLAN

1. Existing Road - Please refer to Map No. 1 which shows the existing roads. New roads which will be required have been marked on this map. All existing and new roads will be properly maintained during the duration of this project.

2. Planned Access Roads - Please refer to Map No. 1. The grade of the access roads will be consistent with that of the local terrain. The road surface will not exceed twenty feet (20') in width. Upon completion of the project, the access road will be adequately drained to control soil erosion. Drainage facilities may include ditches, water bars, culverts or any other measure deemed necessary by trained Company personnel to insure proper drainage. Gates and/or cattleguards will be installed if necessary.

3. Location of Existing Wells - Please refer to Map No. 2.

4. Location of Tank Batteries, Production Facilities, and Production Gathering and Service Lines - Please refer to Maps No. 1 and No. 2. Map No. 2 shows the existing roads and new proposed access roads. All known production facilities are shown on these two maps.

5. Location and Type of Water Supply - Water for the proposed project will be obtained from a private source.

6. Source of Construction Materials - No additional materials will be required to build either the access road or the proposed location.

7. Methods of Handling Waste Materials - All garbage and trash materials will be put into a burn pit shown on the attached Location Plat No. 1. When clean-up operations are begun on the proposed project, the burn pit with its refuse will be buried to a depth of at lease three feet (3'). A latrine, the location of which is also shown on Plat No. 1. will be provided for human waste. If large amounts of liquids are left in the reserve pit after completion of the project, the pit will be fenced until the liquids have had adequate time to dry. The location clean-up will not take place until such time as the reserve pit can be properly covered over to prevent run-off from carrying any of these materials into the watershed. No earthen pit will be located on natural drainage; all earthen pits will be so constructed as to prevent leakage from occurring.

8. Ancillary Facilities - No camps or airstrips will be associated with this project.

9. Wellsite Layout - Please refer to the attached Plat No. 1.

10. Plans for Restoration of the Surface - After completion of the proposed project the location will be cleaned and leveled. The location will be left in such a condition that will enable reseeding operations to be carried out. Seed mixture as designated by the responsible government agency will be used. The reseeding operation will be performed during the time period set forth by the regulatory body. The location production equipment will be painted as designated by the responsible government agency.

11. Other Information - The proposed site is located on the south side of the Mouth of Canyon Largo. The site is located approximately 150' to the North side of any existing road. The soil is sandy loam. The principal vegetation is pinon & juniper.

12. Operator's Representative -

SEE DRILLING PROGNOSIS

13. Certification - I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements mad in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Tenneco Oil Company Company and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

L. Freeman
Staff Production Analyst

LF/gh

541 - 7/81

TENNECO OIL COMPANY

CALCULATION SHEET

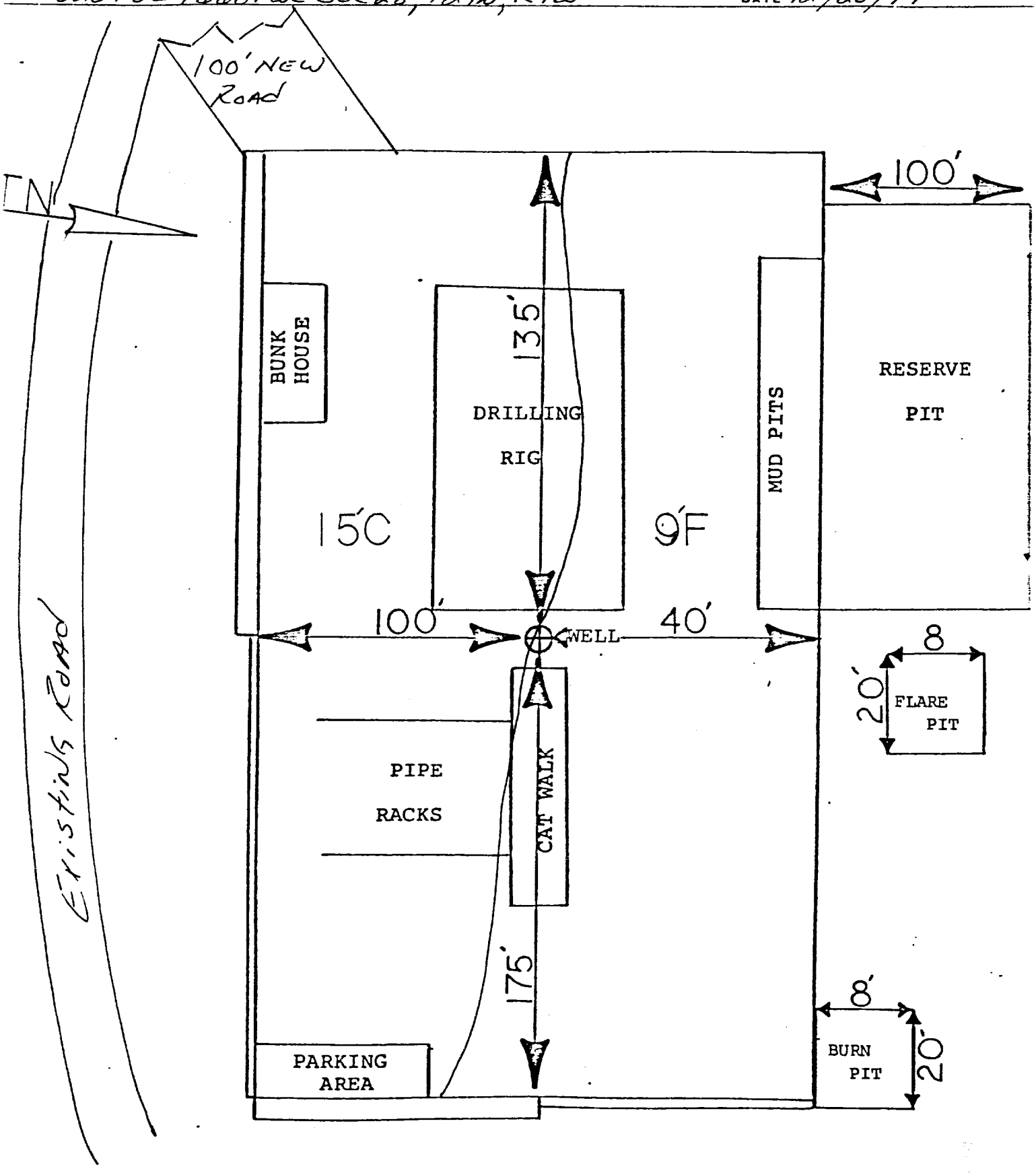
ANY

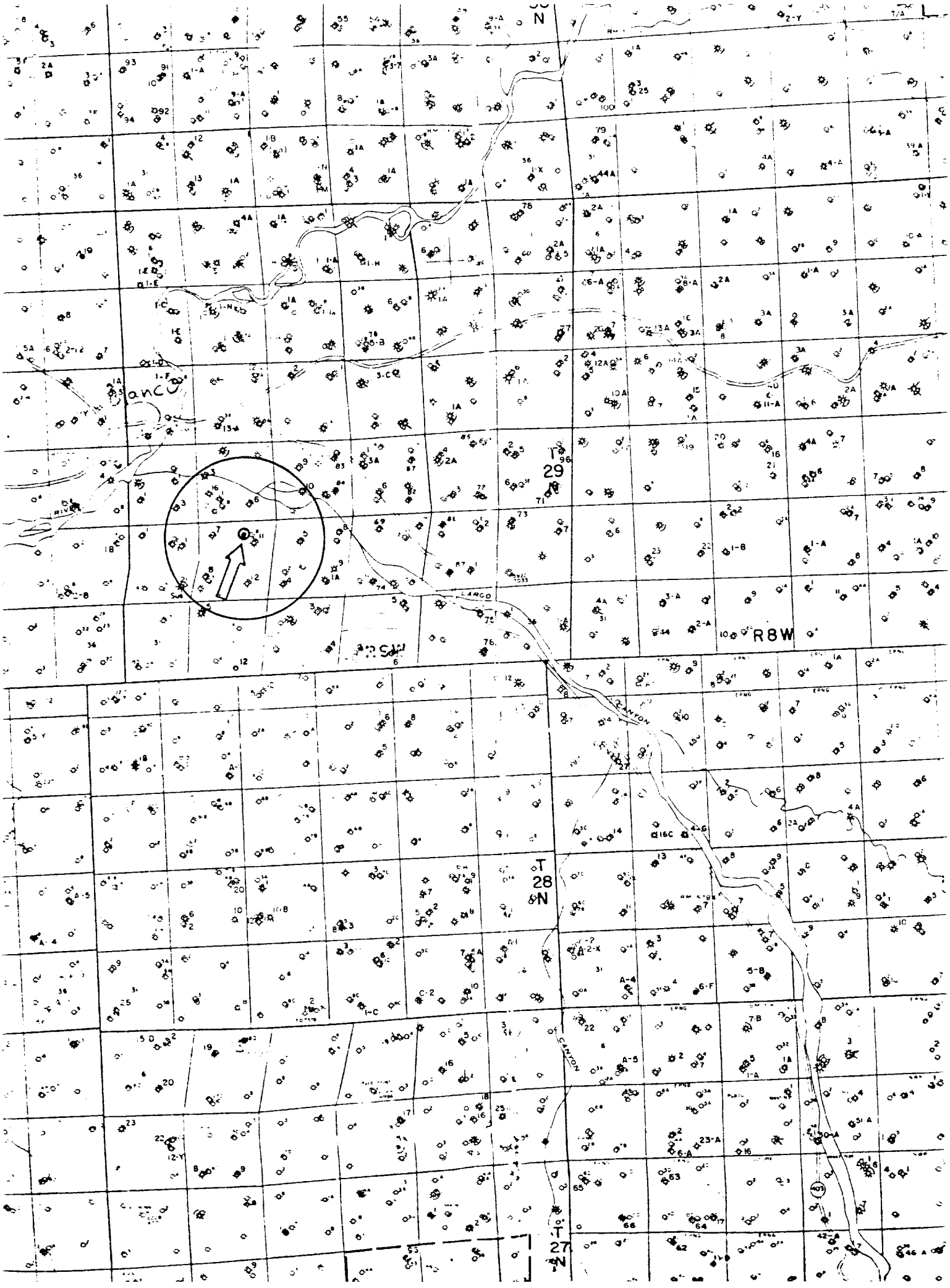
EXHIBIT

ECT DRILLING WELL SITE LAYOUT HAMUCK #4

TION 825 FSL 1660 FWL SEC 28, T29N, R9W

DATE 12/20/79




T 29 N
R 8 W
T 28 N
T 27 N
CANYON
CANYON
LARGO
RIVER