

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

30-045-24125

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  
 720 S. Colorado Blvd., Denver, CO 80222

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*  
 At surface  
 F 2195 FNL 2025 FWL  
 At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
 8.5 miles East South East

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 1920.00  
 17. NO. OF ACRES ASSIGNED TO THIS WELL w/ 320.00

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.  
 19. PROPOSED DEPTH 6898  
 20. ROTARY OR CABLE TOOLS Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
 6096 GR  
 22. APPROX. DATE WORK WILL START\* ASAP

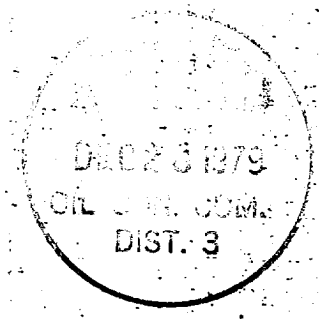
23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
13 3/4"	9 5/8" new	36#, K-55	300±	Circulate to surface
8 3/4"	7" new	23#, K-55	3,000±	Circulate to surface
6 1/4"	4 1/2" new	10.5#, 11.6#	6,898±	Circulate through liner hanger

See Attached

THE GAS IS DEDICATED

U. S. GEOLOGICAL SURVEY  
FARM, NEPTUN, N. M.



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 18, 1979

(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:  
 ok Frank

\*See Instructions On Reverse Side

NMCOG

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT

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

Form C-107  
Revised 10-1-78

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

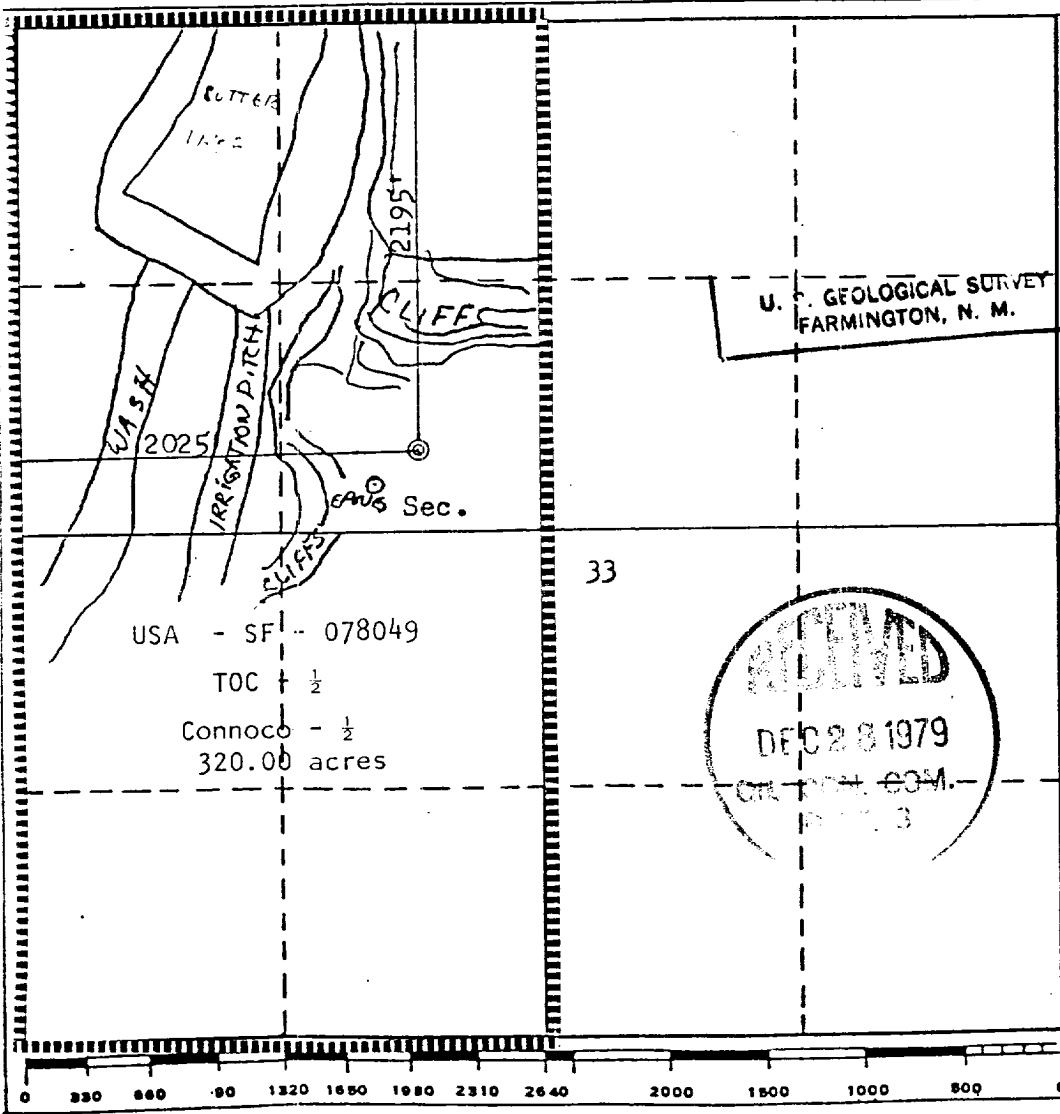
Operator <b>TENNECO OIL COMPANY</b>		Lease <b>HUGHES "A"</b>		Well No. <b>6</b>
Unit Letter <b>F</b>	Section <b>33</b>	Township <b>29N</b>	Range <b>8W</b>	County <b>San Juan</b>
Actual Footage Location of Well: <b>2195</b> feet from the <b>North</b> line and <b>2025</b> feet from the <b>West</b> line				
Ground Level Elev. <b>6096</b>	Producing Formation <b>Dakota</b>	Pool <b>Basin Dakota</b>	Dedicated Acreage: <b>320.00</b> 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.



<b>CERTIFICATION</b>	
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.	
Name	<i>M. L. Freeman</i>
Position	Staff Production Analyst
Company	Tenneco
Date	December 18, 1979
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	September 23, 1979
Registered Professional Engineer and/or Land Surveyor	<i>Fred B. Kemmer</i> 23050
Certificate No.	3950

TENNECO OIL COMPANY

PROGNOSIS TO DRILL AND COMPLETE

DIVISION: Rocky Mountain

DATE: August 14, 1979

LEASE: Hughes

WELL NO.: A-6

LOCATION: 2195' FNL, 2025' FWL  
Sec. 33, T 29N, R 8W  
San Juan County, New Mexico

FIELD: Basin Dakota

ESTIMATED ELEVATION: 5920 G.L.

ESTIMATED TOTAL DEPTH: 6898'

PROJECTED HORIZON: Dakota

DRILLING, CASING AND CEMENT PROGRAM:

- (1) MIRURT.
- (2) Drill a 13 3/4" hole to 300+. Run 9 5/8", 36#, K-55, ST&C casing to T.D. and cement to surface. Use 2% CaCl<sub>2</sub> in cement.
- (3) Cut off casing and weld on casing head. Pressure test weld to 1000 psi. NUBOP's and manifold. Pressure test casing, BOP's and manifold to 1000 psi for 30 minutes.
- (4) Drill out shoe and reduce hole to 8 3/4". Drill 8 3/4" hole to 3000+. Run 7", 23#, K-55, ST&C casing to T.D. and cement to surface.
- (5) Land casing in slips and cut off. Install drilling spool on casing head. Install rotating head, manifold and flare line. Pressure test blind rams, manifold and casing to 1000 psi for 15 minutes. Pick up drilling assembly and 3 1/2" drill pipe. Pressure test pipe rams to 1000 psi for 15 minutes.
- (6) Drill out of 7" with 6 1/4" bit using gas as circulating fluid. Drill a few feet of formation and then blow hole with gas until it is dusting. Drill to T.D.
- (7) Log the hole dry as directed by the wellsite geological engineer and gauge the natural flow from the Dakota.
- (8) If productive, run 4 1/2" casing to T.D. as per casing design. Cement in one stage. Bring cement to above Mesaverde zone.
- (9) If nonproductive, plug and abandon as per U.S.G.S. requirements.

ESTIMATED FORMATION TOPS:

OJO Alamo	1458' (water)	Mancos	4790'
Pictured Cliffs	2426' (gas)	Gallup	5878'
Cliffhouse	4058' (gas)	Greenhorn	6614'
Menefee	4158' (gas)	Dakota "A"	6816' (gas)
Point Look Out	4650' (gas)		

ms

DRILLING MUD PROGRAM:

0-300' Spud Mud  
300'-T.D. 7" casing-low solids fresh water mud. No W.L. control.  
3000'+-T.D. Gas

CORING AND TESTING PROGRAM:

No cores or tests. Gauge natural flow from the Dakota.

DEVIATION SURVEYS:

1. Survey surface hole at 100' intervals. Maximum allowable deviation at
2. FROM SURFACE TO TOTAL DEPTH DEVIATION SURVEYS MUST BE TAKEN EVERY 500' OR EACH TRIP WHICHEVER IS FIRST. This may entail running the TOTCO on wireline. Record each survey on the AAODC Drilling Report Sheet. Maximum allowable change in deviation is 1<sup>o</sup> per 100'.

SAMPLES:

As directed by wellsite geological engineer.

WELL SURVEYS:

GR/FDC/CNL caliper from T.D. to base of Mesaverde.  
GR/SP/SN induction from T.D. to surface casing.

BOP: From 300' to T.D. as per U.S.G.S. requirements.

PREVENTORS MUST BE CHECKED FOR OPERATION EVERY 24 HOURS, AND THE CHECK MUST BE RECORDED ON THE AAODC DRILLING REPORT SHEET.

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 - Don Barnes private line - Monday-Friday (before 7:45 A.M.)
2. 303-936-0704 (home) - Don Barnes - weekends and holidays
3. 303-424-1269 (home) - John Owen - if Don Barnes not available

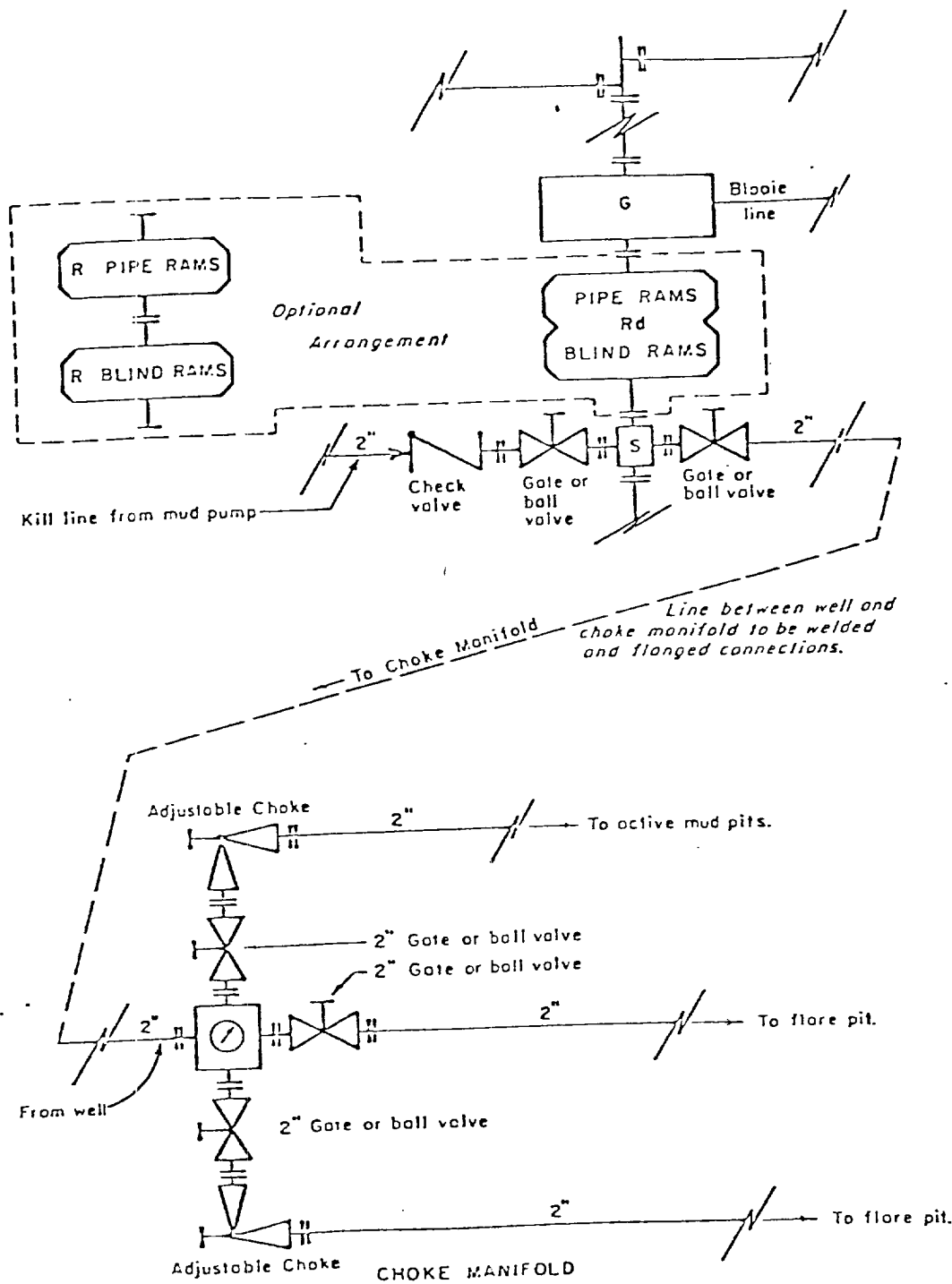
The yellow sheet of the IADC Report to be filled out completely, the original copy of the drilling time recorder, and copies of any invoices from this well signed and received for Tenneco Oil Company will be mailed daily to:

TENNECO OIL COMPANY  
PENTHOUSE  
720 SOUTH COLORADO BOULEVARD  
DENVER, COLORADO 80222

ATTENTION: DRILLING DEPARTMENT

In case of an emergency, notify the following:

1. Mr. Don Barnes, Division Drilling Engineer - 303-936-0704.
2. Mr. John Owen, Project Drilling Engineer - 303-424-1269.
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 AND  
 CHOKE MANIFOLD

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 least 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.

TENNECO OIL COMPANY

CALCULATION SHEET

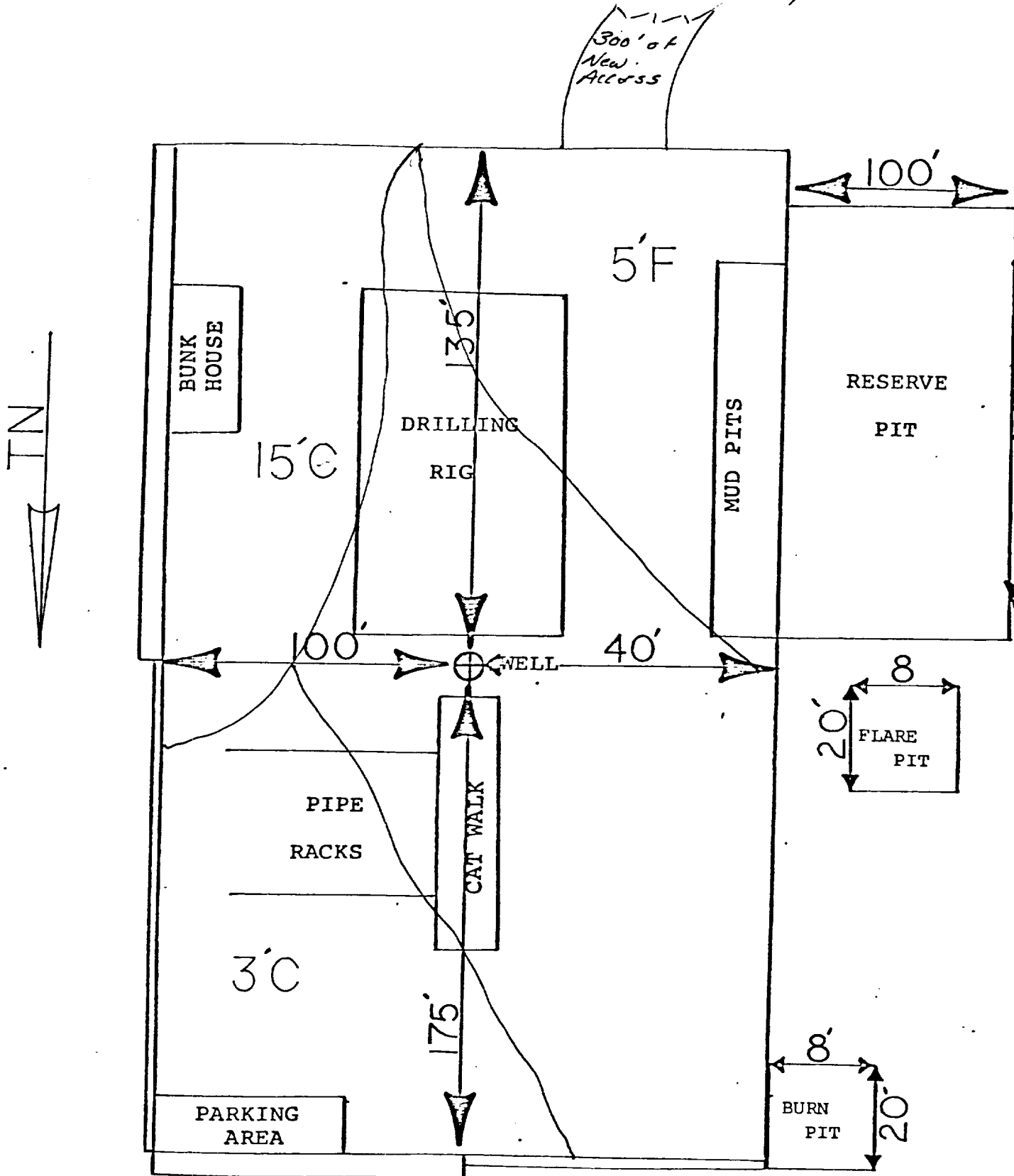
COMPANY

EXHIBIT

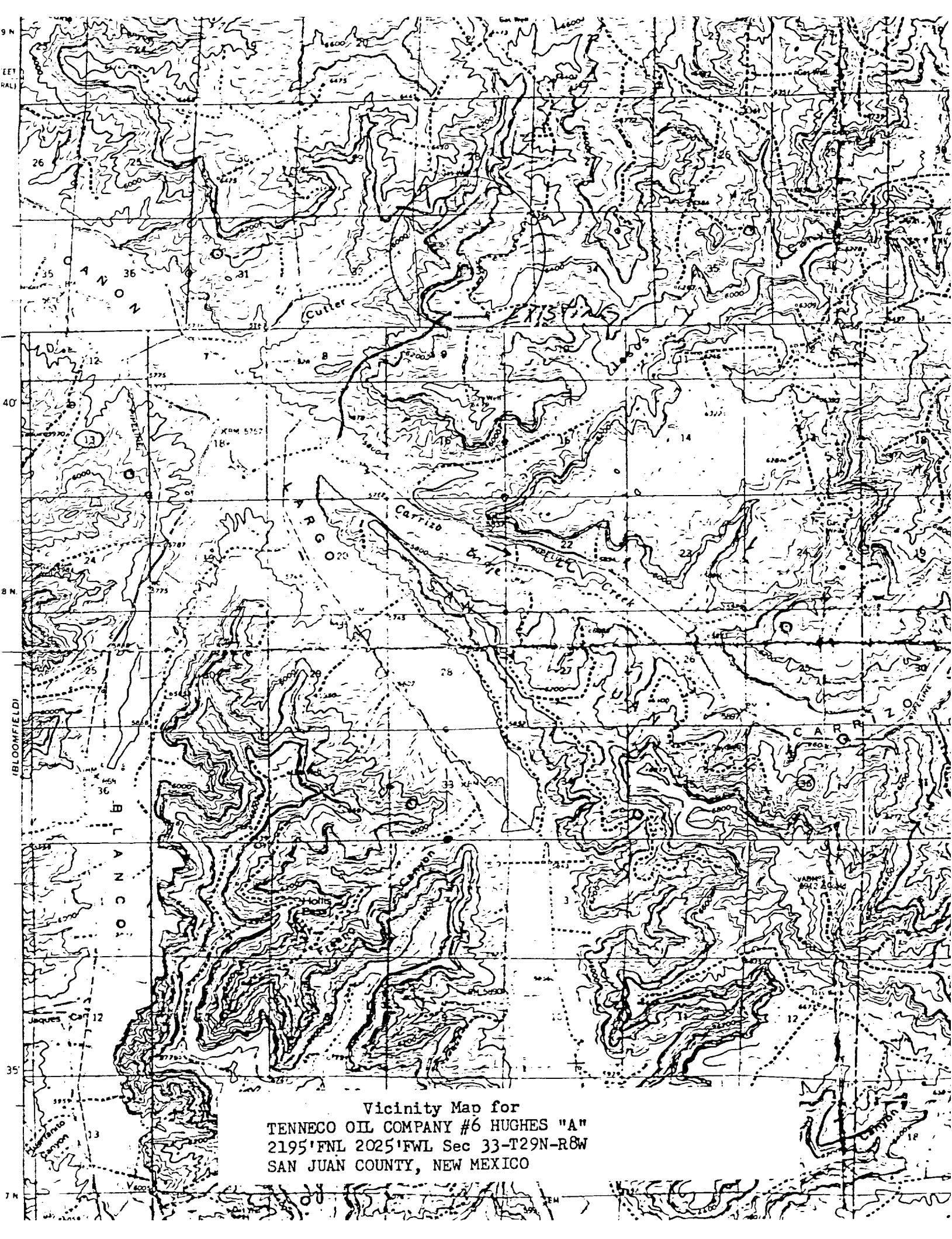
SUBJECT DRILLING WELL SITE LAYOUT *Hughes "A" 6*

LOCATION *2195 FNL 2025 FWC SEC 33 T29N 28W*

DATE *12/18/79*







Vicinity Map for  
TENNECO OIL COMPANY #6 HUGHES "A"  
2195'FNL 2025'FWL Sec 33-T29N-R8W  
SAN JUAN COUNTY, NEW MEXICO

