

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

## 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

1830' FNL, 800' FWL

At proposed prod. zone

## 14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*

9 miles East/Northeast of Blanco, NM

## 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

1447.31

17. NO. OF ACRES ASSIGNED  
TO THIS WELL

164.16 w/324.16

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

## 19. PROPOSED DEPTH

7580

## 20. ROTARY OR CABLE TOOLS

Rotary

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

6304 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 1/4"	9 5/8" new	36#, K-55	+ 250'	Circulate to surface
8 3/4"	7" new	23#, K-55	+ 4000'	Circulate to surface
6 1/2"	4 1/2" new	10.5#, 11.6#	+ 7580	Circulate through liner hanger

SEE ATTACHED

THE GAS IS DEDICATED

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. L. Freeman

TITLE Staff Production Analysis

DATE

12/26/79

(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

NM000

All distances must be from the outer boundaries of the Section

Operator <b>TENNECO OIL COMPANY</b>		Lease <b>FLORANCE</b>		Well No. <b>123</b>
Unit Letter <b>E</b>	Section <b>3</b>	Township <b>29N</b>	Range <b>8W</b>	County <b>San Juan</b>

Actual Footage Location of Well:

**1830** feet from the **North** line and **800** feet from the **West** line

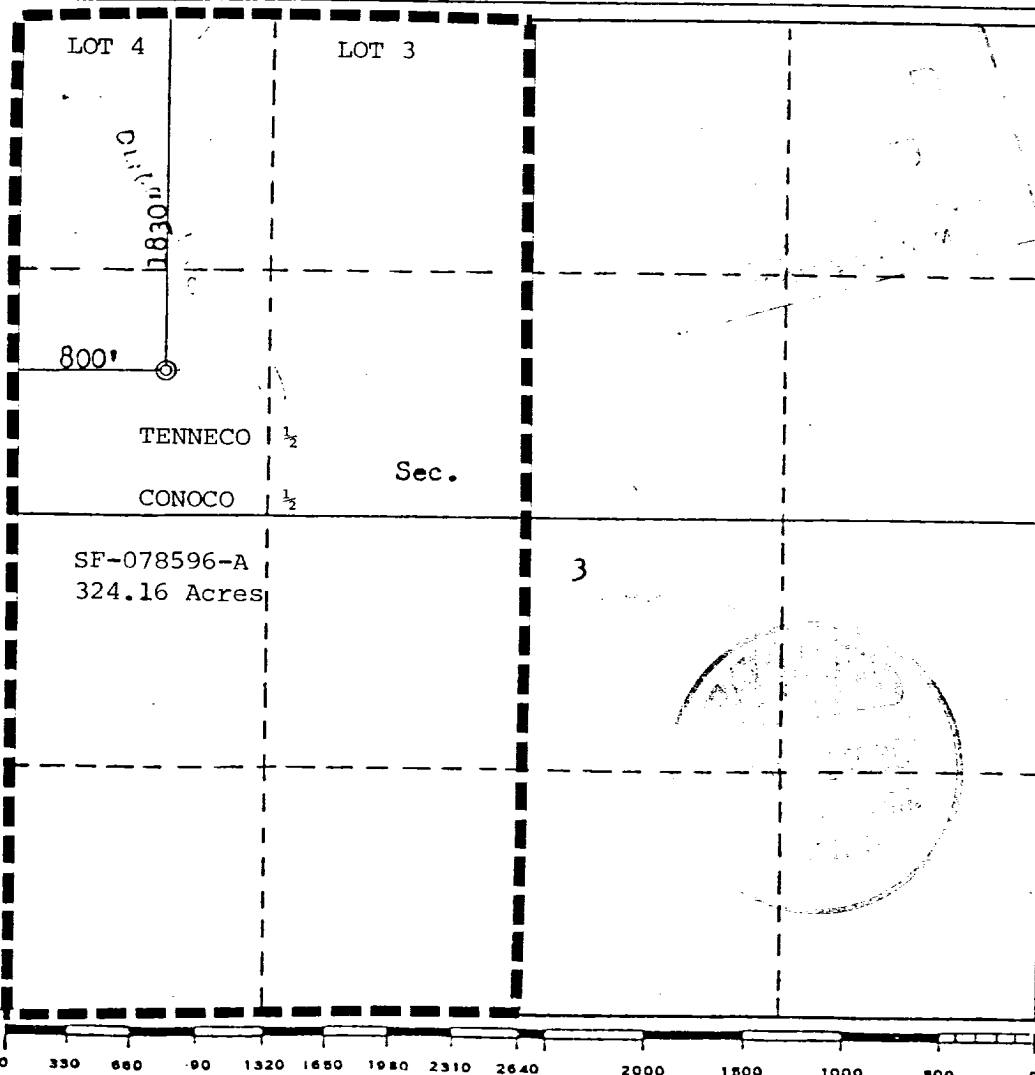
Ground Level Elev. <b>6304</b>	Producing Formation <b>P.C./Dakota</b>	Pool <b>Blanco/Basin Dakota</b>	Dedicated Acreage: <b>164.16 324.16</b> Acres
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1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat 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.

*M. L. Freeman*

Name **M. L. Freeman**  
Staff Production Analyst

Position  
**Tenneco Oil Company**

Company  
**12/26/79**

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

**November 6, 1979**

Registered Professional Engineer  
and/or Land Surveyor

*Fred B. Kerr*

Certificate No. **3950**

**3950**

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

DRILLING PROCEDURE

DATE: November 26, 1979

LEASE: Florance

WELL NO.: 123

LOCATION: 1830' FNL, 800' FWL  
Sec. 3, T 29N, R 8W  
San Juan County, New Mexico

FIELD: Four Townships Area

ELEVATION: 6290' Est. G.L.

TOTAL DEPTH: 7580'

PROJECTED HORIZON: Pictured Cliffs/Dakota

SUBMITTED BY: Doug Keathley

APPROVED BY: John W. Brown

DK/ms

1st Rev.

ESTIMATED FORMATION TOPS

OJO Alamo	1905'	(Water)
Pictured Cliffs	3305'	(Gas)
Lewis Shale	3500'	
Cliff House	4690'	(Gas)
Menefee	4825'	(Gas)
Point Lookout	5160'	(Gas)
Mancos	5455'	
Gallup	6220'	(Oil)
Greenhorn	7220'	
Dakota	7325'	(Gas)
T.D.	7580'	

Surface Formation: San Jose

No abnormal temperatures or pressures are expected.

## DRILLING, CASING, AND CEMENT PROGRAM

1. Move in, rig up rotary tools.
2. Drill a 12 1/4" hole to  $\pm$  250'.
3. Run 9 5/8", 36#, K-55, ST&C casing to 250'.
4. Cement with Class B cement with 2% CaCl<sub>2</sub>. Use sufficient volume to circulate cement to surface.
5. Wait on cement a minimum of 12 hours. Nipple up blowout preventer and manifold with relief lines. Pressure test to 600 psi for 30 minutes. Test pipe and blind rams.
6. Drill an 8 3/4" hole to  $\pm$  4000'. Samples should be taken every 10' starting at 3400' to insure penetrating the Lewis Shale 500'.
7. Run 7", 23#, K-55, ST&C casing to  $\pm$  4000'.
8. Cement with 50/50 pozmix and tail in with 150 sx Class B cement with 2% CaCl<sub>2</sub>. Cement with sufficient volume to circulate cement returns to surface.
9. Wait on cement a minimum of 18 hours. Nipple up to gas drill. Pressure test to 1000 psi for 30 minutes.
10. Pick up 4 3/4" drill collars and 3 1/2" drill pipe. Drill cement to within 5' of guide shoe. Displace water with nitrogen. Displace nitrogen with gas. Drill 5' of new formation and blow hole dry.
11. Drill a 6 1/4" hole to T.D. using gas.
12. Run open hole logs.
13. Run 4 1/2" casing with casing liner hanger to T.D. Run a minimum of 150' of overlap.
14. Cement with 50/50 pozmix as a lead cement. Tail in with neat cement to cover Dakota. Use sufficient volume of cement to circulate cement to liner top.
15. Reverse out excess cement. Lay down 3 1/2" drill pipe. Install well head.
16. MORT.
17. If well is non-productive, P & A as per regulatory agency regulations.

### CASING PROGRAM

Surface:	250' of 9 5/8", 36#, K-55, ST&C casing.
Intermediate:	4000' of 7", 23#, K-55, ST&C casing.
Liner:	3150' of 4 1/2", 10.5#, K-55, ST&C casing.
	580' of 4 1/2", 11.6#, K-55, ST&C casing.

## MUD PROGRAM

0-250' Native solids. Viscosity as needed to clean hole. Sweeps as necessary.

250-4000' Low solids, chemical gel mud. Sweeps to clean hole.

4000-T.D. Gas.

## EVALUATION

### Cores and DST's:

None.

### Deviation Surveys:

1. Survey surface hole at 100' intervals. Maximum allowable deviation at surface, 1°.
2. From surface to T.D., deviation surveys will be taken every 500', or each trip, whichever is first. This may entail running the TOTCO on wireline. Record each survey on the IADC Drilling Report Sheet. Maximum allowable change in deviation is 1° per 100'.

### Samples:

Samples should be taken every 10' from 2950' to 3500' to insure penetrating the Lewis Shale 600'.

Logs: This will require one set of logs run after T.D. in Dakota and TDT log run after casing is set in Dakota.

Induction/GR - T.D. to surface.

Comp. Density with Gamma Ray & Caliper - T.D. to B/Pt. Lookout.

TDT - 300' below Pictured Cliffs to surface.

## BLOWOUT EQUIPMENT

10" 900-series, double ram hydraulic operated with closing unit and 40 gallon accumulator.

10" 900-series, rotating head, 7" blosie line, high pressure manifold with separate valves and discharge lines.

## 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.

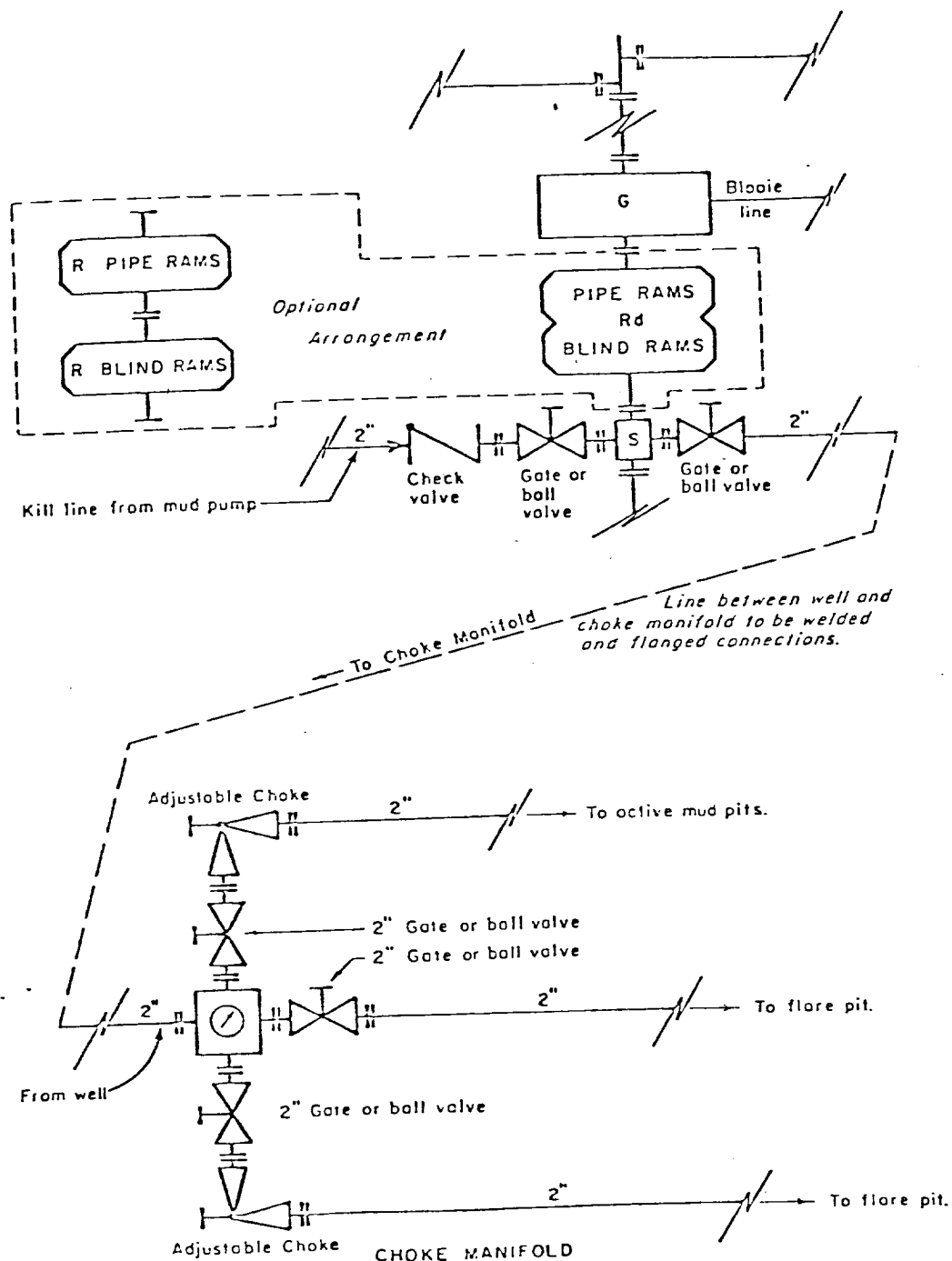
The yellow sheet of the IADC Report to be filled out completely, the original copy of the drilling time recorder, and copies of any invoices from this well, signed and received for Tenneco Oil Company will be mailed daily to:

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

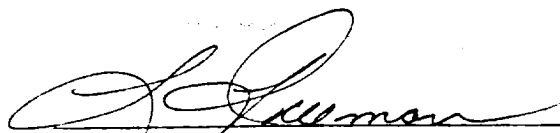
TENNECO OIL COMPANY  
ROCKY MOUNTAIN DIVISION  
REQUIRED MINIMUM  
BLOWOUT PREVENTER AN  
CHOKES MANIFOLD

J. MAGILL 10-26-79 EVI



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.

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 atop Manzanares Mesa on slightly rolling topography. There is an adjacent location to the North providing access. The soil is sandy clay supporting primarily pinon, juniper and native grasses.
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

## TENNECO OIL COMPANY

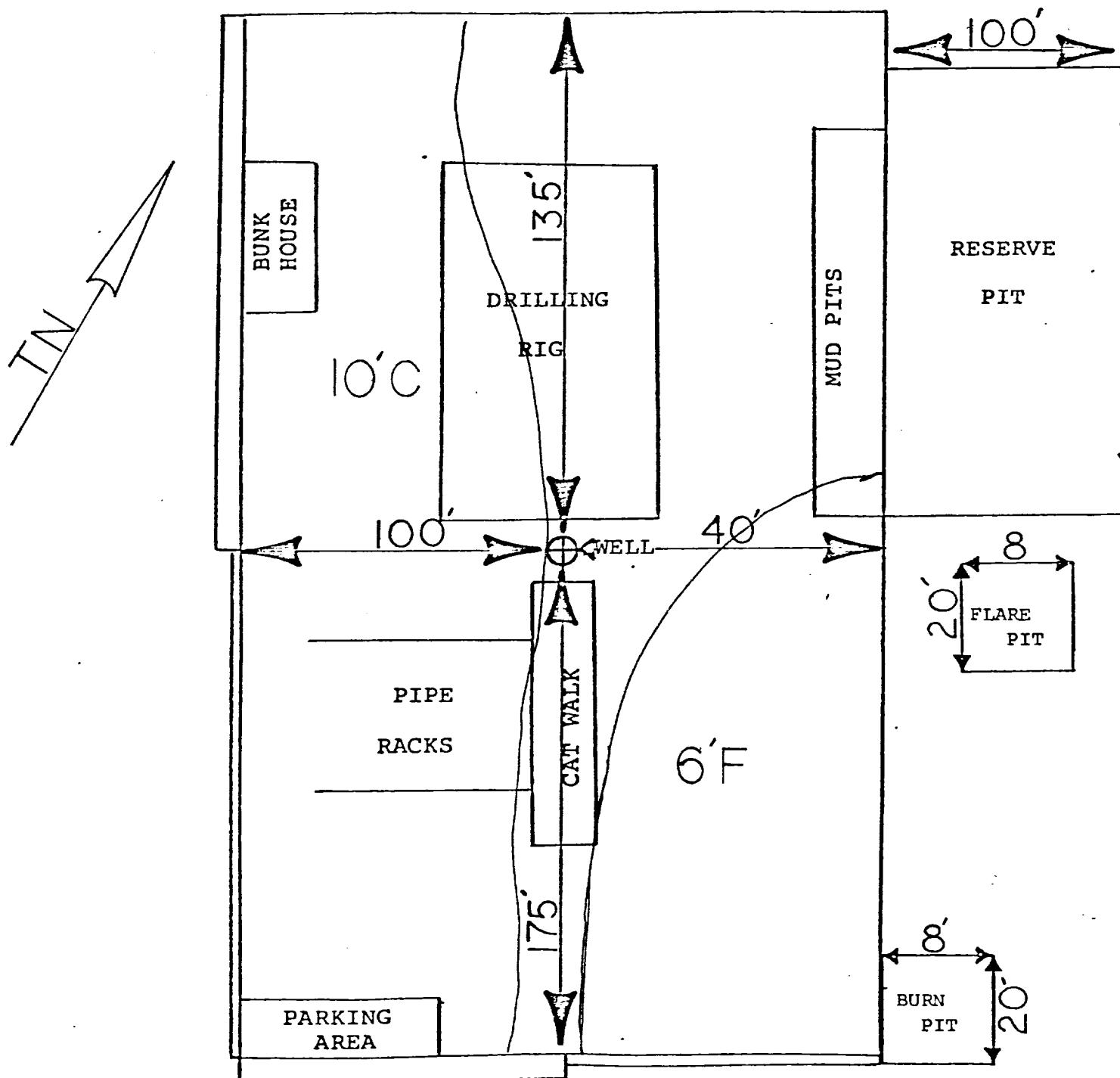
## CALCULATION SHEET

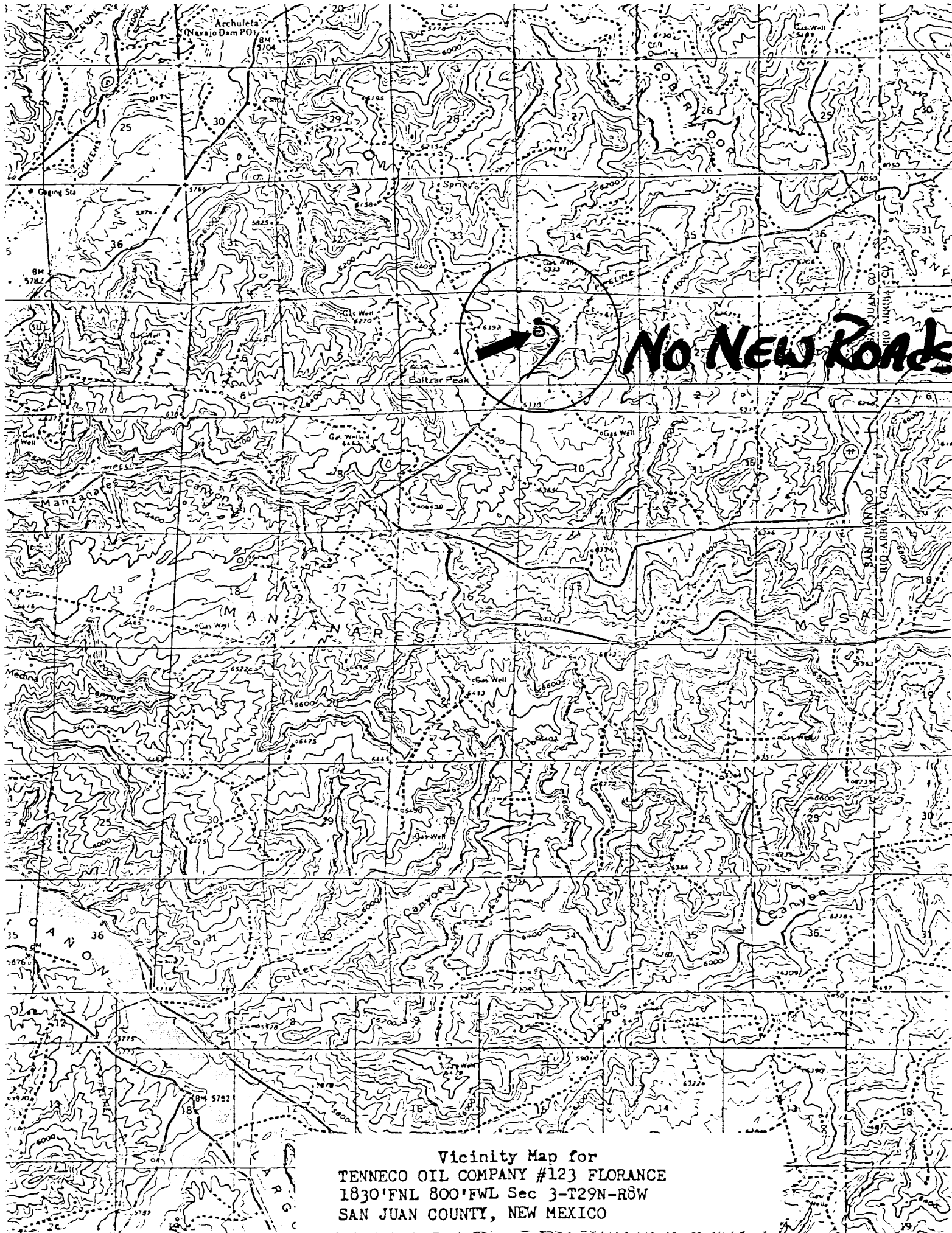
ANY

EXHIBIT

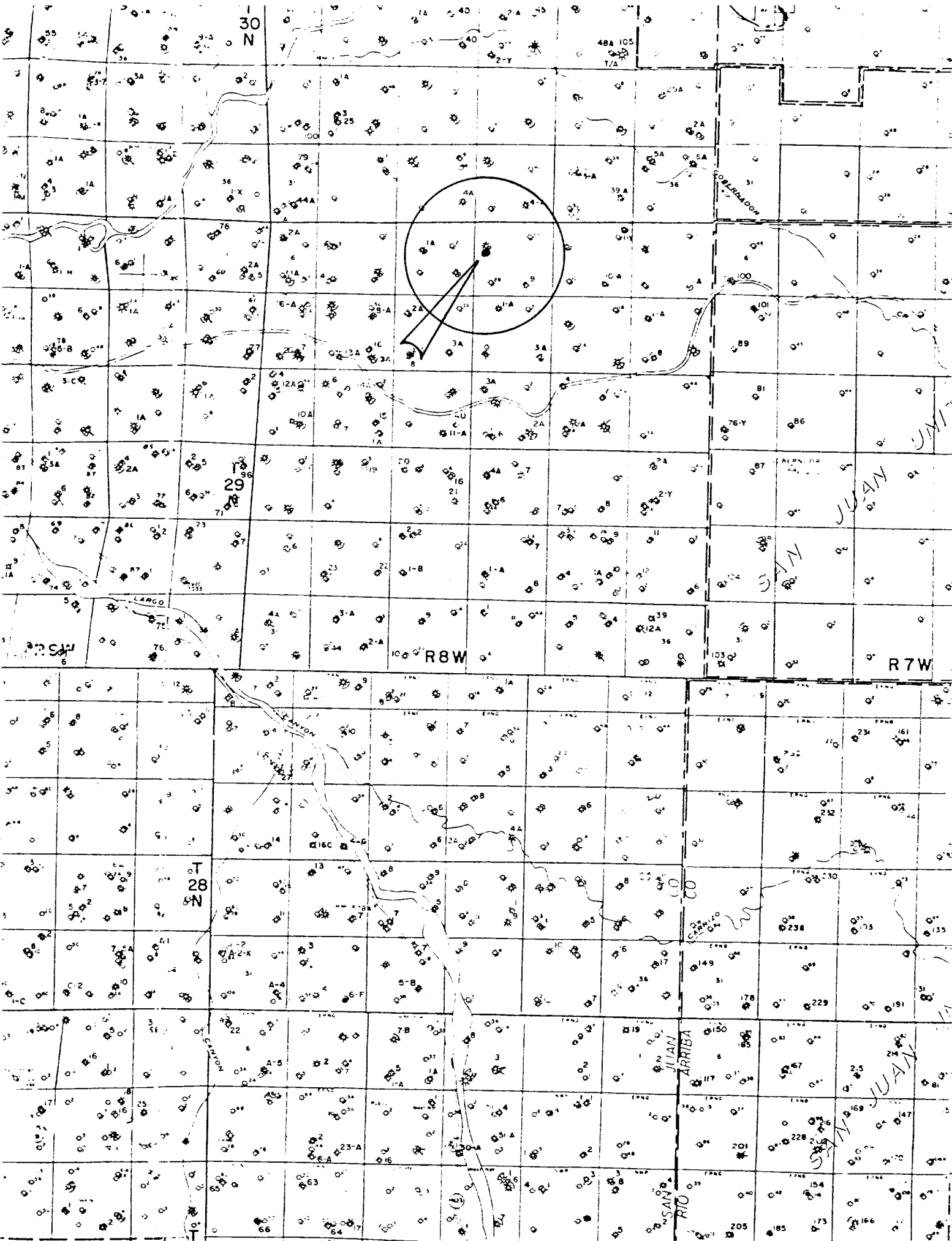
CT DRILLING WELL SITE LAYOUT *FLORANCE 123*TION *18.30 FNL, 800 FWL SEC 3, T29N, R28W*

DATE





Vicinity Map for  
TENNECO OIL COMPANY #123 FLORANCE  
1830'FNL 800'FWL Sec 3-T29N-R8W  
SAN JUAN COUNTY, NEW MEXICO



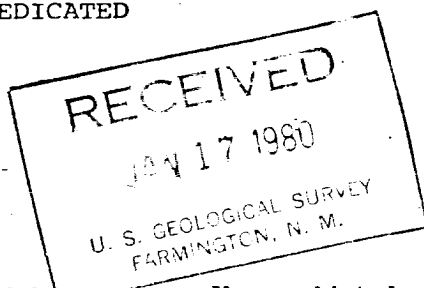
# Revision

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIPPLICATE\*  
(Other instructions on  
reverse side)Form approved.  
Budget Bureau No. 42-R1425.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK			5. LEASE DESIGNATION AND SERIAL NO.	
1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>			SF-078596-A	
b. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" 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 S. Colorado Blvd., Denver, CO 80222			8. FARM OR LEASE NAME Florance	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)* At surface 1830' FNL, 800' FWL At proposed prod. zone			9. WELL NO. 123	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 9 miles East/Northeast of Blanco, NM			10. FIELD AND POOL, OR WILDCAT Blanco P.C./Basin Dakota	
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. 3, T29N, R8W	
16. NO. OF ACRES IN LEASE 1447.31			12. COUNTY OR PARISH San Juan	
17. NO. OF ACRES ASSIGNED TO THIS WELL PC-164.16/Dakota-324.16			13. STATE NM	
18. DISTANCE FROM PROPOSED* LOCATION TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.			19. PROPOSED DEPTH 7580	
20. ROTARY OR CABLE TOOLS rotary			21. APPROX. DATE WORK WILL START* ASAP	
22. ELEVATIONS (Show whether DF, RT, GR, etc.) 6304GR				
23. PROPOSED CASING AND CEMENTING PROGRAM				
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	9 5/8" new	36#, K-55	+250'	Circulate to surface
8 3/4"	7" new	23#, K-55	+4000'	Circulate to surface
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THE GAS IS DEDICATED



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 FreemanTITLE Staff Production AnalystDATE 1-11-80

(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_

APPROVAL DATE \_\_\_\_\_

APPROVED BY \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:

TITLE \_\_\_\_\_

APPROVED  
AS AMENDEDDRILLING OPERATIONS AUTHORIZED ARE  
SUBJECT TO COMPLIANCE WITH ATTACHED  
"GENERAL REQUIREMENTS"

\*See Instructions On Reverse Side

JAN 21 1980  
James F. Sims  
DISTRICT ENGINEER

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

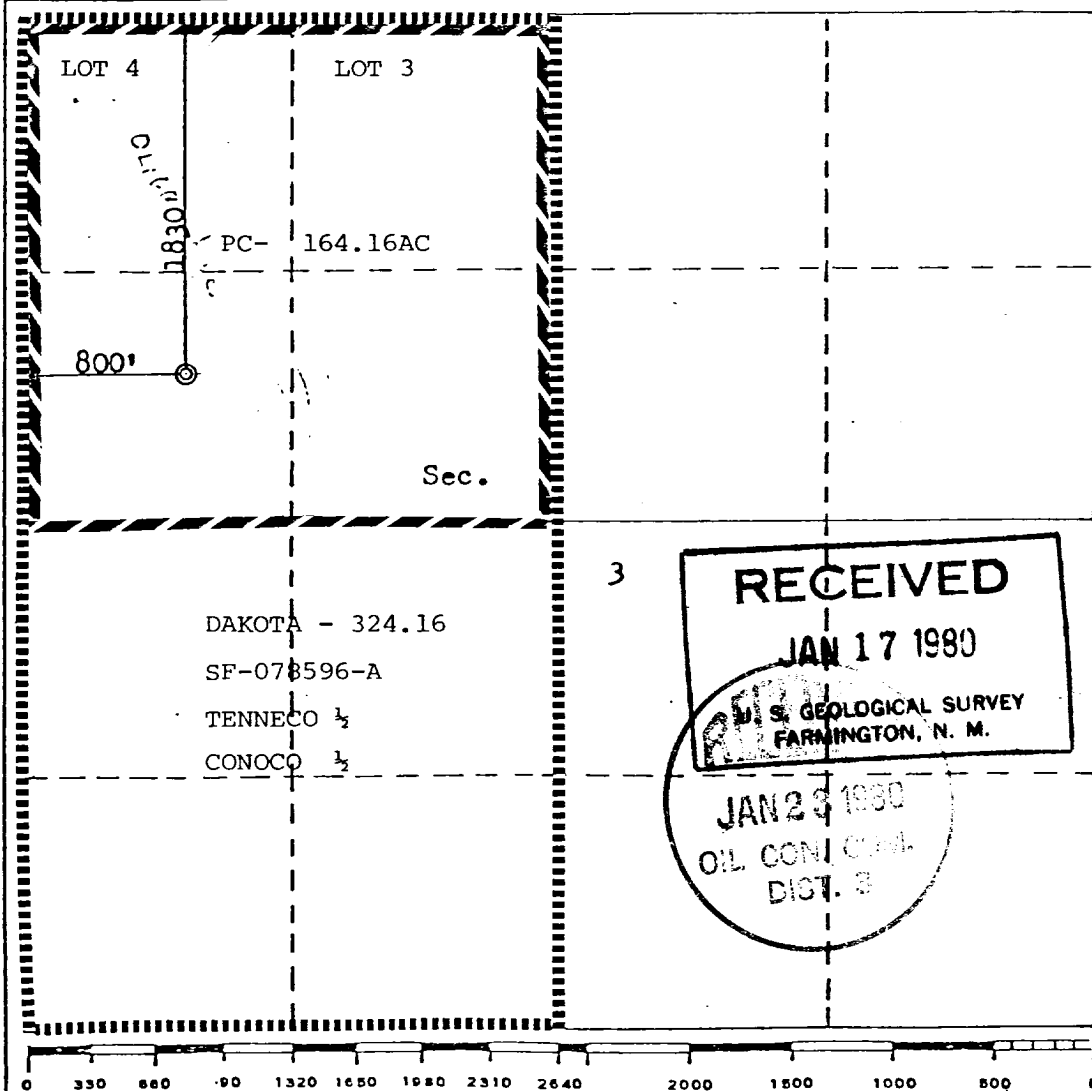
Operator <b>TENNECO OIL COMPANY</b>		Lease <b>FLORANCE</b>		Well No. <b>123</b>	
Unit Letter <b>E</b>	Section <b>3</b>	Township <b>29N</b>	Range <b>8W</b>	County <b>San Juan</b>	
Actual Footage Location of Well: <b>1830</b> feet from the <b>North</b> line and <b>800</b> feet from the <b>West</b> line					
Ground Level Elev. <b>6304</b>	Producing Formation <b>Pictured Cliffs/Dakota</b>		Pool <b>Blanco Pictured Cliffs</b> <b>Basin Dakota</b>		Dedicated Acreage: <b>164.16</b> Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure 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

Position

Staff Production Analyst

Company

TENNECO OIL COMPANY

Date

January 11, 1980

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

November 16, 1979

Registered Professional Engineer  
and/or Land Surveyor

Fred B. Kerr Jr.

Certificate No. 3950

REPP IR.