

**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  
 P.O. Box 3249, Englewood, Colorado 80155

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*  
 At surface                      1800 FNL, 1840 FEL  
 At proposed prod. zone  
 same as above

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
 Approximately 9 miles NE of Blanco, N.M.

16. NO. OF ACRES IN LEASE  
 325.97 <sup>2</sup> 1273.8

17. NO. OF ACRES ASSIGNED TO THIS WELL  
 161.82 - 160 BPC/320 KD <sup>E/321.82</sup>

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.  
 800'

19. PROPOSED DEPTH  
 ±7030

20. ROTARY OR CABLE TOOLS  
 Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
 5729' GR

22. APPROX. DATE WORK WILL START\*  
 March 1981

5. LEASE DESIGNATION AND SERIAL NO.  
 SF-079511 A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME  
 Florance

9. WELL NO.  
 111

10. FIELD AND POOL, OR WILDCAT Basin Blanco Dakota/Pictured Cliffs

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
 Sec. 19, T30N, R8W

12. COUNTY OR PARISH  
 San Juan

13. STATE  
 N.M.

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#	±200	Circulate to surface
8 3/4"	7" new	23#	±3100	Circulate to surface
6 1/4"	4 1/2" new	10.5#, 11.6#	±7030	Circulate to liner top

For information only to administrative appeal pursuant to 30 CFR 290.

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 R.A. Mishler TITLE Sr. Production Analyst DATE December 15, 1980

(This space for Federal or State office use)  
 PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

APPROVED BY Burr Wamsley TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
 CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions On Reverse Side

418000

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102  
Supersedes C-128  
Effective 1-1-65

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

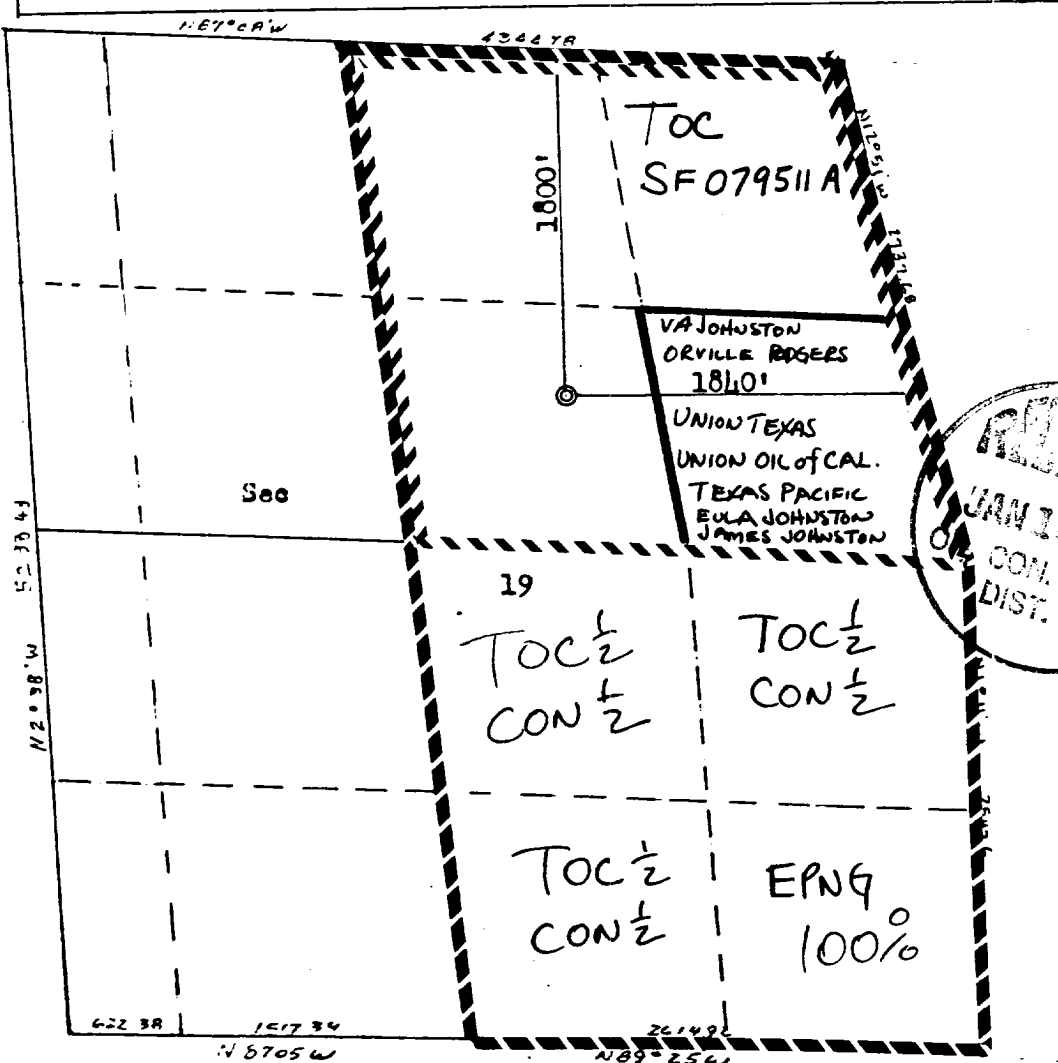
Operator <b>TENNECO OIL COMPANY</b>		Lease <b>Florance</b>		Well No. <b>111</b>
Unit Letter <b>G</b>	Section <b>19</b>	Township <b>30N</b>	Range <b>8W</b>	County <b>San Juan</b>
Actual Footage Location of Well: <b>1800</b> feet from the <b>North</b> line and <b>1540</b> feet from the <b>East</b> line				
Ground Level Elev. <b>5729</b>	Producing Formation <b>Pictured Cliffs/DAKOTA</b>	Pool <b>BLANCO PICTURED CLIFFS/BASIN DAKOTA</b>	Dedicated Acreage: <b>160/320</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 COMMUNITIZATION IN PROGRESS

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.

*R. A. Mishler*  
Name

R. A. Mishler

Position

Sr. Production Analyst

Company

Tenneco Oil Company

Date

December 15, 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

October 24, 1978

Registered Professional Engineer and Land Surveyor

*W. B. Kerr Jr.*  
W. B. Kerr Jr.

Certificate No.

3950

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

DRILLING PROCEDURE

DATE: November 19, 1979

LEASE: Florance

WELL NO.: 111

LOCATION: 1800' FNL, 1840' FEL  
Sec. 19, T 30 N, R 8W  
San Juan County, New Mexico

FIELD: Basin Dakota

ELEVATION: 5729 G.L.

TOTAL DEPTH: 7030

PROJECTED HORIZON: Dakota/PC

SUBMITTED BY:

Df. Kardash

APPROVED BY:

John W. Allen

DK/ms

1st Rev.

ESTIMATED FORMATION TOPS

OJO Alamo	1250	(Water)
Pictured cliffs	2450	(Gas)
Lewis Shale	2610	
Cliffhouse	4216	(Gas)
Menefee	4340	(Gas)
Point Lookout	4665	(Gas)
Mancos	4885	
Gallup	6170	(Oil)
Greenhorn	6655	
Dakota	6765	(Gas)
T.D.	7030	

Surface Formation: Nacimiento

No abnormal temperatures or pressures are expected.

DRILLING, CASING, AND CEMENT PROGRAM

1. MIRURT.
2. Drill a 12 3/4" hole to  $\pm$  200'.
3. RU and run 9 5/8", 36#, K-55, ST&C casing.
4. Cement with 150 sx Class B + 2% CaCl<sub>2</sub>.
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  $\pm$  500' into the Lewis Shale.
7. RU and run 7", 23#, K-55, ST&C casing to T.D.
8. Cement with sufficient volume to circulate cement to surface using 50/50 pozmix, 4% gel tailed by 150 sx of Class B + 2% CaCl<sub>2</sub>. Precede cement with a chemical preflush.
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<sub>2</sub> 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 specifications.

CASING PROGRAM

0-200	9 5/8", 36#, K-55 ST&C
0-3100	7", 23#, K-55, ST&C
2950-7030	(4050') 4 1/2", 10.5#, K-55, LT&C

## MUD PROGRAM

0-200	Native solids. Have sufficient viscosity to clean hole and run casing.
200-3100	Benex and water. Have sufficient viscosity to run casing.
3100-T.D.	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°.
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° per 100'.

### Samples:

### Logs:

GR/IND T.D. to Intd.  
GR/FDC/CAL T.D. to Base M V  
TDT 300' below PC to surface.

## BLOWOUT EQUIPMENT

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

10", 150 psi, rotating head and 7" blowout 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:

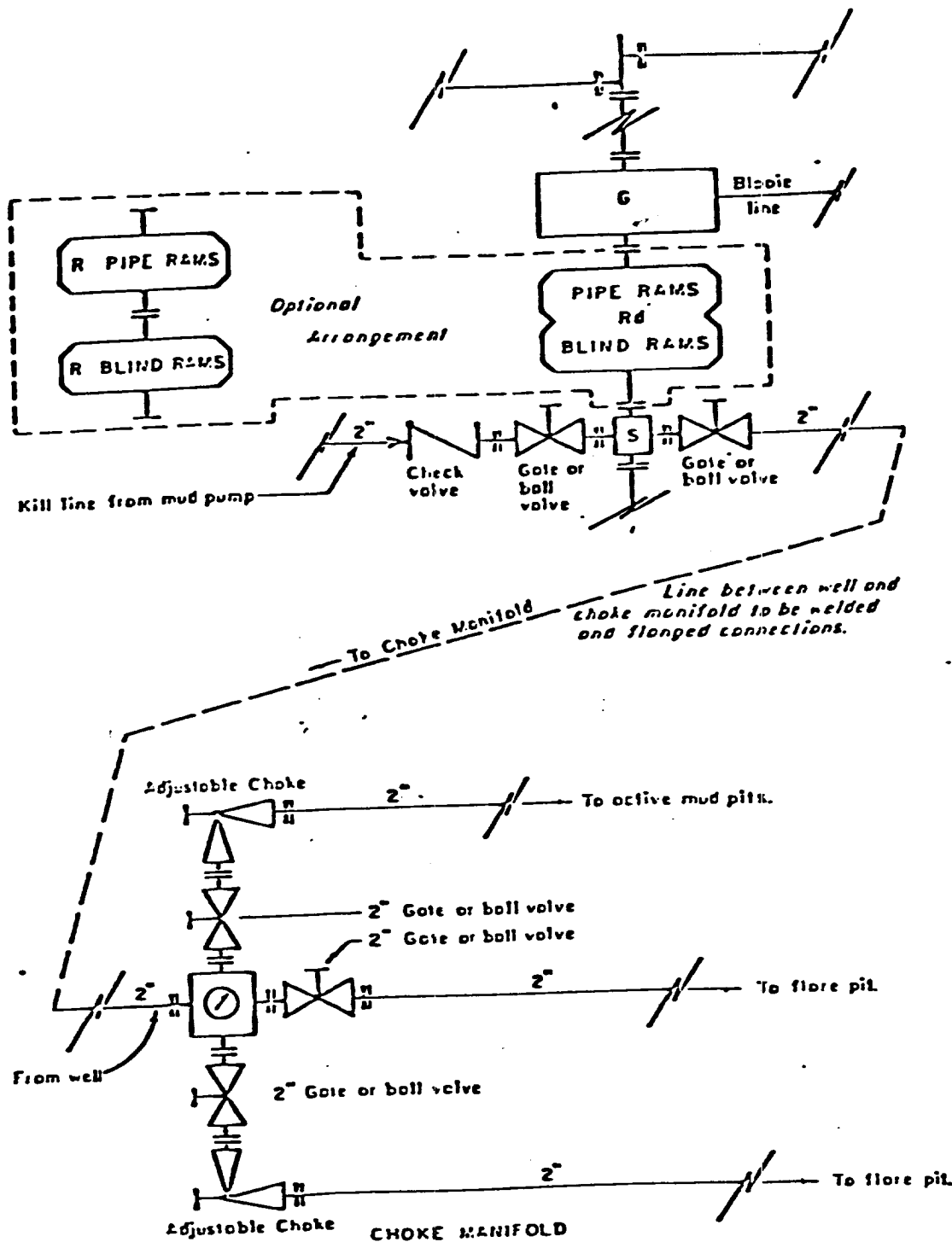
1. Mr. Don Barnes, Division Drilling Engineer - 303-936-0704
2. Mr. John Owen, Project Drilling Engineer - 303-795-0221
3. Mr. Mike Lacey, Division Production Manager - 303-979-0509

TENNECO OIL COMPANY - 10 POINT PLAN

1. The geological name of the surface formation: *Nacimiento*
- 2 & 3. Estimated Formation Tops:  
  
(See Attached Drilling Procedure)
4. Proposed Casing Program:  
  
(See Attached Drilling Procedure)
5. Blowout Preventors:  
Hydraulic double ram. One set of rams will be provided 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". BOP's, drills and tests will be recorded in the driller's log. BOP will be tested every 24 hours and recorded in IADC Log.
6. Mud Program: (Sufficient quantity of mud and weight material will be available on location).  
  
(See Attached Drilling Procedure.)
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.
  - d. Floats at bits.
  - e. Drill string safety valve(s) to fit all pipe in drill string will be maintained on the rig floor while drilling operations are in progress.
8. Coring, Logging, and Testing Program:  
  
(See Attached Drilling Procedure)
9. No abnormal pressures, temperatures or potential hazards such as H<sub>2</sub>S are expected to be encountered.
10. The drilling of this well will start approximately (*March 8/*) and continue for 10 to 12 days.

Your office 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.





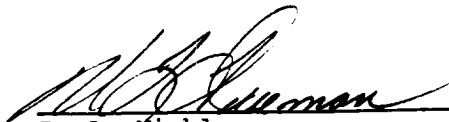
- All equipment to be 3,000 psi working pressure except as noted.
- Rd Double ram type preventer with two sets of rams.
  - R Single ram type preventer with one set of rams.
  - S Drilling spool with side outlet connections for choke and kill lines.
  - G Rotating head 150 psi working pressure minimum

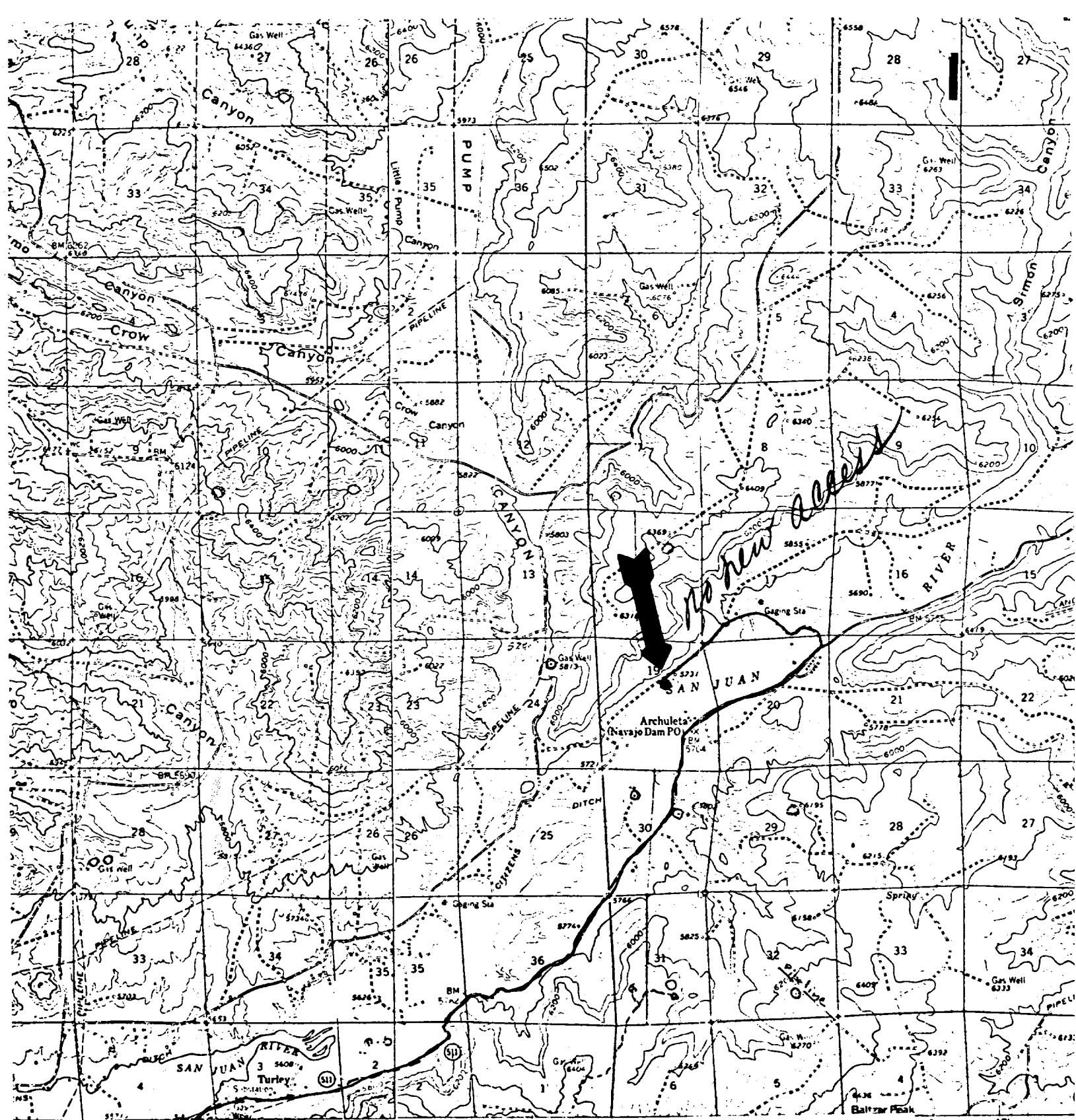
**ARRANGEMENT C**

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.

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 area is flat. Vegetation includes sage, snakeweed, and some 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 and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

  
R. A. Mishler  
Sr. Production Analyst



INTERIOR-DEOLOGICAL SURVEY WASHINGTON D.C. - 1972  
 1:4 MI TO 1 MI X 17  
 BLANCO 42 MI  
 10745' 25E  
 253000m E

**ROAD CLASSIFICATION**  
 Medium-duty ——— Light-duty ———  
 Unimproved dirt .....  
 U.S. Route (circle with number) State Route (circle with number)

**Vicinity Map for  
 TENNECO OIL CO. #111 FLORANCE  
 1800'FNL 1840'FEL Sec 19-T3ON-R8W  
 SAN JUAN COUNTY, NEW MEXICO**



28 MILS  
 249 MILS

**AZTEC, N. MEX**  
 N3645 - W10745/15

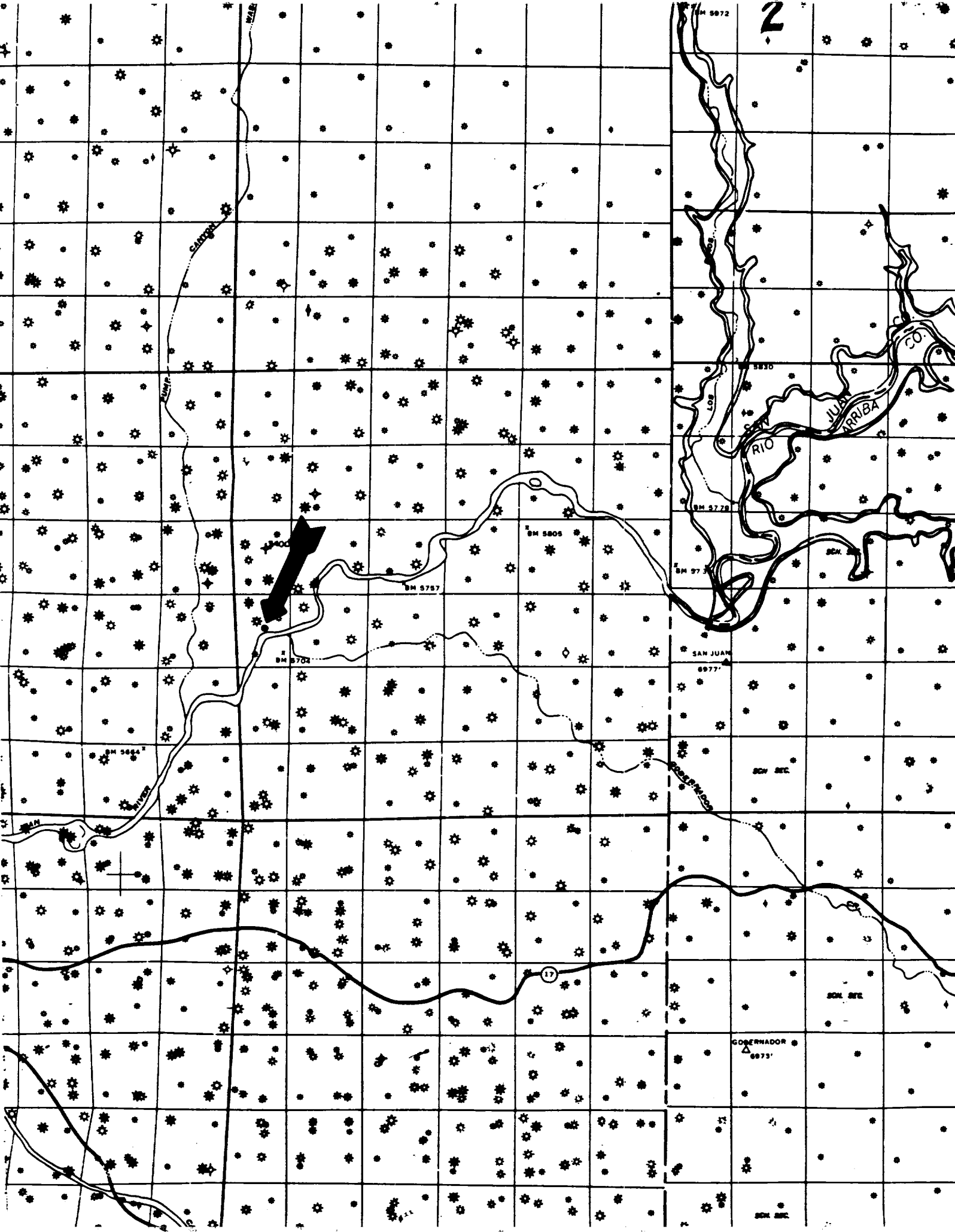
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 olyconic projection 1927 North American datum  
 0.000 foot grid based on New Mexico coordinate system,  
 est and central zones  
 300 meter Universal Transverse Mercator grid ticks,  
 one 13, shown in blue

UTM GRID AND 1959 MAGNETIC NORTH  
 DECLINATION AT CENTER OF SHEET

1959

hatching indicates area to be submerged by Navajo  
 project water 5000 feet  
 covered by dashed light blue pattern is subject

FOR SALE BY  
 A



TENNECO OIL COMPANY

CALCULATION SHEET

PLAT # 1

COMPANY

SUBJECT

Drilling Well Site Layout - Florence III

LOCATION

SW/NE Section 19, T30N, R8W San Juan

DATE

1-79

