Form 9-331 C
(May 1963)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

30-039-22583

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

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

b. TYPE OF WELL
OIL WELL [ ] GAS WELL [X] OTHER SINGLE ZONE [X] 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
1560 FSL, 1610 FEL
At proposed prod. zone
same as above

5. LEASE DESIGNATION AND SERIAL NO.
Contract #110

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Jicarilla

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Jicarilla A

9. WELL NO.
#5E

10. FIELD AND POOL, OR WILDCAT
Basin Dakota

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 20, T26N, R5W

12. COUNTY OR PARISH
Rio Arriba

13. STATE
N.M.

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
Approximately 22 miles NW of Lindrith, N.M.

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)
1030'

16. NO. OF ACRES IN LEASE
2558.36

17. NO. OF ACRES ASSIGNED TO THIS WELL
320

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

19. PROPOSED DEPTH
±7445

20. ROTARY OR CABLE TOOLS
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
6582 GR

22. APPROX. DATE WORK WILL START*
February 1981

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#	±300	Circulate to surface
7 7/8"	4 1/2" new	11.6#, 10.5#	±7445	Cement in two stages

ARE ATTACHED

This action is subject to administrative appeal pursuant to 30 CFR 290.

See attached.

The gas is dedicated.

RECEIVED
JAN 9 1981
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 K. A. Mishler R. A. Mishler TITLE Sr. Production Analyst DATE December 10, 1980

(This space for Federal or State office use)

APPROVED
AS AMENDED

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

JAN 07 1981
for JAMES F. SIMS
DISTRICT ENGINEER

*See Instructions On Reverse Side

NM000

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	Lease	Well No.
TENNECO OIL COMPANY	JICARILLA "A"	5E

Unit Letter	Section	Township	Range	County
J	20	26N	5W	Rio Arriba

Actual Footage Location of Well:
1560 feet from the South line and 1610 feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
6582	Dakota	Basin Dakota	320 Acres

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

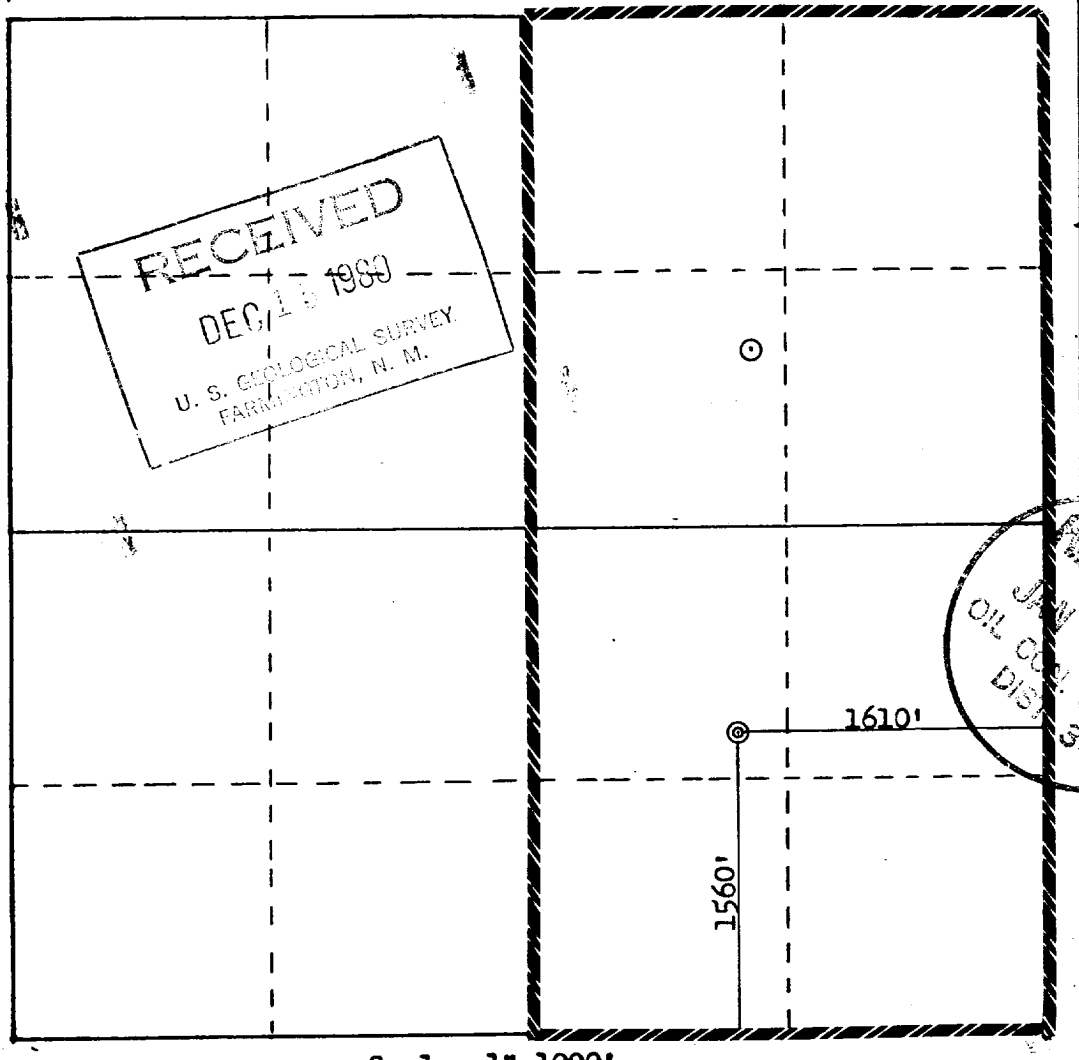
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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.

R. A. Mishler

Name: R. A. Mishler

Position: Sr. Production Analyst

Company: Tenneco Oil Company

Date: December 10, 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 2, 1980

Registered Professional Engineer and Land Surveyor

Fred B. Kerr Jr.

Certificate No. 3950

FORM 24-11

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

DRILLING PROCEDURE

DATE: September 23, 1980

LEASE: Jicarilla

WELL NO.: A #5E

LOCATION: 1560 FSL, 1610 FEL
Section 20, T26N, R5W
Rio Arriba County, New Mexico

FIELD: Basin Dakota

ELEVATION: 6582 (Est. G.L.)

TOTAL DEPTH: 7445'

PROJECTED HORIZON: Dakota

SUBMITTED BY: David Kranz DATE: September 23, 1980

APPROVED BY: [signature] DATE: 9/25/80

CC: Administration
DSB Well File
Field File

ESTIMATED FORMATION TOPS

Ojo Alamo	2400'	Water
Pictured Cliffs	2970'	Gas
Lewis	3035'	Shale
Mesaverde	4640'	Gas
Mancos	5380'	Shale
Greenhorn	7065'	Lmy SS
Dakota A	7145'	Gas
TD	7445'	

DRILLING, CASING AND CEMENTING PROGRAM

1. MIRURT

2. Drill a 12¼" Hole to ± 300' with Gel-Water Mud.

3. RU and run 9 5/8", 36#, K-55, ST&C casing to TD. Cement with Class B + 2% $CaCl_2$ in sufficient quantity to circulate cement to surface. WOC 12 hours.

4. Screw on 9 5/8 8rd x 11-3000 casing head, NU BOPS. Pressure test casing, lines and blinds to 1000 PSI for 30 minutes. GIH with drill pipe and test pipe rams to 1000 PSI for 30 minutes. Record all tests on IADC Report.

5. Drill out using a 7 7/8" Bit to T.D. Log open hole as directed by G.E. Department.

6. Run 4½" 11.6 and 10.50# K-55 ST&C as designed.

7. Cement in two stages with sufficient volume to circulate cement to surface. Locate DV tool + 250' above Cliffhouse to prevent lost returns in Mesa Verde. Lead in first stage with light cement (pozmix, Halliburton lite, etc.). Tail in with sufficient volume of Class "B" cement to cover the Dakota. Circulate a minimum of four hours between stages. Lead in second stage with light cement.

8. MORT

9. Install tree and fence reserve pit.

10. If non-productive, P & A as required by the USGS.

Casing Program

Interval	Length	Size	Weight	Grade	Coupling
0-300	300	9 5/8	36#	K-55	STC
7000-7445	445	4 1/2	11.6#	K-55	STC
0-7000	7000	4 1/2	10.5#	K-55	STC

MUD PROGRAM

0-300	Native solids. Have sufficient viscosity to gel chemical to clean hole and run casing.
300-TD	Low solids. Gel chemical. 32 viscosity and 10-15 water loss down through the Mancos. Before reaching Gallup, add 6% LCM and run viscosity at 38-40 seconds. After penetrating Gallup, let LCM drop.

EVALUATION

Cores and DST's: None.

Deviation Surveys:

1. Survey surface hole at 100' intervals. Maximum allowable deviation at 500' is $1\text{-}1/2^{o}$.

2. From surface to toal depth, deviation surveys must be taken every 500' or each trip, whichever is first. The may entail running the TOTCO on wire-line. Record each survey on the IADC Drilling Report Sheet. Maximum allowable change in deviation is 1^{o} per 100'. Maximum deviation allowable is 5^{o}.

Samples: As requested by Wellsite Geological Engineer.

Logs: 1. GR/IND FDC-GR-Cal TD to MV

BLOWOUT EQUIPMENT

11" - 3000 BOP with rotating head to comply with TOC requirements as shown in BOE arrangement, Figure C. Preventers must be checked for operation every 24 hours with each check recorded on the IADC Drilling Report Sheet.

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.)
   303-936-0704 (Home) Don Barnes, weekends and holidays.

2. John Owen (Home) 303-795-0221

The yellow sheet of the IADC Report is 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.

2. Mr. John W. Owen, Project Drilling Engineer.

3. Mr. Mike Lacey, Division Production Manager (Home 303-979-0509).

TENNECO OIL COMPANY - 10 POINT PLAN

1. The geological name of the surface formation: San Jose
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.

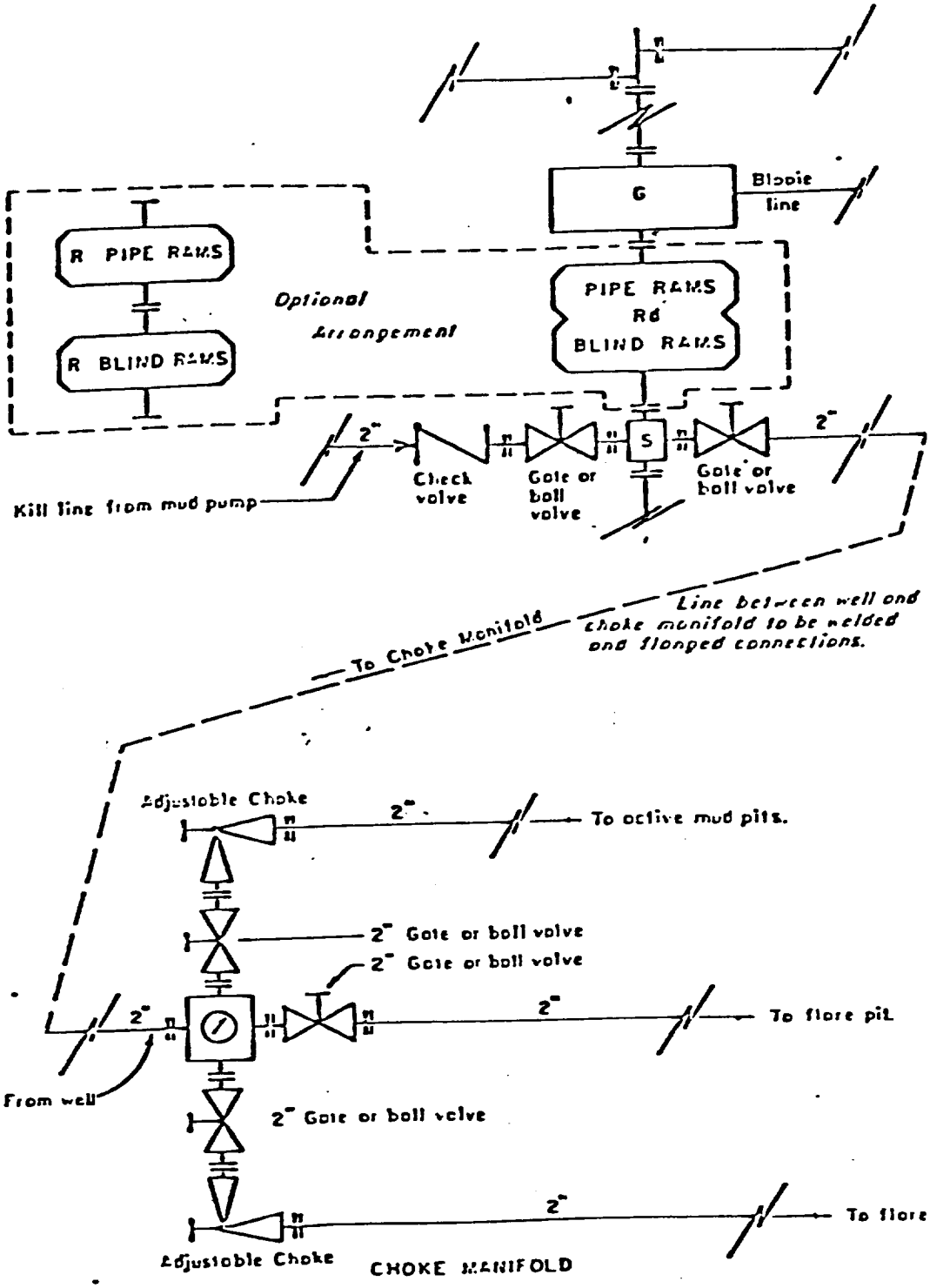
8. Coring, Logging, and Testing Program:

(See Attached Drilling Procedure)

9. No abnormal pressures, temperatures or potential hazards such as H_2S are expected to be encountered.

10. The drilling of this well will start approximately (February '89) 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 AN
CHOKE MANIFOLD

J. MAGILL 10-25-78 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 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 - Location is in area consisting of broken ridges and heavily eroded draws. Soil is sandy clay. Vegetation includes pinon and juniper and sage. Drainage of the location is to the east.

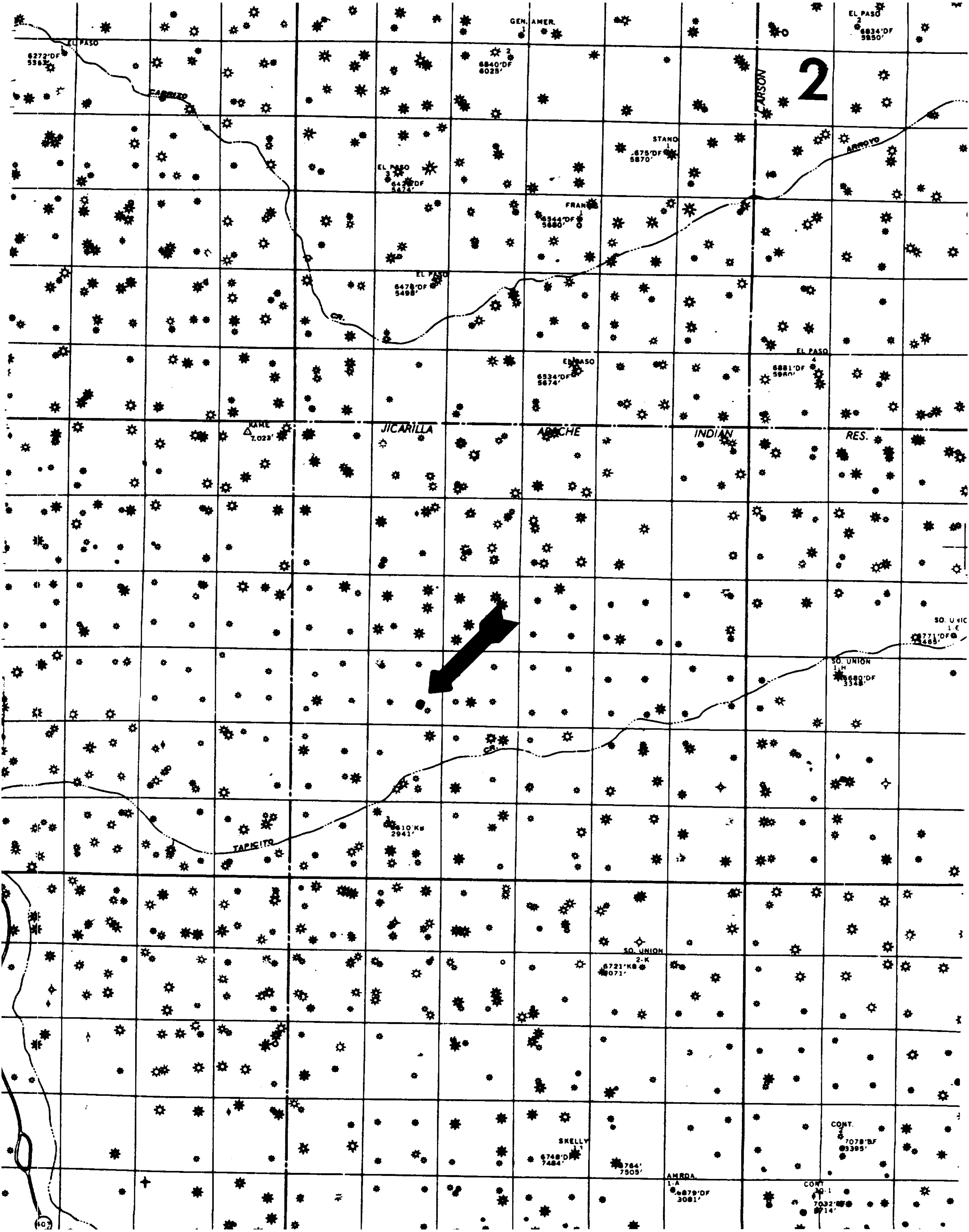
12. Operator's Representative - See drilling prognosis.

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

R. A. Mishler
Sr. Production Analyst

Vicinity Map for
TENNECO OIL CO. #5E JICARILLA "A"
1560'FSL 1610'FEL Sec. 20-T26N-R5W
RIO ARRIBA COUNTY, NEW MEXICO



2
EL PASO
6272'DF
CARRIZO
GEN. AMER.
6840'DF
6025'
EL PASO
6834'DF
5950'
STANO
5870'
ARROYO
EL PASO
6544'DF
5680'
EL PASO
6478'DF
5498'
CR.
6534'DF
5674'
EL PASO
JICARILLA
APACHE
INDIAN
RES.
SO. UNION
1-H
3348'
CR.
TAPICITO
2941'
SO. UNION
2-K
SKELLY
7484'
7505'
3081'
CONT.
7078'BF

TENNECO OIL COMPANY

CALCULATION SHEET

Plat # 1

DRILLING WELL SITE LAYOUT Jicarilla A "SE

DATE 12/10/80