

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

## APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>			5. LEASE DESIGNATION AND SERIAL NO. 30-045-24423 SF 079319	
b. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input 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 Schwerdtfeger	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*) At surface 340' FNL, 1120' FWL At proposed prod. zone			9. WELL NO. 1	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 13.3 miles Southeast of Blanco, NM			10. FIELD AND POOL, OR WILDCAT Basin Dakota	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drilg. unit line, if any)			11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 21, T27N, R8W	
16. NO. OF ACRES IN LEASE 2516.33			12. COUNTY OR PARISH San Juan	
17. NO. OF ACRES ASSIGNED TO THIS WELL 320			13. STATE NM	
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.			20. ROTARY OR CABLE TOOLS Rotary	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 6066' GR			22. APPROX. DATE WORK WILL START* ASAP	

## 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	± 3500'	Circulate to surface
6 1/4"	4 1/2" new	10.5#, 11.6#	± 6930'	Circulate through liner hanger

SEE ATTACHED

No abnormal temperatures, pressures or geologic hazards are expected.

THE GAS IS DEDICATED

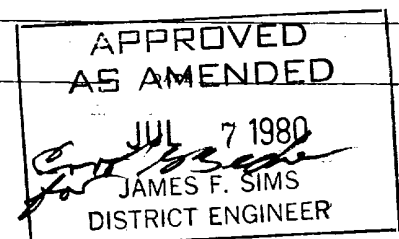
IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED M. L. Freeman TITLE Staff Production Analyst DATE 3/18/80  
M. L. FREEMAN  
(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_  
APPROVED BY Charles Holson TITLE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:

MOC

\*See Instructions On Reverse Side



## OIL CONSERVATION DIVISION

P. O. BOX 2048

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT

SANTA FE, NEW MEXICO 87501

Form C-107  
Revised 10-1-7

All distances must be from the outer boundaries of the Section

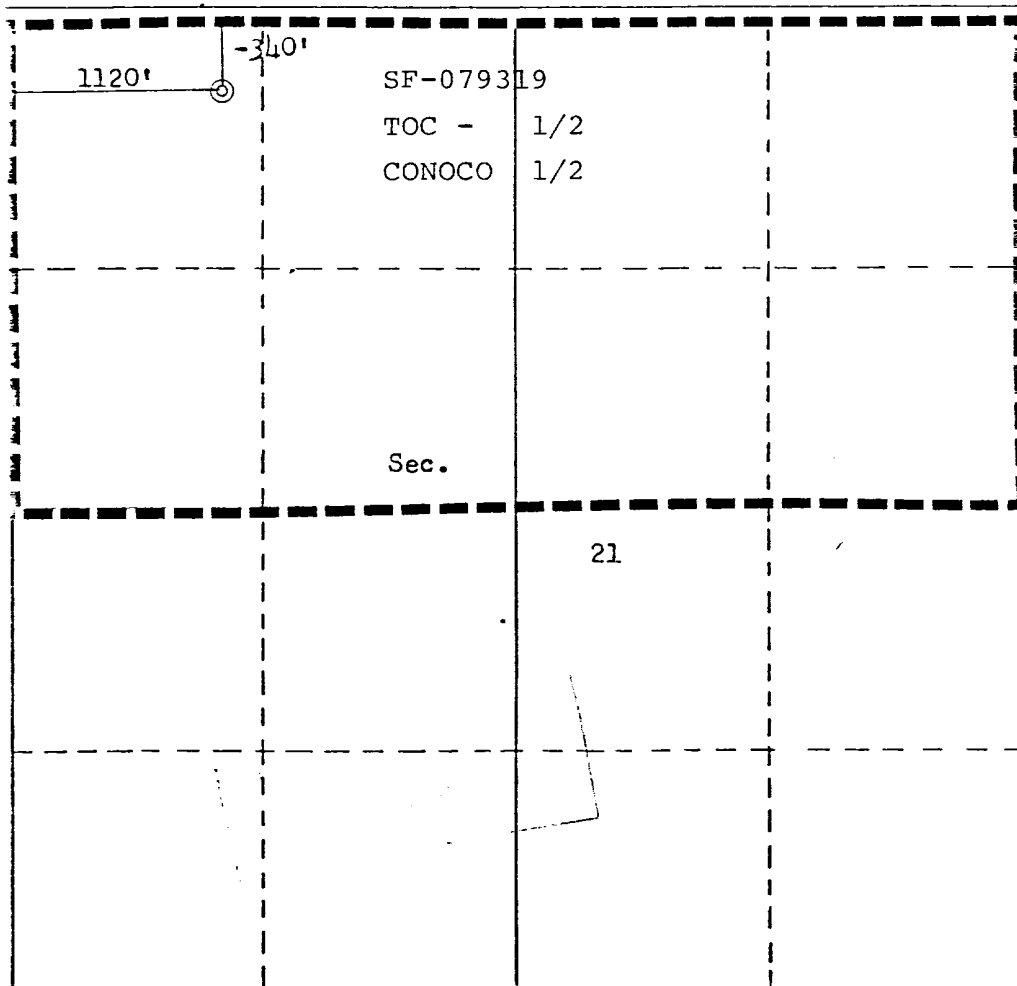
Operator <b>TENNECO OIL COMPANY</b>			Lease <b>SCHWERTFEGER</b>		Well No. <b>1</b>
Unit Letter <b>D</b>	Section <b>21</b>	Township <b>27N</b>	Range <b>8W</b>	County <b>San Juan</b>	
Actual Footage Location of Well: <b>340</b> feet from the <b>North</b> line and <b>1120</b> feet from the <b>West</b> line					
Ground Level Elev. <b>6066</b>	Producing Formation <b>Dakota</b>		Pool <b>Basin Dakota</b>		Dedicated Acreage: <b>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 \_\_\_\_\_

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**  
Position **Staff Production Analyst**  
Company **Tenneco Oil Company**  
Date **March 17, 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 **February 1, 1980**  
Registered Professional Engineer and/or Land Surveyor  
*Fred B. Kerr, Jr.*  
Certificate No. **3950**  
**KERR, JR.**

**Tenneco Oil**  
A Tenneco Company

Penthouse  
720 South Colorado Blvd.  
Denver, Colorado 80222  
(303) 758-7130



March 17, 1980

Mr. Jim Sims  
U. S. Geological Survey  
P. O. Box 959  
Farmington, NM 87401

RE: Schwerdtfeger #1  
340' FNL, 1120' FWL  
Sec. 21, T27N, R8W  
San Juan County, NM

Dear Mr. Sims:

We respectfully request approval of the referenced unorthodox drill site. This site was selected to minimize the environmental and cultural impact.

There was an archaeological site at our original location and a very steep mesa to the south.

Enclosed is the Field Inspection Form which verifies our selection.

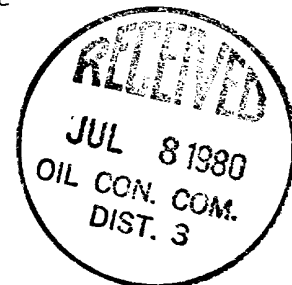
Yours very truly,

TENNECO OIL COMPANY

A handwritten signature in cursive script, appearing to read "M. L. Freeman".

M. L. Freeman  
Staff Production Analyst

MLF/gh  
Enclosures



Tenneco Oil  
A Tenneco Company

Penthouse  
720 South Colorado Blvd  
Denver, Colorado 80222  
(303) 758-7130



Well Name Schwendtger A-1  
Location Sec 21 T27N R8W  
Formation DAKOTA 6,930'

We, the undersigned, have inspected this location and road.

U.S. Forest Service

Date

Dabney Ford  
Archaeologist

2/6/80  
Date

Bureau of Indian Affairs Representative

Date

Bob Mark

2/6/80  
Date

Bureau of Land Management Representative

Date

Steve Sheehan

2/6/80  
Date

U. S. Geological Survey Representative

Agrees to the Footage Location of this Well.

Reason: Original site relocated to avoid  
and archeological survey location

Seed Mixture: \_\_\_\_\_

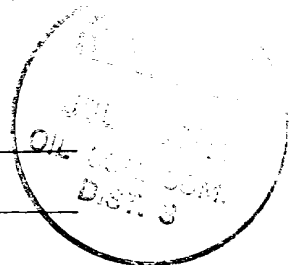
Equipment Color: Brown

Road and Row: (Same) or (Separate)?

Remarks: Relocated to avoid archaeological site

THE NEXT closest place to POT A location

Bob Mark  
B.L.M.



TENNECO OIL COMPANY

PROGNOSIS TO DRILL AND COMPLETE

DIVISION: Rocky Mountain

DATE: July 6, 1979

LEASE: Schwerdtfeger

WELL NO.: 1

LOCATION: 340' FNL, 1120' FWL  
Section 21, Township 27N, Range 8W  
San Juan County, New Mexico

FIELD: Basin Dakota

ESTIMATED ELEVATION: 6066'

ESTIMATED TOTAL DEPTH: 6,930'

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 3500'+. 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.

### DRILLING MUD PROGRAM:

0-300'	Spud mud
300-3500'	Low solids fresh water mud. No WL control.
3500+-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 250' is  $\frac{1}{2}^{\circ}$ .
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  $1^{\circ}$  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. asper 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.

ESTIMATED FORMATION TOPS

Ojo	1400'
Pictured Cliffs	2248'
Cliffhouse	3838'
Menefee	
Point Lookout	
Mancos	
Gallup	
Greenhorn	
Dakota "A"	6636'
T.D.	

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 - 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:

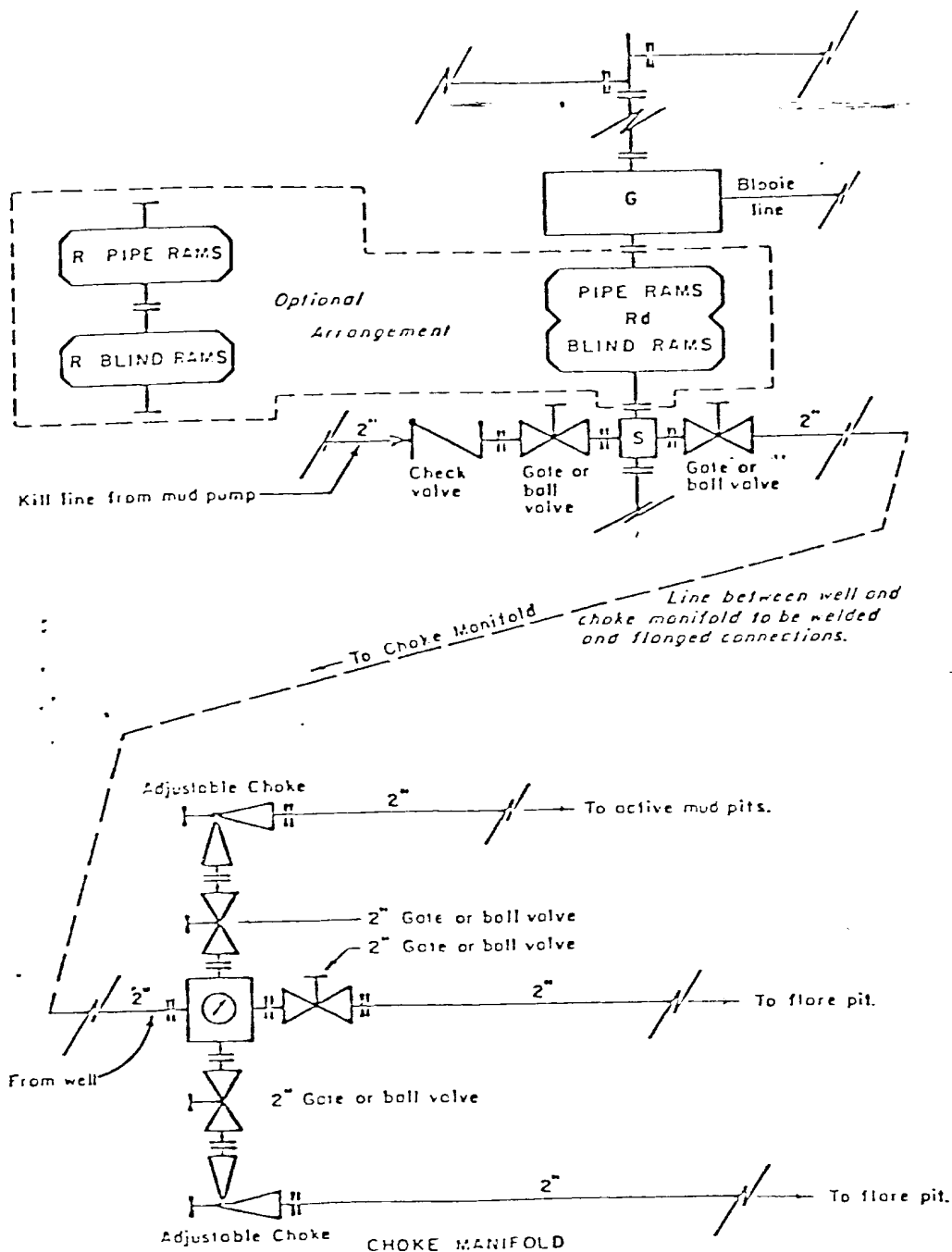
TENNECO OIL COMPANY  
PENTHOUSE  
720 SOUTH COLORADO BOULEVARD  
DENVER, COLORADO 80222

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

J. MAGILL 10-26-70 EVI

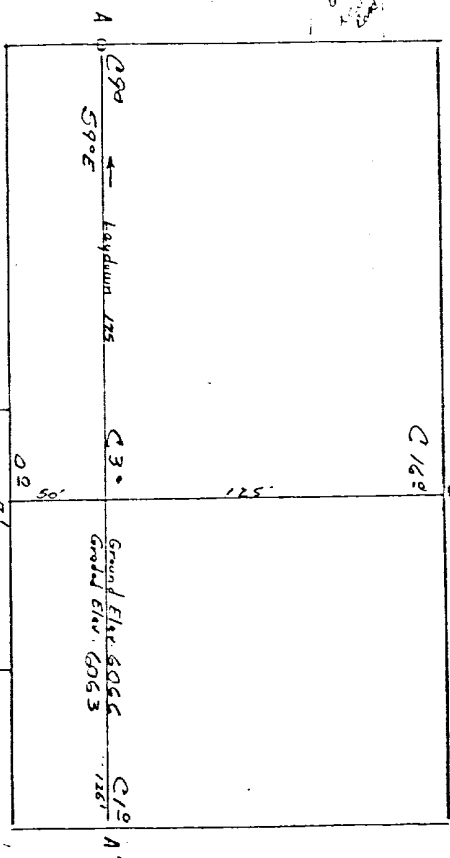
1. Existing Road - Please refer to Map No. 1 which shows the existing roads. New roads which will be required have been marked on this map. All existing and new roads will be properly maintained during the duration of this project.
  2. Planned Access Roads - Please refer to Map No. 1. The grade of the 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 in a box canyon 1 mile SW of canyon largo. The soil is sandy supporting pinon, juniper, greasewood, sage and native grasses. The surface and minerals are held in public domain.
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

LENECO OIL COMPANY #1-A Seaward Leased  
 310' FNL 1120' FNL Sec. 21-T27N-R8W San Juan County, New Mexico



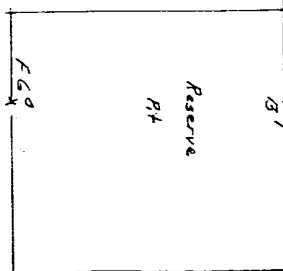
Scale: 1" = 50'

Vert. 1"=40'      A-A'      Horiz. 1"=100'

6080		
6070		
6060		
6050		

B-B'      E

6080		
6070		
6060		
6050		



Vert. 1"=40'      C-C'      Horiz. 1"=100'


D-D'      E


KERR LAND SURVEYING  
 Date: 1/24/80

*Franklin*



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial  
photographs taken 1955. Field checked 1959.

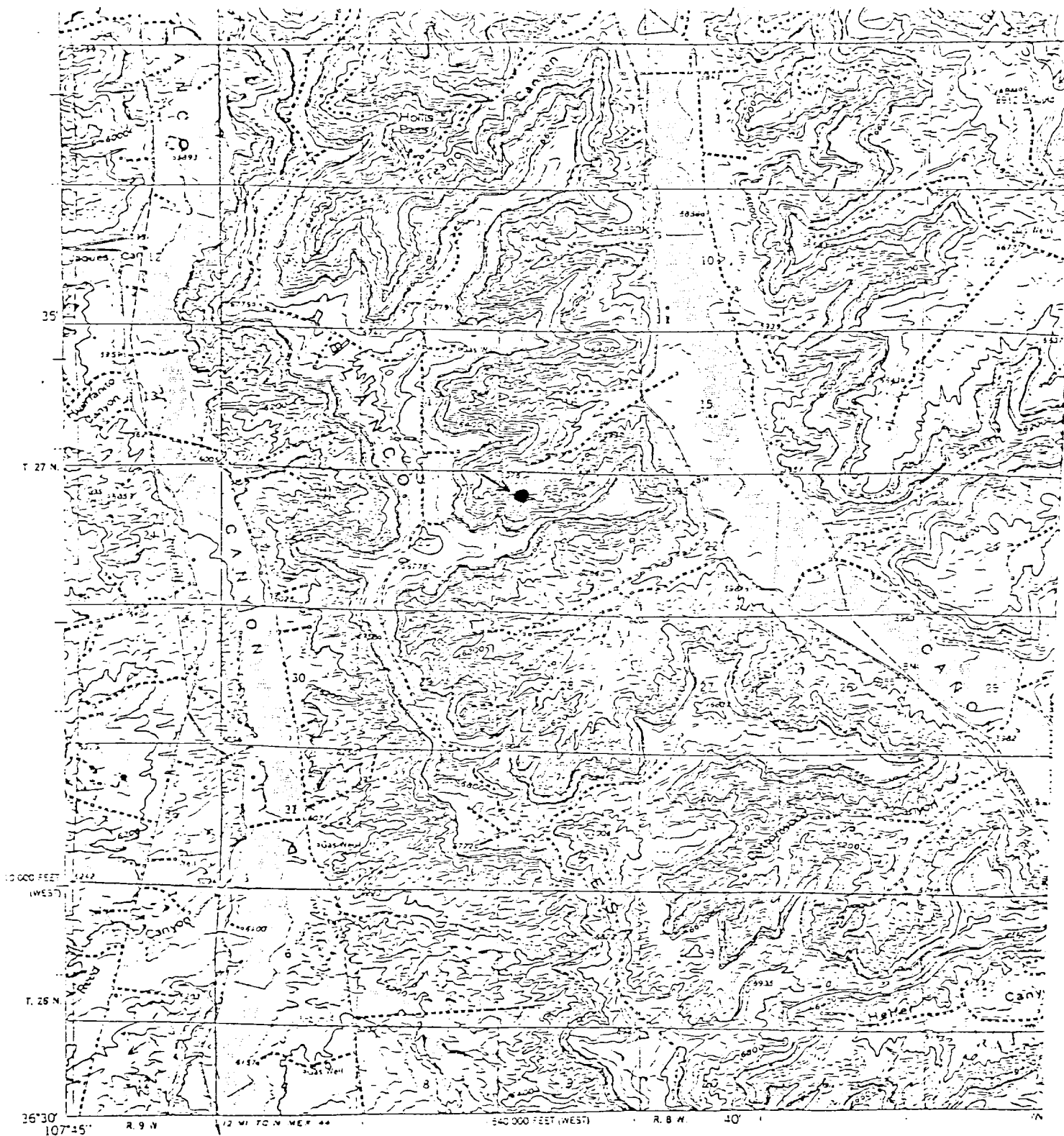
Polyconic projection. 1927 North American datum.  
10,000 foot grid based on New Mexico coordinate system,  
west and central zones.  
1000 meter Universal Transverse Mercator grid ticks,  
zone 13 shown in blue.

APPROXIMATE MEAN  
DECLINATION, 1959



THIS MAP COMPLETES SET  
FOR SALE BY U.S. GEOLOGICAL SURVEY  
A FOLDER DESCRIBING TOPOGRAPHY

Vicinity Map for  
TENNECO OIL COMPANY #1 SCHWERTFEGGER  
960'FNL 840'FWL Sec 21-T27N-R3W  
SAN JUAN COUNTY, NEW MEXICO

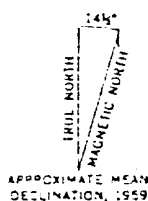


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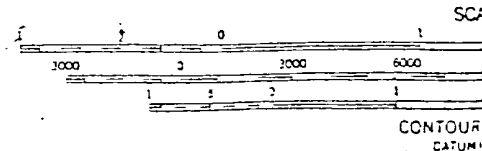
Control by USGS and USC&GS

Topography by photogrammetric methods from aerial  
photographs taken 1955. Field checked 1959

Polyconic projection 1927 North American datum  
10,000 foot grid based on New Mexico coordinate system,  
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Vicinity Map for  
TENNECO OIL COMPANY #1 SCHWERDTFEGER  
960'FWL 840'FWL Sec 21-T27N-R8W

