

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

30-045-24278

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

At proposed prod. zone

1700 FNL, 1765 FWL
Unit letter F

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

6.2 miles North West of Navajo Dam PQ

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

771.81

17. NO. OF ACRES ASSIGNED
TO THIS WELL

317.69

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

19. PROPOSED DEPTH

7720'

20. ROTARY OR CABLE TOOLS

Rotary

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

6307 62

22. APPROX. DATE WORK WILL START*

ASAP

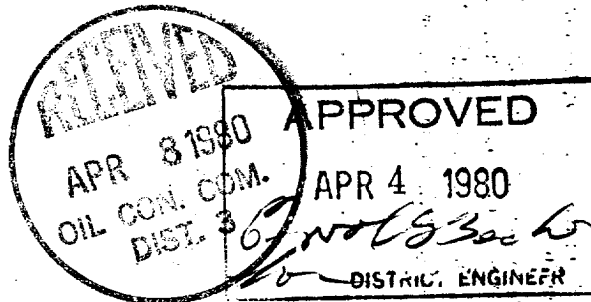
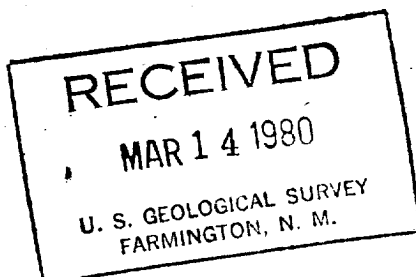
23. PROPOSED CASING AND CEMENTING PROGRAM

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	± 3600'	Circulate to surface
6 1/2"	4 1/2" new	10.5#, 11.6#	± 7720'	Circulate through liner hanger

SEE ATTACHED

No abnormal temperature, pressure 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 Analysis

DATE

3-7-80

(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

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENTP. O. BOX 2088
SANTA FE, NEW MEXICO 87501Form C-107
Revised 10-1-78

All distances must be from the outer boundaries of the Section

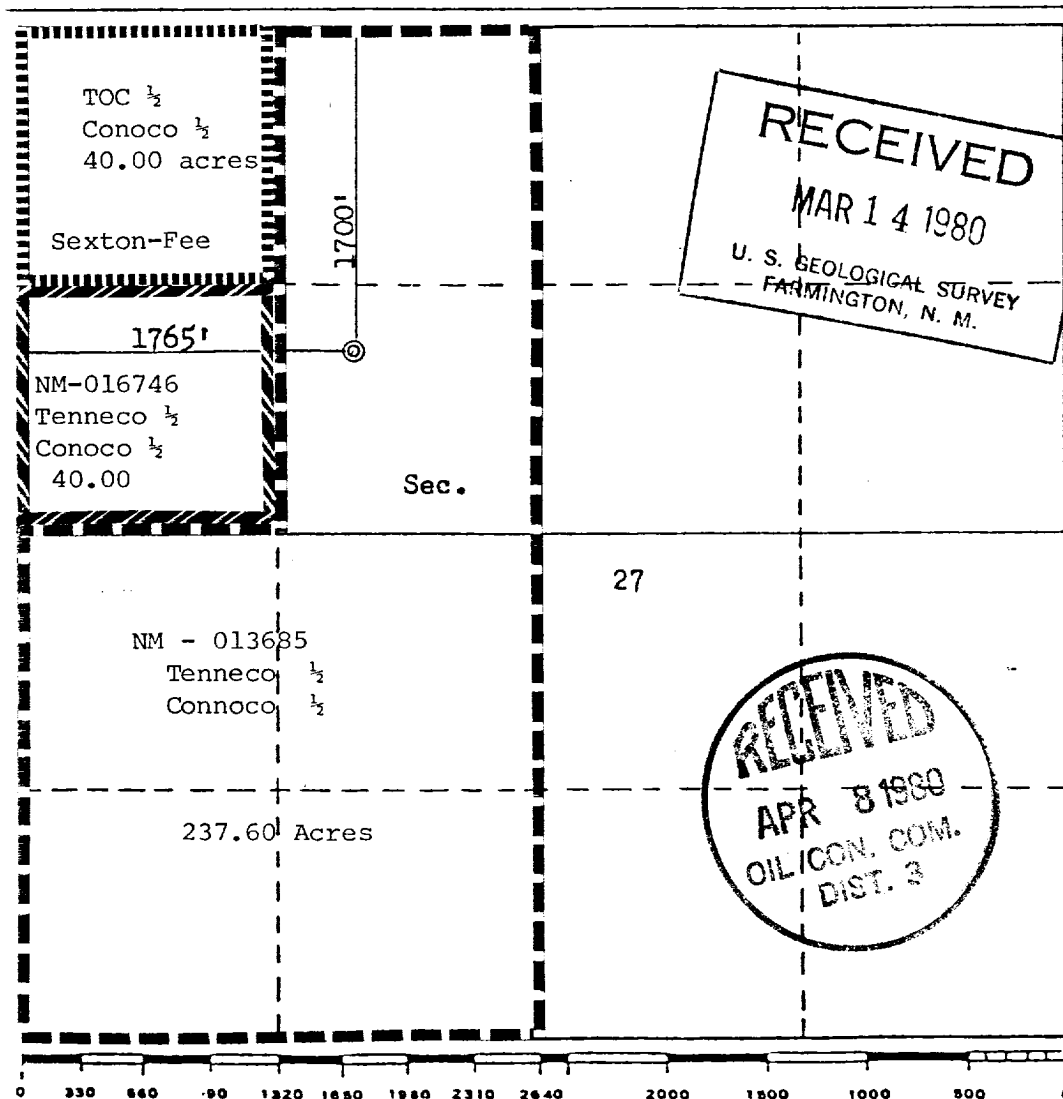
Operator TENNECO OIL COMPANY			Lease SCHWERDTFEGER COM		Well No. 1-E
Unit Letter F	Section 27	Township 31N	Range 9W	County San Juan	
Actual Footage Location of Well:					
1700 feet from the North line and		1765 feet from the West line			
Ground Level Elev. 6307	Producing Formation Dakota		Pool Basin Dakota	Dedicated Acreage: W 317.69 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

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. Lee Freeman

Position

Staff Production Analyst

Company

Tenneco Oil Company

Date

March 7, 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

January 18, 1980

Registered Professional Engineer
and/or Land Surveyor

Fred B. Kerr Jr.

Certificate No.

3950

TENNECO OIL COMPANY

PROGNOSIS TO DRILL AND COMPLETE

DIVISION: Rocky Mountain

DATE: September 12, 1979

LEASE: Schwerdtferger Com

WELL NO.: 1-E

LOCATION: 1700' FNL, 1765' FWL
Sec. 27, T 31N, R 9W
San Juan County, New Mexico

FIELD: Basin Dakota

ESTIMATED ELEVATION: 6250'

ESTIMATED TOTAL DEPTH: 7720'

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% CaCl₂ 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 3600'. Run 7", 23#, K-55, ST&C casing to T.D. and cement to surface. (Set 7" 200-300' into Lewis shale.)
- (5) Land casing is 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
- (6) Drill out of 7" with 6 1/4" bit. Drill to within 5' of shoe and displace water with Nitrogen. Drill 5' of formation and blow with gas until well dusts. Drill to TD.
- (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	1780'	Point Look Out	5370'
Pictured Cliffs	3040'	Mancos	5640'
Lewis	3140'	Gallup	6600'
Cliffhouse	4830'	Greenhorn	7310'
Menefee	4950'	Dakota "A"	7420'
		T.D.	7720'

DRILLING MUD PROGRAM:

0 - 300' Spud Mud.

300' - 3600' Low solids fresh water mud. Use Benex to flocculate mud as needed.
No WL control.

3600' - T.D. Gas.

CORING AND TESTING PROGRAM:

No cores or tests.

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° per 100'.

SAMPLES:

As directed by wellsite geological engineer.

WELL SURVEYS:

Majority of logs will be cased hole GR - Neutron or TDE.

A few will be open hole GR - Induction.

BOP:

PREVENTORS MUST BE CHECKED FOR OPERATION EVERY 24 HOURS, AND THE CHECK MUST BE RECORDED ON THE AAODC 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 - 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 not available

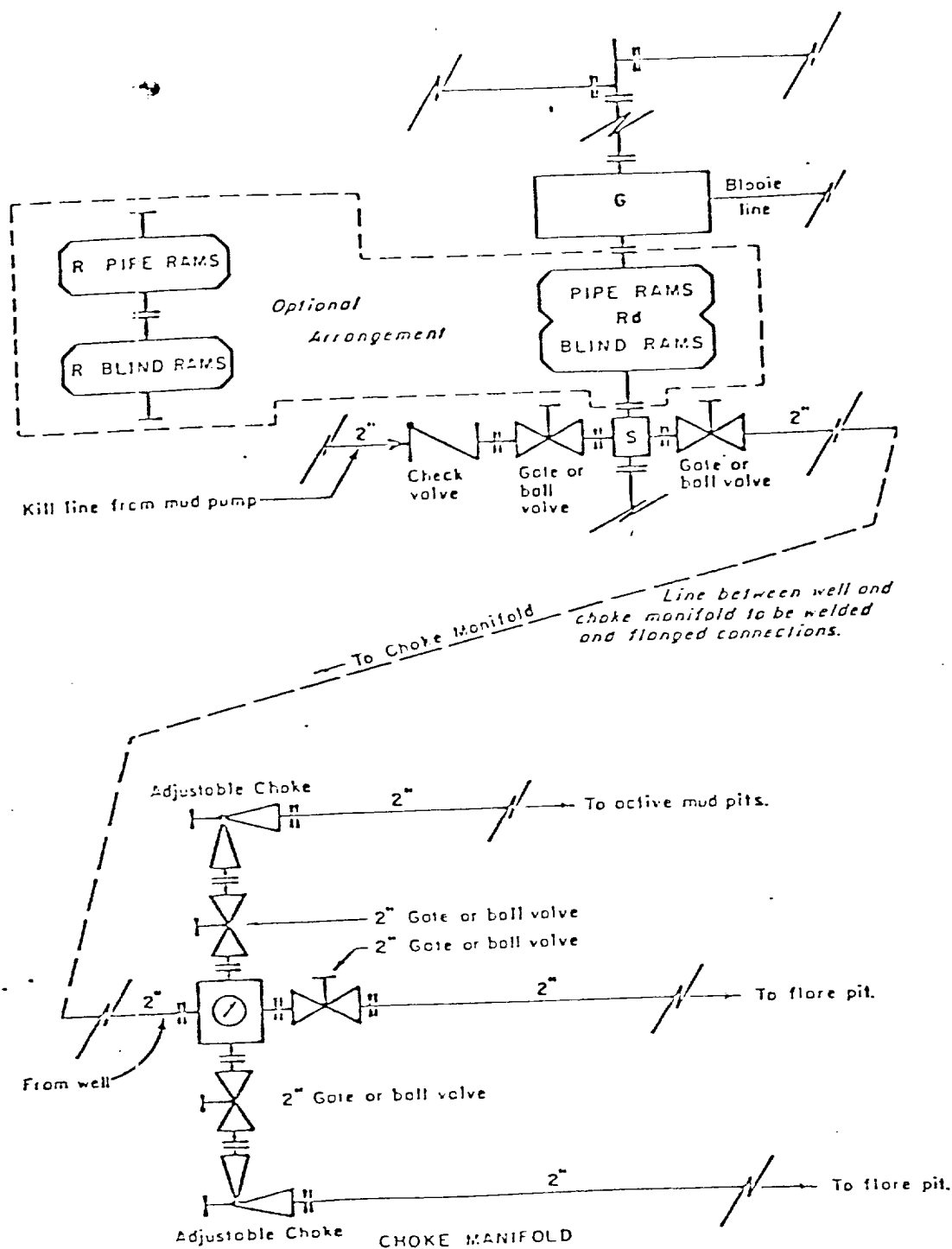
The yellow sheet of the IADC Report to be filled out completely, the original copy of the drilling time recorder, and copies of any invoices from this well signed and received for Tenneco Oil Company will be mailed daily to:

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 - 303-795-0221
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 AND
 CHOKES 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 reseeded operations to be carried out. Seed mixture as designated by the responsible government agency will be used. The reseeded 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 above Little Pump Canyon on a North East South West ridge. The soil is sandy, fractured sand stone supporting pinon, juniper various shrubs and grasses. The road alignment was moved North to avoid an Archaeological site.
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 made 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.

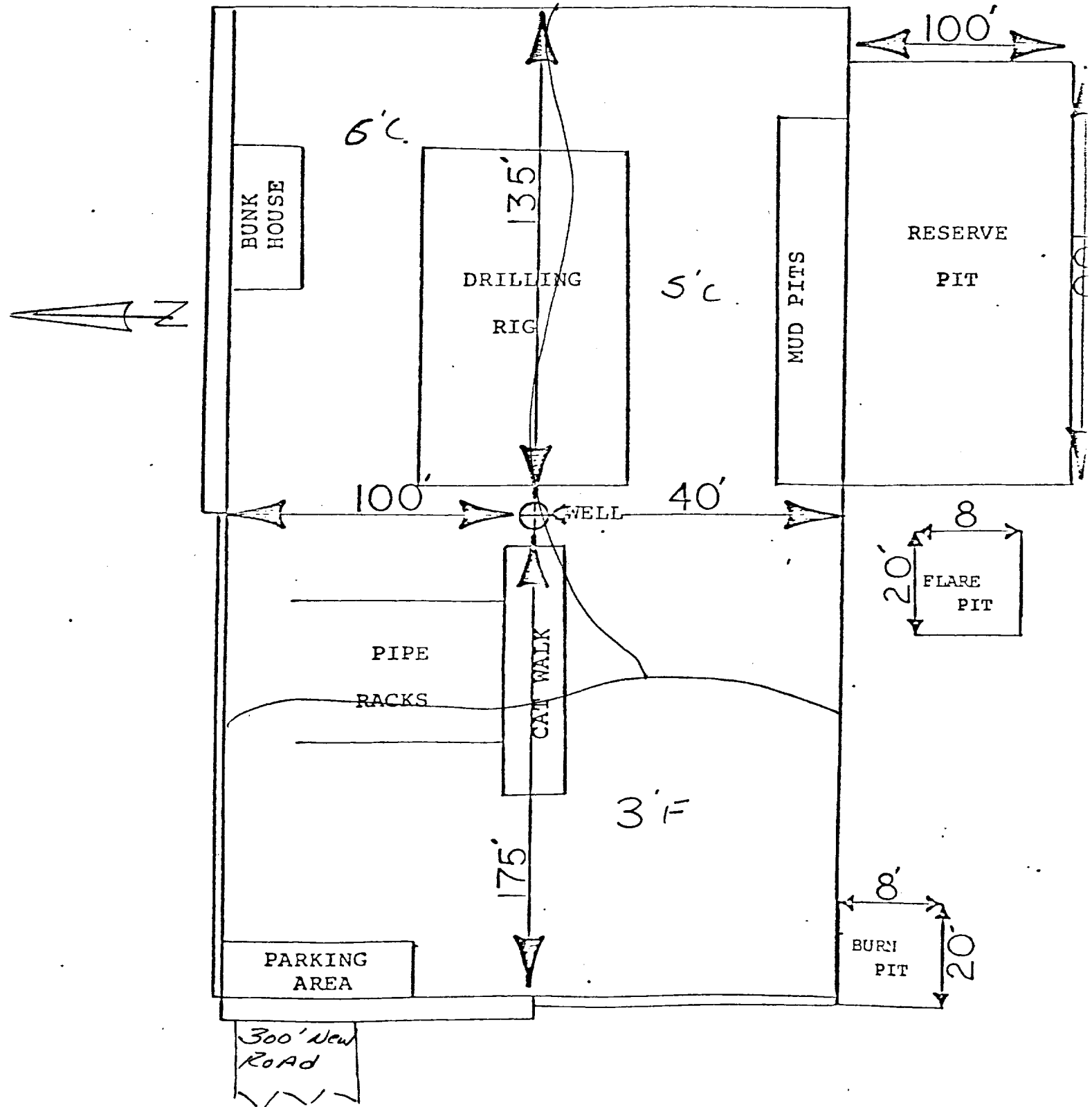

L. Freeman
Staff Production Analyst

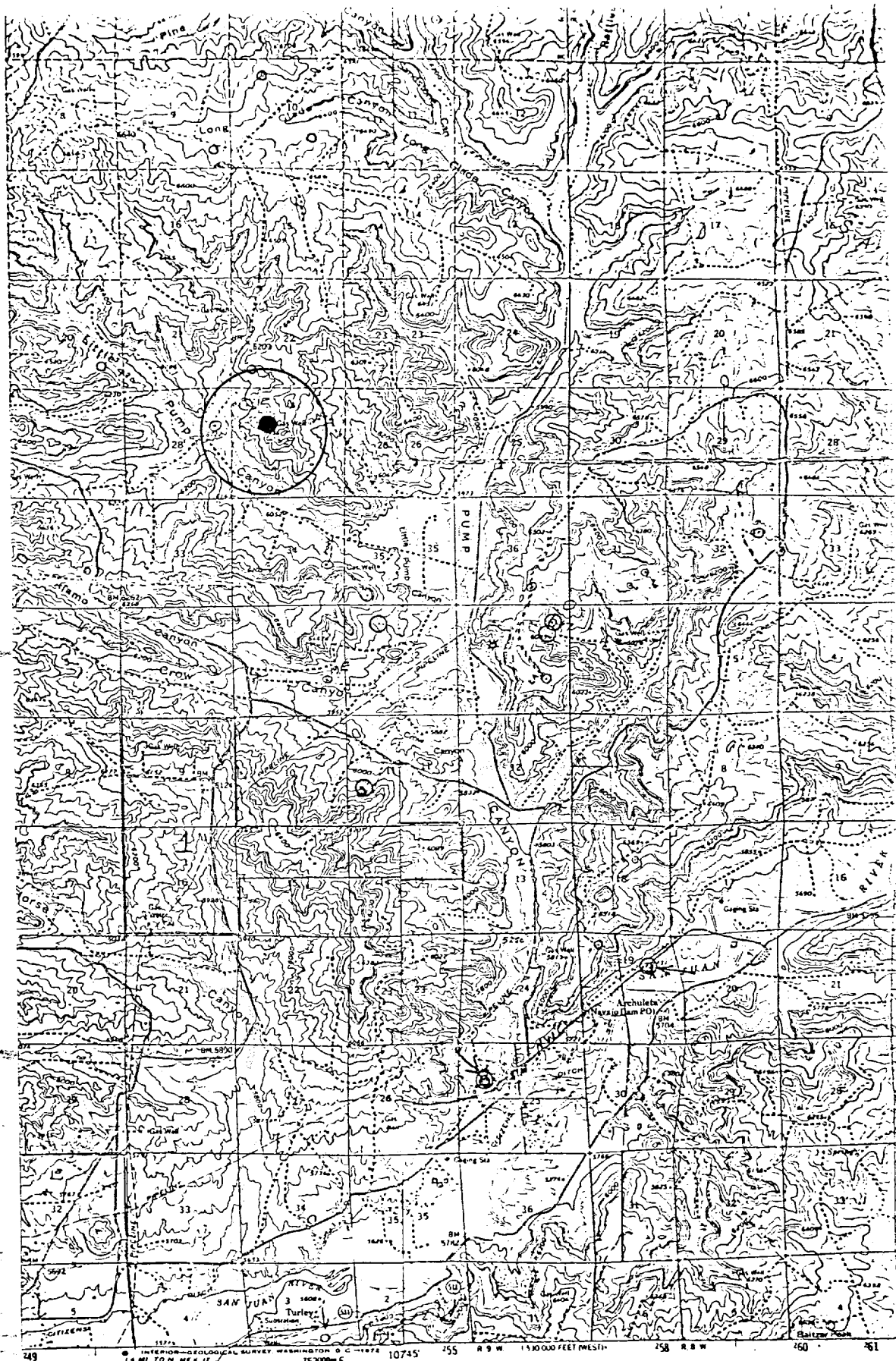
TENNECO OIL COMPANY

CALCULATION SHEET

EXHIBIT

RILLING WELL SITE LAYOUT *Schwerdtfeger Com 1E*
 1700 FNL 1765 FNL SEC 27, T31N, 9W DATE *3/6/80*
300' New Road



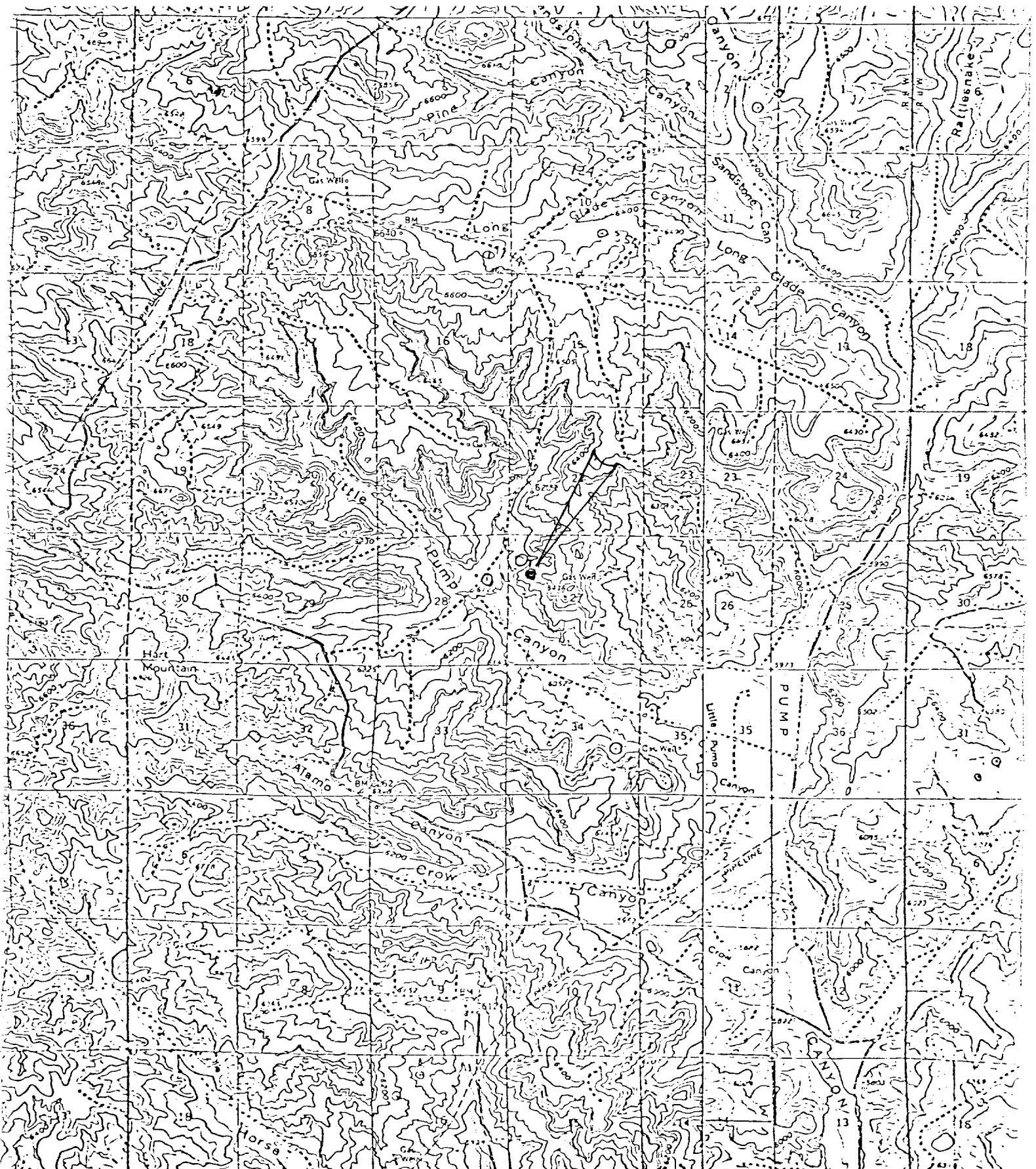


Medium

Vicinity Map for
 TENNECO OIL COMPANY #1-E SCHWERTFEGER COM
 1700' FNL 1765' FWL Sec 27-T31N-R9W
 SAN JUAN COUNTY, NEW MEXICO

1:25,000 meter Universal Transverse Mercator grid ticks.
 Zone 11 (100m x 100m)

UTM GRID AND 1958 MAGNETIC NORTH
 DECLINATION AT CENTER OF SHEET



Vicinity Map for
TENNECO OIL COMPANY #1-E SCHWERTFEGER CCM
1580'FNL 870'FNL Sec 27-T31N-R9W
SAN JUAN COUNTY, NEW MEXICO

