Form 9-331 C
(May 1963)

N.M.O.C.D. COPY

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

30-015-22984 LC-047459

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

RECEIVED
AUG 16 '79
O. C. D.
ARTESIA, OFFICE

5. LEASE DESIGNATION AND SERIAL NO.: NM 057-495USA Las Cruces LC-057495
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
7. UNIT AGREEMENT NAME: N/A
8. FARM OR LEASE NAME: Federal 33-G
9. WELL NO.: # 1
10. FIELD AND POOL, OR WILDCAT: South Empire-Wolf Camp
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 33 T17S-R29E
12. COUNTY OR PARISH: Eddy
13. STATE: New Mexico

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

b. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] OTHER ✓ SINGLE ZONE [ ] MULTIPLE ZONE [X]

2. NAME OF OPERATOR: Tenneco Oil Company

3. ADDRESS OF OPERATOR: 6800 Park Ten Blvd, Suite 200 North San Antonio, Texas 79213

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 1980' FNL & 1820' FEL (SW NE)
At proposed prod. zone: same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 19.0 miles east and south of Artesia, New Mexico

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 1820'

16. NO. OF ACRES IN LEASE: 160

17. NO. OF ACRES ASSIGNED TO THIS WELL: 80

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: 1957.4'

19. PROPOSED DEPTH: 9300'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 3553' GR

22. APPROX. DATE WORK WILL START*: August 1, 1979

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-½"	13-3/8" New	48# H-40 ST&C	300'	Sufficient to circulate
11"	8-5/8" New	32# K-55 ST&C	3400'	Will circulate
7-7/8"	5½" New	15.5# K-55 ST&C	5400'	
	5½" New	17# K-55 ST&C	5400'-9200'	Cement from 7650' to 9200'

1. Set 40' of 20" conductor pipe. Cement with Redi-Mix.
2. Drill 17½" hole to 300'±. Cement 13-3/8" casing with cement circulated to surface. Nipple up 10", 3000# W.P. B.O.P.'s.
3. Drill 11" hole to 3400'±. Cement 8-5/8" casing with cement circulated to surface. This will cement off the Grayburg and San Andres between 2560' to 3000'.
4. Nipple up 10", 3000# W.P. B.O.P.'s. Test ram type B.O.P.'s to 3000 psi; Test Annular B.O.P. and 8-5/8" casing to 1500 psi. Function test B.O.P.'s daily and on all trips.
5. Drill to 9200' T.D. Log and Test as warranted. Run 5½" casing if productive.
6. Perforate and Stimulate as necessary.

RECEIVED
JUN 8 1979
U.S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

**********SEE ATTACHED EXHIBITS**********

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 Theodore K Arnot TITLE Division Drilling Engineer DATE 5/25/79

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE 8-13-79

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

Need NSL approval.

*See Instructions On Reverse Side

NEW MEXICO OIL CONSERVATION COMMISSION

WELL CATION AND ACREAGE DEDICATION AT

EXHIBIT "A"
Location & Elevation Plat

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

Operator	Lease	Well No.
Tenneco Oil Co.	~~LC-057459~~ Fed 33-6 NM ~~057-459-USA Las Cruces~~	1

Unit Letter	Section	Township	Range	County
G	33	17-S	29-E	Eddy

Actual Footage Location of Well:
1980 feet from the North line and 1820 feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3553'	~~Cisco~~ Wolf Camp	Undes. S. Empire Wolf Camp	80 Acres

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

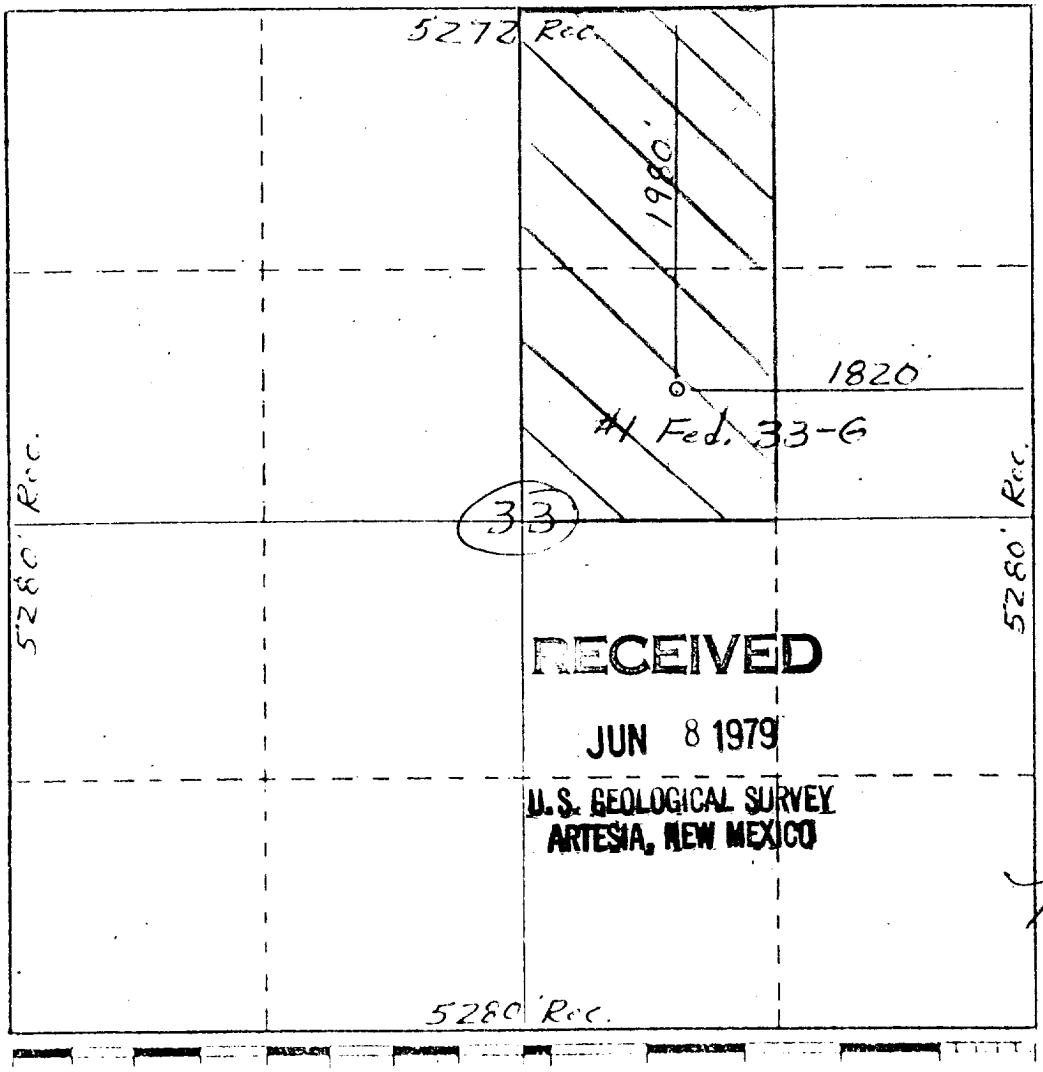
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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.

George Lapaseotes

Name George Lapaseotes

Position Vice President

Company Powers Elevation

Date 6/6/79

NEALE C. EDWARDS
NEW MEXICO
6857
REGISTERED LAND SURVEYOR

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.

5-17-79

Date Surveyed

Neale C. Edwards

Registered Professional Engineer and/or Land Surveyor

6857

Certificate No.

N.M.O.C.D. COPY

United States Department of the Interior

GEOLOGICAL SURVEY
P. O. Drawer U
Artesia, New Mexico 88210

RECEIVED
AUG 16 1979
O. C. C.
ARTESIA, OFFICE

August 13, 1979

Tenneco Oil Company
6800 Park Ten Blvd.
Suite 200 North
San Antonio, Texas 79213

TENNECO OIL COMPANY
Federal 33-C No. 1
1980 FNL 1820 FEL Sec. 33, T17S, R29E
Eddy County Lease No. LC 057459
Above Data Required on Well Sign

Gentlemen:

Your APPLICATION FOR PERMIT TO DRILL the above-described well to a depth of 9,300 feet to test the Wolfcamp formation is hereby approved subject to compliance with the OIL AND GAS OPERATING REGULATIONS (30 CFR 221) and the following conditions:

1. Drilling operations authorized are subject to compliance with the attached General Requirements for Oil and Gas Operations on Federal Leases, dated July 1, 1978.

2. Prior to commencing construction of road, pad, or other associated developments, operator will provide the dirt contractor with a copy of the Surface Use Plan and these Conditions of Approval including the attached General Requirements.

3. Submit a Daily Report of Operations from spud date until the well is completed and the Well Completion Report (form 9-330) is filed. The report should be not less than 8" x 5" in size and each page should identify the well.

4. All permanent above-ground structures and equipment shall be painted in accordance with the attached Painting Guidelines. The color used should simulate sandstone brown (Federal Standard Color No. 595A, color 20318 or 30318).

5. Before drilling below the 8-5/8" casing, the blowout preventer assembly will consist of a minimum of one annular type and two ram type preventers.

6. A kelly cock will be installed and maintained in operable condition.

7. After setting the 8-5/8" casing string and before drilling into the Wolfcamp formation, the blowout preventers and related control equipment shall be pressure tested to rated working pressures by an independent service company. Any equipment failing to test satisfactorily shall be repaired or replaced. This office should be notified in sufficient time for a representative to witness the tests and shall be furnished a copy of the pressure test report.

8. Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be installed and operating before drilling into the Wolfcamp formation and used until production casing is run and cemented. Monitoring equipment shall consist of the following:

   (1) A recording pit level indicator to determine pit volume gains and losses.

   (2) A mud volume measuring device for accurately determining mud volume necessary to fill the hole on trips.

   (3) A flow sensor on the flow-line to warn of any abnormal mud returns from the well.

9. Please have anyone contacting the Survey in regard to this well to identify the well with all of the information required above for the well sign.

Sincerely yours,

(Orig. Sgd.) ALBERT R. STALL

Albert R. Stall
Acting District Engineer

EXHIBITS ATTACHED:

"A"	Location and Elevation Plat
"B"	The Ten-Point Compliance Program
"C"	The Blowout Preventer Diagram
"D"	The Multi-Point Requirements for A.P.D.
"E"	Access Road Map to Location
"F"	Radius Map of Field
"G"	Drill Pad Layout & Production Facilities
"H"	Drill Rig Layout

EXHIBIT "B"

TEN-POINT COMPLIANCE PROGRAM

OF NTL-6 APPROVAL OF OPERATIONS

Attached to Form 9-331C
Tenneco Oil Company
#1 Federal 33-G
1980' FNL & 1820' FEL
Sec. 33 T17S R29E
Eddy County, New Mexico

1. The Geologic Surface Formation

The surface formation is Quaternary Alluvium.

2. Estimated Tops of Important Geologic Markers

B Salt	700'
Yates	900'
Queen	1,875'
Grayburg	2,320'
San Andres	2,700'
Abo	6,675'
Wolf C	8,182'
Cisco	8.850'
Total Depth	9,300'

3. Estimated Depths of Anticipated Water, Oil, Gas or Minerals

Grayburg - San Andres	2,560'-3,000'	Oil (will cement off)
Wolf Camp	8,650'	Oil
Cisco	9,080'	Oil

EXHIBIT "B"
Page 2

4. The Proposed Casing Program

Casing Design

CASING STRING	HOLE SIZE	INTERVAL	SECTION LENGTH	SIZE (OD)	WEIGHT, GRADE & JOINT	NEW OR USED	MUD * WEIGHT	SF t	SF c	SF b
Conductor	--	0-40'	40'	20"	----------	---	----	--	--	--
Surface	17½"	0-300'	350'	13-3/8"	48# H-40 ST&C	New	8.8	16.8	3.7	High
Intermediate	11"	0-3400'	3400'	8-5/8"	32# K-55 ST&C	New	10.0	3.7	1.4	2.7
Production	7-7/8"	0-5400'	5400'	5½"	15.5# K-55 ST&C	New	9.5	1.5	1.5	1.4
		5400'-9200'	3800'	5½"	17# K-55 ST&C	New	9.5	3.4	1.1	1.5

* At casing setting

Cement Design

In setting 13-3/8" and 8-5/8", cement will be circulated.
5½" pipe will be cemented from 7650' to 9200' (T.D.)

5. The Operator's Minimum Specifications for Pressure Control

EXHIBIT "C" is a schematic diagram of the blowout preventer equipment. The BOP's will be hydraulically tested to 3000 psi. after nippling up and after any use under pressure. Pipe rams will be operationally checked each 24-hour period, as will blind rams and annular preventer each time pipe is pulled out of the hole. Such checks of BOP will be noted on daily drilling reports.

Accessories to BOP will include a kelly cock, floor safety valve, drill string BOP and choke manifold with pressure rating equivalent to the BOP stack.

6. The Type and Characteristics of the Proposed Circulating Muds

Mud system will be gel-chemical with adequate stocks of sorptive agents on site to handle possible spills of fuel and oil on the surface. Heavier muds will be on location to be added if pressure requires.

Interval	Mud Weight (ppg)	Viscosity (sec.)	Fluid Loss	Remarks
0-300'	8.8	34	NC	
350'-3400'	10.0	29	NC	Brine
3400'-9200'	9.5	34	10 cc.	

7. The Auxiliary Equipment to be Used

(a) A kelly cock will be kept in the string at all times.

(b) A float will not be used at the bit.

(c) Flow-show and PVT will be used in monitoring mud system.

(d) A stabbing valve will be on the floor to be stabbed into the drill pipe when kelly is not in the string.

8. The Testing, Logging and Coring Programs to be Followed

(a) DST's are anticipated in the Wolf Camp and Cisco horizons. Other zones will be tested as needed.

(b) The logging program will consist of a Dual Laterolog, a Density/Neutron from 3550' to T.D. and Gamma Ray to surface. Any other logs will be determined at well site to best evaluate any shows.

(c) No coring is anticipated.

(d) Stimulation procedures will consist of acidizing if indicated after evaluation of logs. Appropriate Sundry Notice will be submitted.

9. Any Anticipated Abnormal Pressures or Temperatures

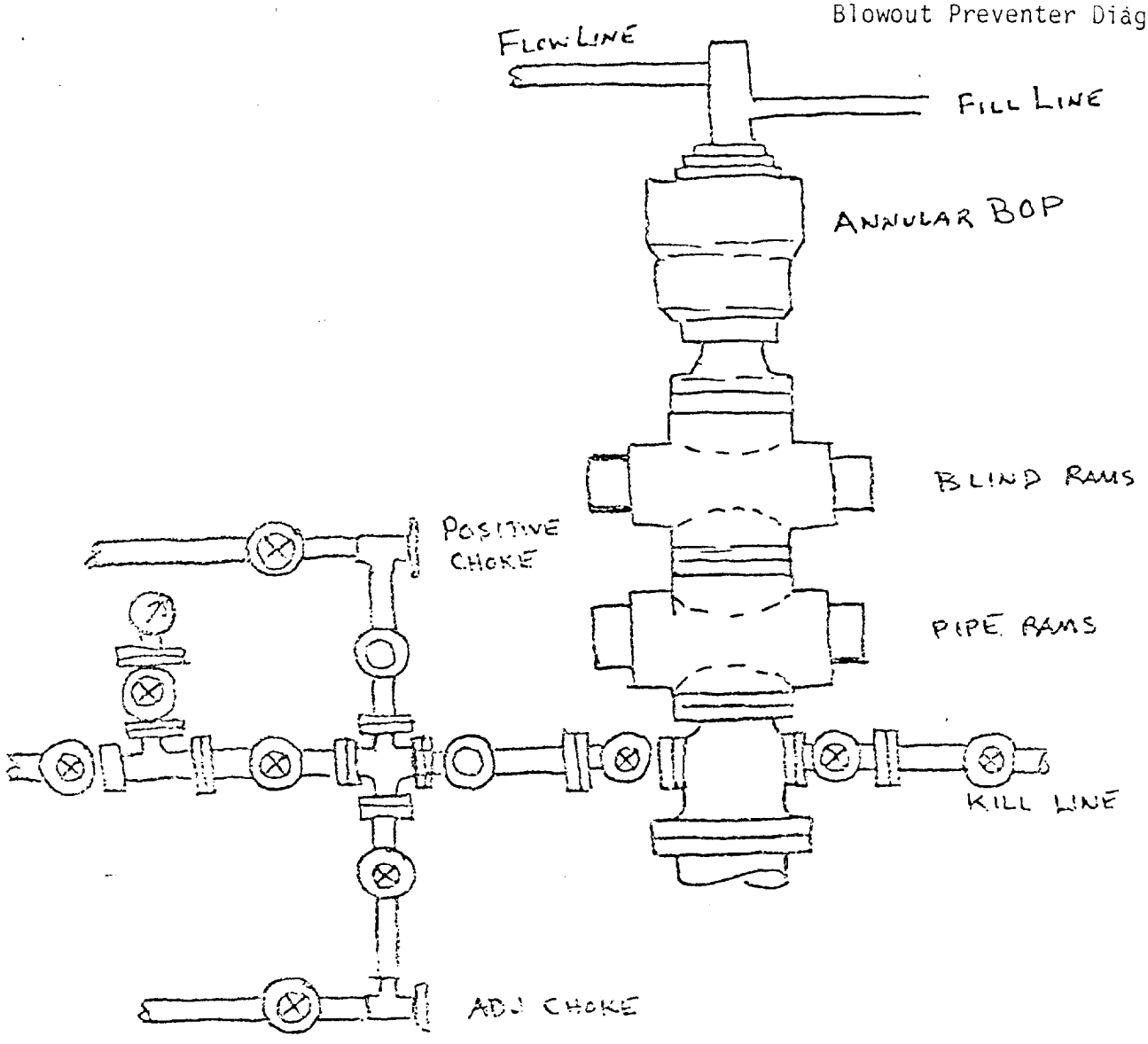
Possible high pressures are anticipated in Wolf Camp horizon. These will be contained by heavy drilling mud. Bottom hole pressure in 1974 was 3730' psig. Pressure buildup in 1976 indicates BHP of 2200' psig.

No hydrogen sulfide or other hazardous fluids or gases have been found, reported or known to exist at these depths in the area.

10. Anticipated Starting Date and Duration of the Operations

The anticipated starting date is set for August 1, 1979, or as soon as possible after examination and approval of drilling requirements. Operations should be completed within 50 days.

Blowout Preventer Diagram



All equipment will be 3000 psi working pressure, or better.

LEASE & WELL #1 Federal 33-G DATE 6/6/79

EXHIBIT "D"

MULTI-POINT REQUIREMENTS TO ACCOMPANY A.P.D.

Attached to Form 9-331C
Tenneco Oil Company
#1 Federal 33-G
SW NE Sec. 33 T17S R29E
1980' FNL & 1820' FEL
Eddy County, New Mexico

1. Existing Roads

A. The proposed well site and elevation plat is shown as EXHIBIT "A".

B. The distance from Artesia, New Mexico is 19.0 miles. Proceed East along Highway #83 for a distance of 17.5 miles, thence Southeast along oil field road 1.5 miles to location, as shown on EXHIBIT "E".

C. All roads to location are color-coded on EXHIBIT "E".

D. N/A

E. This is a development well. All existing roads within a one-mile radius are shown on EXHIBIT "E".

F. The existing roads need no improvement. Maintenance will be performed as required.

2. Planned Access Roads

Map showing all necessary access roads to be constructed or reconstructed is shown as EXHIBIT "E" for the following:

(1) The maximum width of the running surface of the existing oil field road will be 18'.

(2) The grade will be 8% (eight percent) or less.

2. Planned Access Roads - cont'd.

(3) No turn outs are planned.

(4) Appropriate water bars will be constructed to assure drainage off location to conform with the natural drainage pattern.

(5) No culverts are needed. No major cuts or fills are anticipated along access road during drilling operation.

(6) Surfacing materials will be native soil.

(7) No gates, cattle guards, or fence cuts are needed.

(8) The new access road to be constructed was staked and centerline flagged, as shown on EXHIBIT "E".

3. Location of Existing Wells

For all existing wells within a one-mile radius of development well, see EXHIBIT "F".

(1) There are no water wells within a one-mile radius of this location.

(2) Any abandoned wells in this one-mile radius are shown on EXHIBIT "F".

(3) There are no temporarily abandoned wells.

(4) There are no disposal wells.

(5) There are no wells presently being drilled.

(6) Tenneco #2 Federal 33 will be drilled to Wolf Camp and Cisco in NE NW of Section 33.

(7) There are no shut-in wells.

(8) There are no injection wells.

(9) There are no monitoring or observation wells for other uses.

4. Location of Existing and/or Proposed Facilities

A. Within a one-mile radius of location the following existing facilities are owned or controlled by lessee/operator:

4. Location of Existing and/or Proposed Facilities - cont'd.

(1) Tank Batteries: One condensate tank at #1-33.

(2) Production Facilities: Gas production unit at #1-33.

(3) Oil Gathering Lines: None

(4) Gas Gathering Lines: None

(5) Injection Lines: None

(6) Disposal Lines: None

B. If the well is productive, new facilities will be as follows:

(1) A Separator will be located on solid ground of drill pad, as shown on EXHIBIT "G".

(2) Well flow lines will not be buried and will be on the well site and battery site.

(3) All construction materials for battery site and pad will be obtained from site. No additional material from outside sources is anticipated.

(4) Any necessary pits will be fenced and flagged to protect livestock and wildlife.

C. Rehabilitation, whether well is productive or dry, will be made on all unused areas in accordance with B.L.M. stipulations.

5. Location and Type of Water Supply

A. Water will be obtained from a commercial water hauler, or from an existing local well, if available.

B. Water will be transported by truck over existing roadways.

C. No water well is to be drilled on this lease.

6. Construction Materials

A. No construction materials are needed for drilling and access roads into the drilling location unless well is productive. The surface soil materials will be sufficient or will be purchased from Dirt Contractor as needed. Pad surface material will be compacted Caliche.

B. No construction materials will be taken off Federal or Indian land.

C. All surface soil materials for construction of access roads are sufficient.

D. All major access roads presently exist as shown on EXHIBIT "E".

7. Handling of Waste Materials and Disposal

(1) Drill cuttings will be buried in the reserve pit and covered.

(2) Drilling fluids will be handled in the reserve pit.

(3) Any fluids produced during drilling test or while making production test will be collected in a test tank. If a test tank is not available during drilling, fluids will be handled in reserve pit. Any spills of oil, gas, salt water or other noxious fluids will be cleaned up and removed.

(4) Chemical facilities will be provided for human waste.

(5) Garbage and non-flammable waste and salts and other chemicals produced during drilling or testing will be handled in trash pit. Flammable waste will be disposed of in burn pit. Drill fluids, water, drilling mud and tailings will be kept in reserve pit, as shown on EXHIBIT "H". The trash and/or burn pit will be totally enclosed with small mesh wire to prevent wind scattering trash before being burned or buried. Reserve pit will be fenced on three sides and the fourth side fenced upon removal of the rig.

(6) After the rig moves out, all materials will be cleaned up and no adverse materials will be left on location. Any dangerous open pit will be fenced during drilling and kept closed until such time as the pit is leveled.

8. Ancillary Facilities

No air strip, camp or other facilities will be built during drilling of this well.

9. Well Site Layout

(1) EXHIBIT "G" is the Drill Pad Layout as staked, with elevations, by Powers Elevation of Durango, Colorado. Cuts and fills have been drafted to visualize the planned cut across the location spot and the deepest part of the pad. Topsoil will be stockpiled per B.L.M. specifications determined at time of pre-drill inspection.

(2) EXHIBIT "H" is a plan diagram of the proposed rig and equipment, reserve pit, burn and trash pit, pipe racks and mud tanks. No permanent living facilities are planned. There will be a trailer on site.

(3) EXHIBIT "G" is a diagram showing the proposed production facilities layout.

(4) The reserve pits will be lined. Steel mud tanks may be used during drilling operations.

10. Plans for Restoration

(1) Backfilling, leveling and contouring are planned as soon as all pits have dried. Waste disposal and spoils materials will be buried or hauled away immediately after drilling is completed. If production is obtained, the unused area will be restored as soon as possible.

(2) The soil banked material will be spread over the area. Revegetation will be accomplished by planting mixed grasses as per formula provided by the B.L.M. Revegetation is recommended for road area, as well as around drill pad.

(3) Three sides of the reserve pit will be fenced during drilling operations. Prior to rig release, the reserve pit will be fenced on the fourth side to prevent livestock or wildlife from becoming entrapped; and the fencing will be maintained until leveling and cleanup are accomplished.

(4) If any oil is on the pits and is not immediately removed after operations cease, the pit containing the oil or other adverse substances will be flagged overhead or covered with wire mesh.

(5) The rehabilitation operations will begin immediately after the drilling rig is removed. Removal of oil or other adverse substances will begin immediately or area will be flagged and fenced. Other cleanup will be done as needed. Planting and revegetation is considered best in Spring, 1980 unless requested otherwise.

11. Other Information

(1) The soil is sandy. No distinquishing geological features are present. The area is covered with cactus and sagebrush. There are lizards and rabbits in the area. The topography is sand piles desert terrain.

(2) There is little apparent use of this land other than for oil and gas production. The surface is owned by the U.S. Government.

(3) There is no live water within several miles.

The closest occupied dwellings are 7 miles East at Loco Hills.

There are no known archaeological, historical, or cultural heritages that will be disturbed by this drilling.

(4) There are no reported restrictions or reservations noted on the oil and gas lease.

(5) Drilling is planned for on or about August 1, 1979. It is anticipated that operations will be completed within 50 days after commencement of drilling.

12. Lessee's or Operator's Representative

George Lapaseotes
Agent Consultant for
Tenneco Oil Company
600 South Cherry Street
Suite 1201
Denver, Colorado 80222
Phone (303) 321-2217

Bob Dixon
Tenneco Oil Company
6800 Park Ten Blvd.
Suite 200 North
San Antonio, Texas 78213
Phone (512) 734-8161

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 subcontractors in conformity with this plan and the terms and conditions under which it is approved.

6-6-79
Date

George Lapaseotes
George Lapaseotes
Agent Consultant for
Tenneco Oil Company

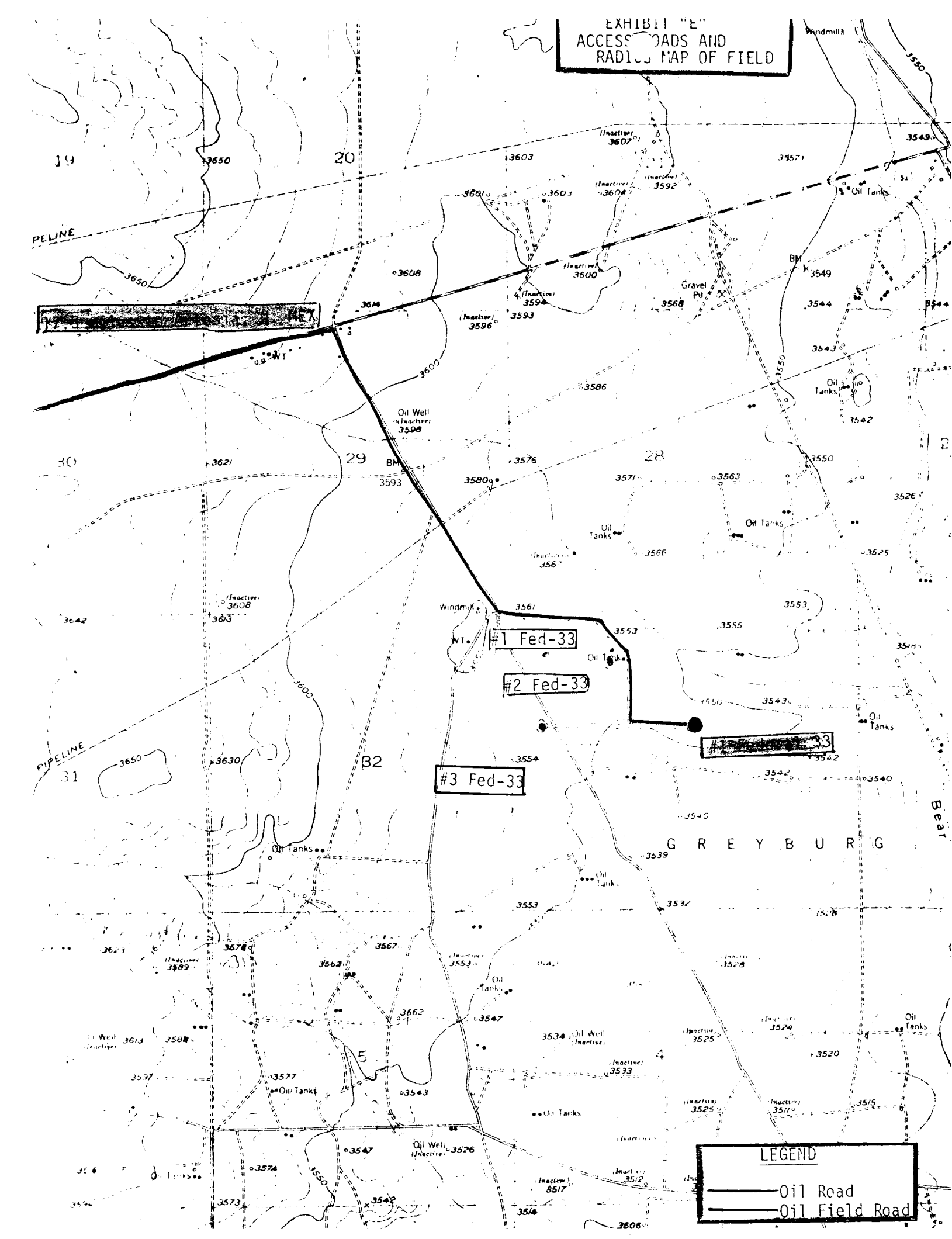
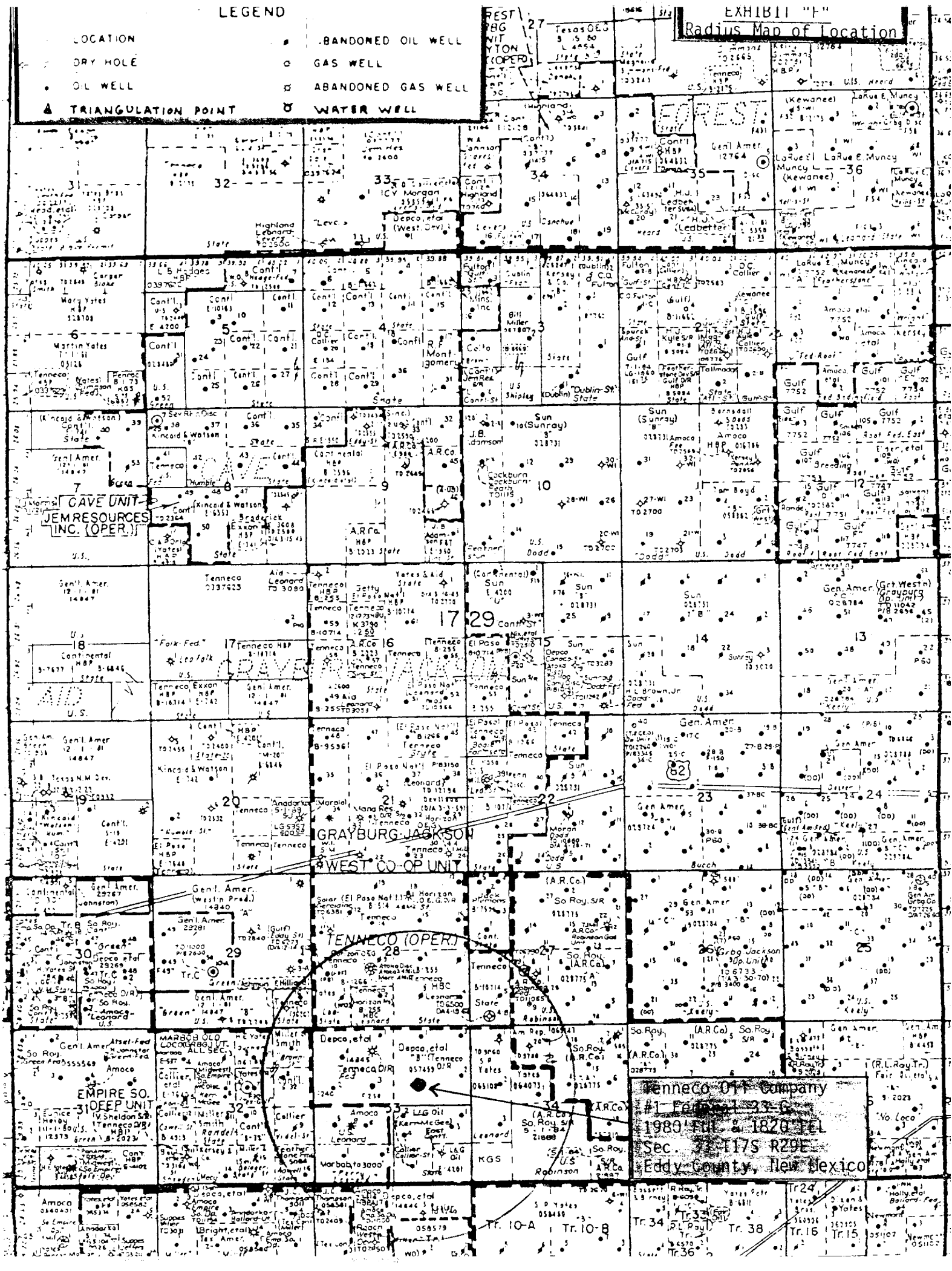
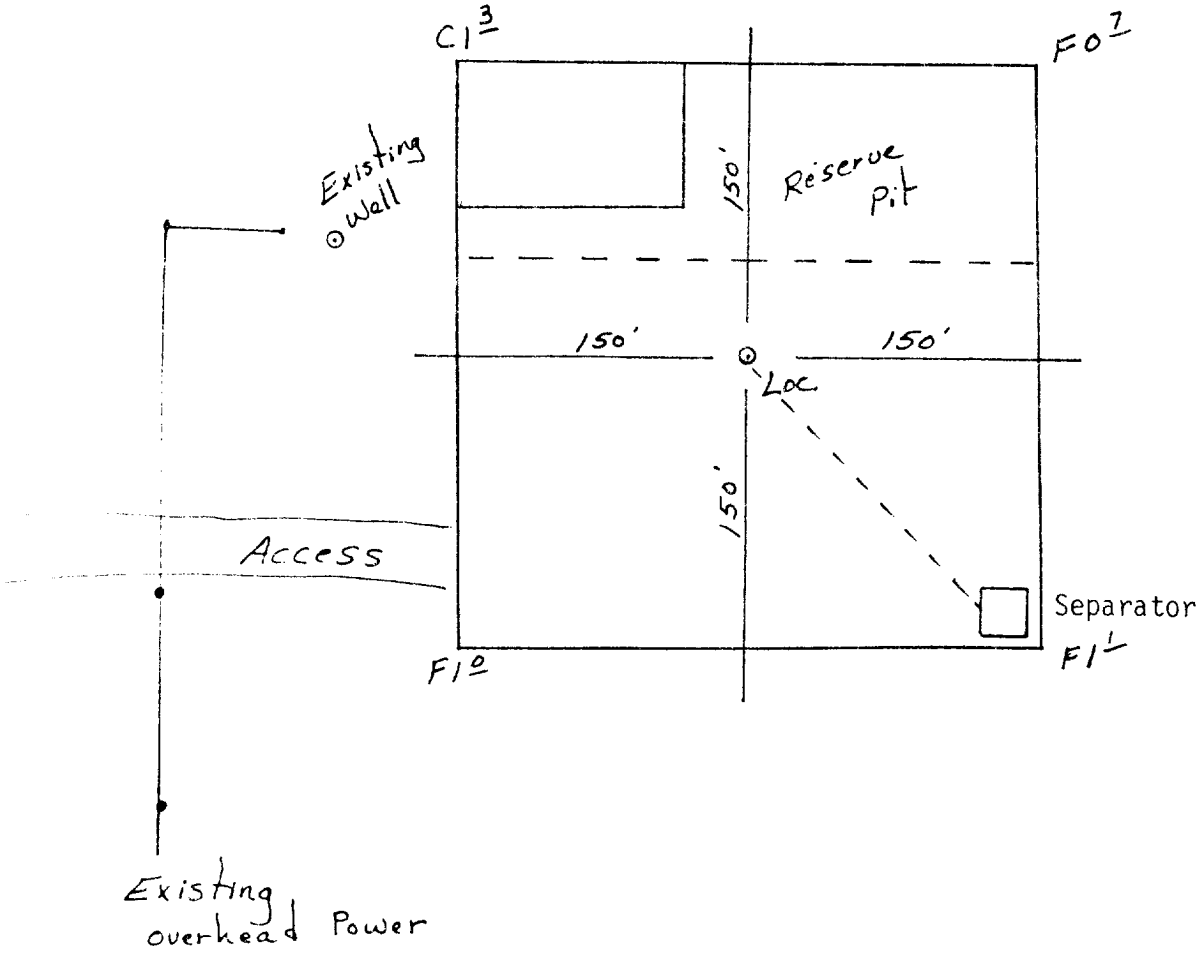


EXHIBIT "E"
ACCESS ROADS AND
RADIUS MAP OF FIELD
#1 Fed-33
#2 Fed-33
#3 Fed-33
PIPELINE
PIPELINE
GREYBURG
Oil Tanks
Oil Well
Windmill
LEGEND
Oil Road
Oil Field Road


LEGEND
LOCATION
DRY HOLE
OIL WELL
TRIANGULATION POINT
ABANDONED OIL WELL
GAS WELL
ABANDONED GAS WELL
WATER WELL
EXHIBIT "F"
Radius Map of Location
CAVE UNIT
JEM RESOURCES INC. (OPER.)
GRAYBURG-JACKSON
WEST CO-OP UNIT
TENNECO (OPER.)
EMPIRE SO. DEEP UNIT
Tenneco Oil Company
#1 Federal 33 Com
1980' FNL & 1820' FEL
Sec. 33-T17S-R29E
Eddy County, New Mexico

POWERS ELEVATION COMPANY, INC.

EXHIBIT "G"
Drill Pad Layout
&
Production Facilities

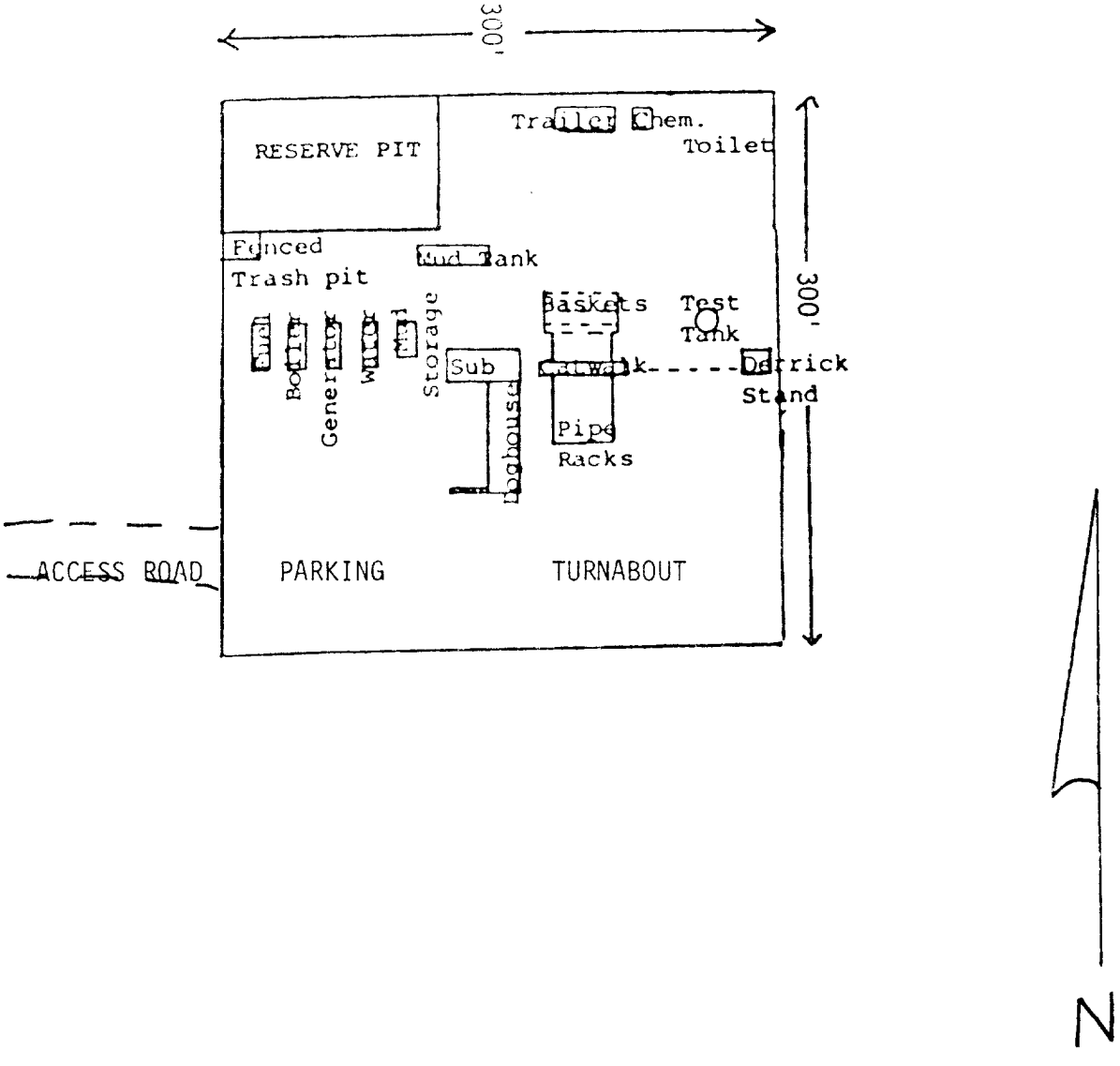


Tenneco Oil Co.
#1 Federal 33-G
1980 FNL 1820 FEL
33-17-S, 29 E
Eddy Co, N. Mex.

EXHIBIT "H"

Drill Rig Layout

Tenneco Oil Company
#1 Federal 33-G
1980'FNL & 1820'FEL Sec. 33 T17S R29E
Eddy County, New Mexico



Scale: 1" = 100'