

NM OIL, IS. COMMISSION
Artesia, NM 88010
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEYSUBMIT IN TRIPlicate*
(Other instru on
reverse side)Form approved.
Budget Bureau No. 42-R1425.

30-015-23889

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
ZONES ☐

2. NAME OF OPERATOR

Tenneco Oil Company (PH 512-734-8161)

3. ADDRESS OF OPERATOR

6800 Park Ten Bl, San Antonio, Tx. 78213

4. LOCATION OF WELL (Report location clearly and in accordance with the State requirements.)

At surface

2283'

FWL &

990'

FSL, S19, T21S, R26E

At proposed prod. zone

Same

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

6 1/2 mi. northwest of Carlsbad

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drlg. unit line, if any)

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

16. NO. OF ACRES IN LEASE

80

19. PROPOSED DEPTH

11,072'

17. NO. OF ACRES ASSIGNED
TO THIS WELL

320

20. ROTARY OR CABLE TOOLS

Rotary

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

3413.8 GL

22. APPROX. DATE WORK WILL START*

Sept. 1, 1981

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8" new	54.5# K-55 STC	+350'	cement to circulate
12 1/4"	8 5/8" new	32# K55STC	2200'	cement to circulate
7 7/8"	5 1/2" new	17# N-80LTC	11,072'	cement to top +7000'

1. Set 20" conductor pipe @ +40' from surface w/rathole-driller.
2. Drill 17 1/2" hole to +350'. (Refer to Note B)
3. Run and cmt, 13 3/8" 54.5# K-55 STC csg. Cement must return to surface. Prepare to 1" down backside if necessary. WOC 8 hrs. total as per NMOCC, proceed w/NU immediately after cmt. Call NMOCC prior to run surface csg.
4. Cut off 13 3/8" csg. NU WKM 13 5/8" 3M type "S" csg. head. SOW. Test csg, head to 1/2 of casing collapse. Weld needs to be able to accommodate to 12 1/4" bit.
5. NU 13 3/8" 5M BOPE, Test to 500 psi w/rig pump.
6. PU 12 1/4" bit and at least 12-8" DC's. Shock sub is advisable but use no reamers due to dry drilling possibilities. Drill 12 1/4" hole to +2200'.
7. Run and cmt, 8 5/8" 32, 0# K-55 STC casing. Cement needs to be circulated to surface Prepare to 1" if necessary, WOC 8 hrs, as per NMOCC, NU while WOC.
8. Set WKM 13 5/8" type "SR" csg slips and cut off 13 3/8" csg. NU WKM 13 5/8" X 11" 3M type "SF" csg. hd. spool. Test head to 1265 psi or 1/2 casing collapse.

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.

SIGNED

TITLE Division Drilling Engineer DATE July 20, 1981

(This space for Federal or State office use)

PERMIT NO.

APPROVED

APPROVAL DATE

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY

JUL 27 1981

for JAMES A. GILLHAM
DISTRICT SUPERVISOR

Instructions

General: This form is designed for submitting proposals to perform certain well operations, as indicated, on all types of lands and leases for appropriate action by either a Federal or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

Item 1: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable State or Federal regulations concerning subsequent work proposals or reports on the well.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on this reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal or State agency offices.

Items 15 and 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective production zone.

Item 22: Consult applicable Federal or State regulations, or appropriate officials, concerning approval of the proposal before operations are started.

★ U.S. GOVERNMENT PRINTING OFFICE : 1963—O-711-396

9. NU 5M BOPE. Test Choke manifold and lines and BOPE to 3000 psi. Test Hydril to 1500 psi.
10. PU 7 7/8" bit and BHA. RIH to float collar and test casing to 1000 psi minimum.
11. Drill to +9000'. Commence mud up thru steel pits. Test the BOP stack and choke lines as in step 9.
12. Drill to +11,072'. (TD will be picked by mud logger)
13. Log as per geological engineer, Run Schlumberger. Repeat formation tester. RIH to condition hole and WO orders.
14. Run 5½" 17.0# N-80 LTC or P & A as per GE.
15. Set slips and NU WKM 11" 5M X 7 1/16" 5M type "U" tubinghead
16. RD MORT. Completion Prognosis to follow.

Gas for the acreage is dedicated.

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-192
Supersedes C-128
Effective 1-1-65

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

Operator TENNECO OIL COMPANY			Lease FEDERAL FN 19 <i>Com</i>		Well No. 2
Section N	Section 19	Township 21 SOUTH	Range 26 EAST	County EDDY	
Annual Production Location of Well: 990 feet from the SOUTH line and 2283 feet from the WEST line					
Ground Level Elev. 3413.8	Producing Formation Morrow	Pool Catclaw Draw <i>Morrow</i>	Dedicated Acreage: 320		

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure 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 Agreement

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.

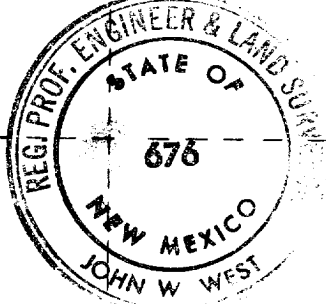
L-6815-1 W.I.-Tenneco -87.5% Holly Energy, Inc. -10.9375 Read & Stevens, Inc. - 1.5625 R.I. - State of New Mexico	NM-0106774-C W.I. Tenneco-87.5% Holly - 10.9375 Read & Stevens- 1.5625 R.I. State of New Mexico	NM-0106774-A W.I. - Tenneco- 87.5% Holly Energy- 10.9375 Read & Stevens- 1.5625 R.I. - United States
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Void
As per Order
4157-D
9-1-81

K-6262
W.I. - Tenneco- 87.5%
Holly -10.9375
Read & Stevens- 1.5625
R.I.-State of New Mexico

NM-0400877-A
W.I.- Tenneco 87.5%
Holly - 10.9375
Read & Stevens- 1.5625
R.I.-United States

NM-84
W.I. - Inexco Oil Co.
R.I. - United States



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

[Signature]
Name
MOSS BANNERMAN
Position
Division Drilling Engineer
Company
Tenneco Oil Company
Date
July 21, 1981

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
7-16-81
Registered Professional Engineer and/or Land Surveyor

[Signature]
Certificate No. **JOHN W. WEST 876**
PATRICK A. ROMERO 6683
Ronald J. Eidson 3239

2283'

066'

330 660 990 1320 1650 1980 2310 2640 2970 3300 3630 3960 4290 4620 4950 5280 5610 5940

EXHIBIT "B"

TEN-POINT COMPLIANCE PROGRAM
OF NTL-6 APPROVAL OF OPERATIONS

Attached to form 9-331C
Tenneco Oil Company
Fed. FN 19 Well #2
1980' FWL & 660' FSL
Sec. 19, T 21S, R 26E
Eddy County, New Mexico

1. The Geologic Surface Formation

The surface formation is Quaternary Alluvium Deposit

2. Estimated Tops of Important Geologic Markers

Quaternary Alluvium	Sfc
El Capitan Reef	700
Delaware	2275
Bone Springs	4475
Wolfcamp Carbonate	8275
Cisco	9300
Strawn	9620
Atoka Clastics	10,200
Morrow	10,612
Barnett Shale	11,022
Esti. TD.	11,072

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

Delaware	2275-4475	Oil
Wolfcamp	8275-9300	Gas
Strawn	9620-10,200	Gas
Morrow	10,612-11,022	Gas

4. Proposed Casing Program:

<u>SIZE</u>	<u>INTERVAL</u>	<u>WEIGHT</u>	<u>GRADE</u>	<u>JOINT</u>	<u>NEW OR USED</u>
20"	0-40'				
13-3/8"	0-350'	54.5#	K-55	ST&C	NEW
8-5/8"	0-2200'	32#	K-55	ST&C	NEW
5-1/2"	0-11072'	17#	N-80	LTC	NEW

CEMENT DESIGN

In setting 13-3/8" & 8-5/8", the cement will be circulated.
5 1/2" casing will be cemented from shoe to 1000' above shallowest pay.

5. PRESSURE CONTROL EQUIPMENT:

Blowout preventer stack will consist of an annular type preventer and two (2) ram-type preventers with 3000 psi working pressure. A sketch of BOP stack is attached.

6. PROPOSED MUD PROGRAM:

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 mud will be on location to be added if pressure requires.

<u>INTERVAL</u>	<u>MUD WEIGHT</u>	<u>VISCOSITY</u>	<u>FLUID LOSS</u>	<u>REMARKS</u>
0-350'	8.4	30	NC	Fresh Water
350-2200'	8.4-8.8	30	NC	Fresh Water
2200-9000'	8.4-9.0	30	NC	Fresh Water
9000'-11072'	8.6-3.9	30	NA	Brine-Drispac starch

7. AUXILIARY EQUIPMENT:

- A. Kelly cock will be kept in kelly.
- B. Full opening stabbing valve will be kept on rig floor in open in open position at all times.

8. TESTING, LOGGING AND CORING PROGRAMS:

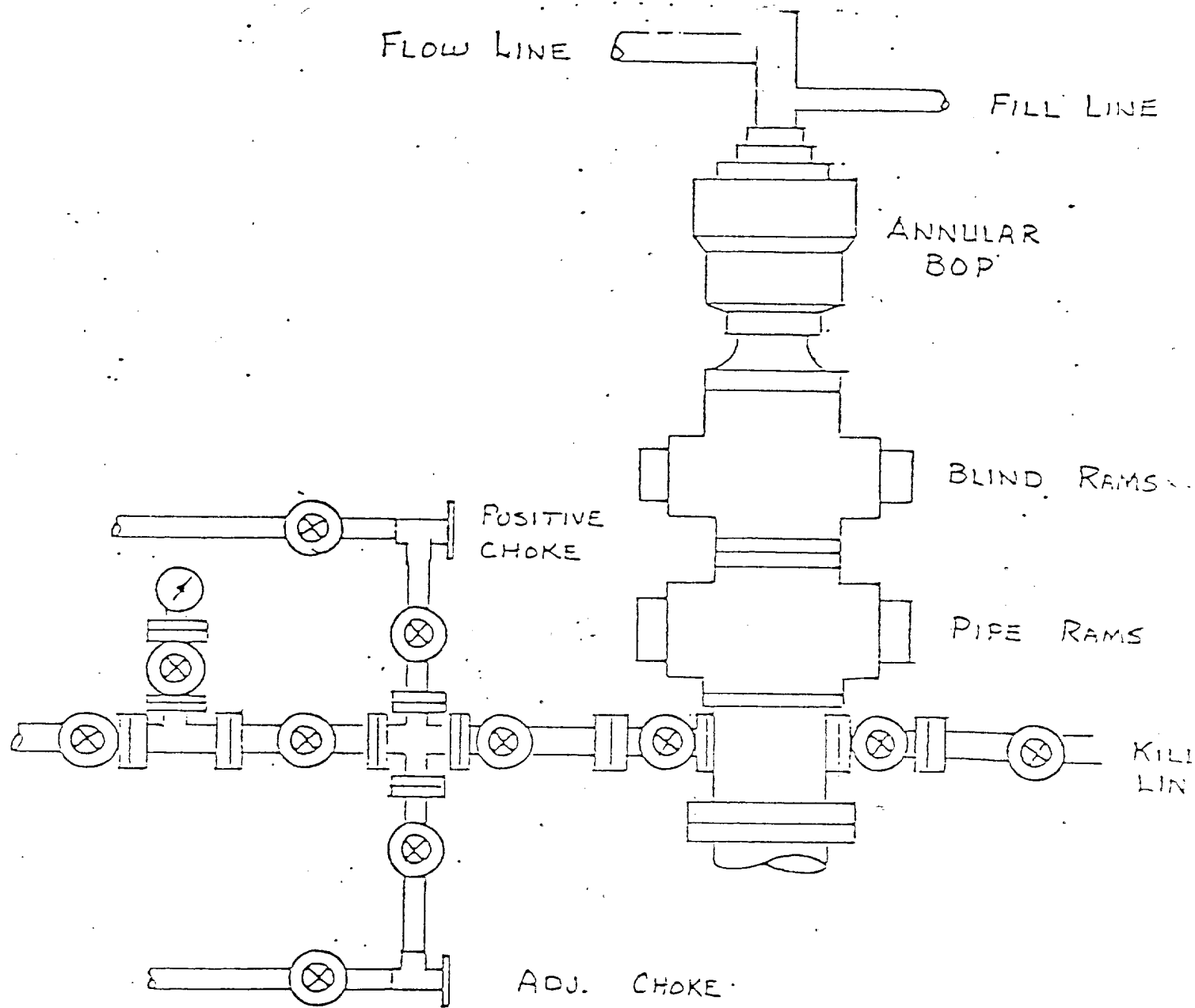
- A. DST's will be run if warranted.
- B. No coring is anticipated.
- C. CNL-FDC w/GR and caliper; DLL, shoe to TD.
- D. Repeat formation tester in selected intervals.

9. ABNORMAL PRESSURES, TEMPERATURES OR HYDROGEN SULFIDE GAS:

None anticipated.

10. ANTICIPATED STARTING DATE AND DURATION OF THE OPERATIONS:

- A. Road and pad construction: August 5, 1981
- B. Spud well: September 1, 1981
- C. Duration of drilling and completion operations should be about 45-75 days.



This is to be 3000 psi wp, which is adequate, that will be used on the 11" and 7 7/8" hole. This is the minimum possible BOP stack that will be used. Tenneco may choose to use more equipment and higher pressure.

Federal "FN" 19
Well No. 2
Eddy County, New Mexico

SURFACE USE PLAN
FOR
DRILLING, COMPLETING AND PRODUCING



TENNECO OIL COMPANY
WELL #2 FEDERAL FN-19
990' FSL & 2283' FWL SEC. 19-21S-26E
EDDY COUNTY, NEW MEXICO

LOCATED: 7 air miles west-northwest of downtown
Carlsbad, New Mexico.

FEDERAL LEASE NUMBER: NM 0400877-A

LEASE ISSUED: 8-1-63 for a primary term of 10 years and
is in its extended term by communitized
production.

RECORD LESSEE: The Superior Oil Co.

OPERATOR'S AUTHORITY: Operating agreement (filed with BLM).

BOND COVERAGE: Tenneco's \$150,000 Nation-wide bond.

ACRES IN LEASE: 240 acres

SURFACE OWNERSHIP: Federal

GRAZING PERMITTEE: John Neill
P. O. Drawer 1838, Carlsbad, N. M. 88220

POOL: Catclaw Draw-Morrow (now 320-acre spacing.)

EXHIBITS: A. Portion of Eddy County Road Map
B. Portion of West Carlsbad Topo Map
C. Portion of USGS Lease Map #20
D. Sketch of Well Pad

ROAD LOG TO PROPOSED DRILLSITE

STARTING POINT is northwest of Carlsbad, New Mexico on US-285 at Mile Point 41.79. This point is 8.57 miles from US-62 in Carlsbad or 0.26 mile past the northwest intersection of the Truck By-Pass with US-285. See Exhibit "A".

- 0.00 Turn left (west) through cattleguard and proceed on an oilfield road in a west-southwesterly direction for a distance of 0.96 mile.
- 0.96 Turn left (south) and proceed in a southerly direction for a distance of 0.93 mile to an E-W road. (Route passes Catclaw Unit Well #6 at mileage 1.22 and Well #4 at mileage 1.87.)
- 1.89 Turn left (east) and proceed in an easterly direction for a distance of 0.39 mile to the southwest corner of Well #1 Nan-Bet State.
- 2.28 Proposed New Road Will Begin at This Point. Turn right (southeast) and proceed in a southeasterly direction for a distance of 0.55 mile to the northeast corner of the proposed well pad.
- 2.83 DRILLSITE (Well #2 Federal FN-19)

THIRTEEN POINT PROGRAM

- 1. EXISTING ROADS: Existing roads, which lead to the proposed drill-site, are shown on Exhibits "A", "B", and "C".
- 2. PROPOSED NEW ROAD: Proposed new access road will be 0.55 mile in length. Exhibit "C" shows proposed route which will originate at mileage 2.28 on the road log and will terminate at the northeast corner of the proposed drill pad. The center of the proposed new road has been staked and flagged.
 - A. Width: 12 feet with 20-foot R-O-W.
 - B. Surfacing Material: The new road will be surfaced with caliche.

- C. Maximum Grade: Less than one percent.
 - D. Turnouts: Two turnouts are planned, each located about 1000 feet from each end of new road.
 - E. Drainage Design: New road will be crowned with drainage to the side.
 - F. Culverts: None necessary.
 - G. Gates, Cattleguards: None necessary.
3. LOCATION OF EXISTING WELLS: Existing wells in the vicinity of the proposed drillsite are shown on Exhibit "C".
4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:
- A. There are no production facilities on the leasehold.
 - B. If the well is productive, production and storage facilities will be located on the well pad.
5. LOCATION AND TYPE OF WATER SUPPLY: Water for leasehold operations will be purchased from the nearest commercial source, or a water supply well may be drilled at the edge of the well pad.
6. SOURCE OF CONSTRUCTION MATERIALS: Material for construction of the proposed new road and well pad will be obtained from an archaeologized Federal (State surface) pit in the SE-NW 13-21S-25E.
7. METHODS OF HANDLING WASTE DISPOSAL:
- A. Drill cuttings will be disposed of in the drilling pits.
 - B. Drilling fluids will be allowed to evaporate in the drilling pits until the pits are dry.
 - C. Water produced during tests will be disposed of in the drilling pits.
 - D. Oil produced during tests will be produced into temporary test tanks.

- E. Trash, waste paper, garbage, and junk will be buried in a trash pit and covered with a minimum of 24 inches of dirt. All waste material will be contained to prevent scattering by the wind. Location of the trash pit is shown on Exhibit "D".
- F. All trash and debris will be buried or removed from the wellsite within 30 days after finishing each drilling and/or completion operation.

8. ANCILLARY FACILITIES: None anticipated.

9. WELLSITE LAYOUT:

- A. The wellsite has been surveyed and a 500' x 500' area has been staked and flagged.
- B. The dimensions and relative location of the drill pad, mud pit, and trash pit with respect to the well bore are shown on Exhibit "D".
- C. The location slopes to the northeast. There will be about a 3' cut at the SW corner, about 2' cut at NW corner, 1½' fill at NE corner and no cut or fill at SE corner.
- D. The well pad will be surfaced with caliche.

10. PLANS FOR RESTORATION OF THE SURFACE:

- A. After completion of drilling and/or completion operations, all equipment and other material not needed for operations will be removed. Pits will be filled and the location cleaned of all trash and junk to leave the wellsite in as aesthetically pleasing condition as possible.
- B. Any unguarded pits containing fluids will be fenced until they are filled.
- C. After abandonment, all equipment, trash and junk will be removed and the location cleaned. Any special rehabilitation and/or special revegetation requirements of the Bureau of Land Management will be complied with and accomplished as expeditiously as possible.

11. OTHER INFORMATION:

- A. Topography: The undisturbed wellsite elevation is 3414 feet. The location is at the southern edge of an alluvial flat which borders a limestone hill to the south. The surface of the location slopes to the northeast. Regional slope is to the north and east toward the Pecos River.
- B. Soil: Top soil at the wellsite is loam.
- C. Land Type & Use: The vicinity surrounding the drillsite is semi-arid rangeland and its primary use is for grazing.
- D. Flora and Fauna: Vegetative cover is sparse. Flora consists primarily of range grasses interspersed with greasewood, broom weed and other semi-arid desert plants. Several rabbits were observed, however fauna for this type of habitat usually consists of lizards, snakes, rodents, coyotes, skunks, quail, dove, and other small birds.
- E. Ponds and Streams: None.
- F. Water Wells: Nearest water well is 0.4 mile to the east.
- G. Residences & Other Structures: Nearest occupied dwelling is 0.4 mile to the east.
- H. Archaeological, Historical & Cultural Sites: A reconnaissance of the 500' x 500' area and proposed new road was made by New Mexico Archaeological Services, Inc. on 7-17-81 and no archaeological sites were found.
- I. Surface Owner: U. S. Government.

12. OPERATOR'S REPRESENTATIVE: Representative responsible for assuring compliance with the approved Surface Use Plan:

Moss Bannerman
Division Drilling Engineer
6800 Park Ten Blvd.
Suite 200 North
San Antonio, Texas 78213
Office 512-734-8161
Home 512-492-5218

Doug Keen
Division Geological Engineer
6800 Park Ten Blvd.
Suite 200 North
San Antonio, Texas 78213
Office 512-734-8161
Home 512-492-4626

13. CERTIFICATION:

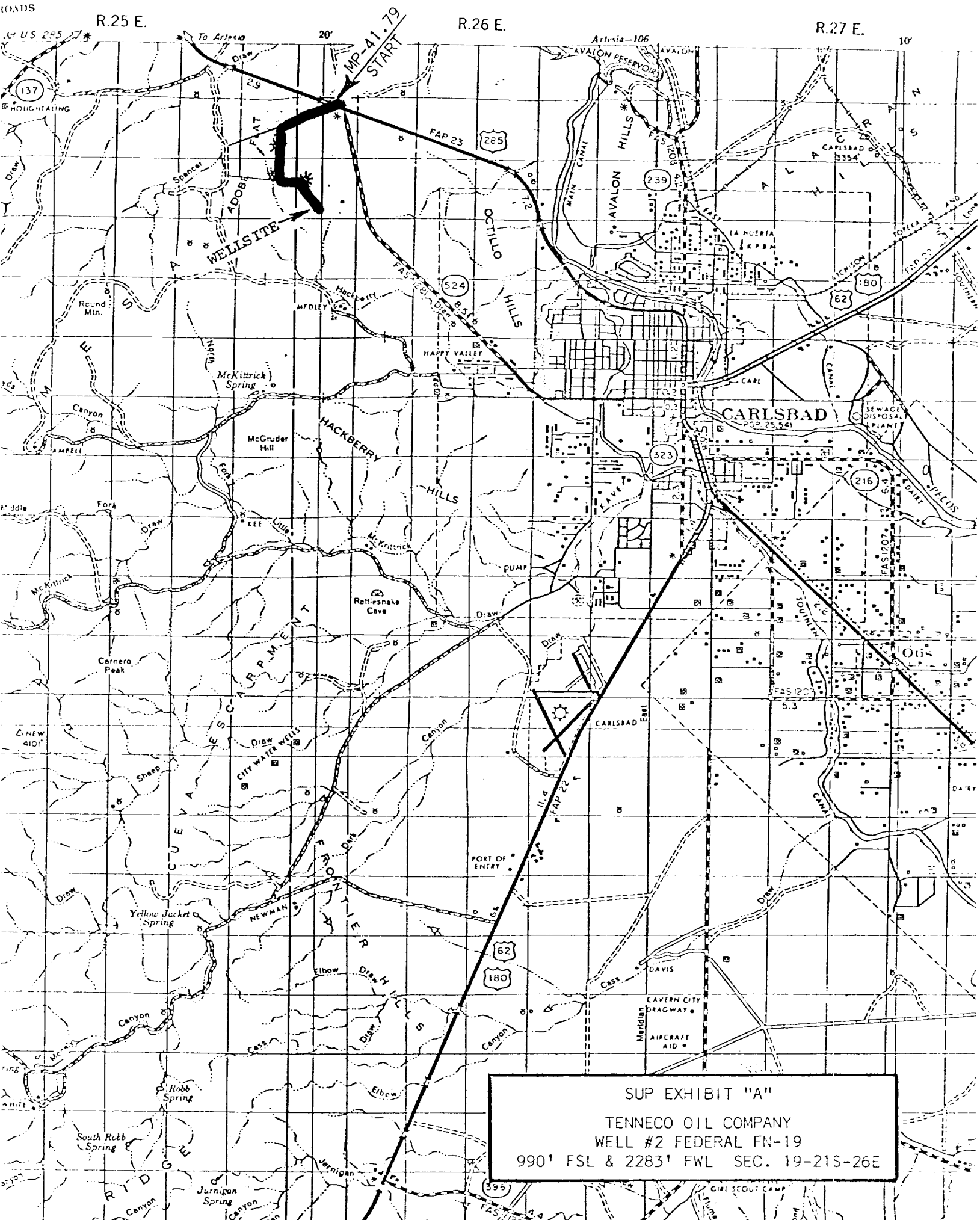
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge true and correct; and, that the work associated with the operations proposed herein will be performed by TENNECO OIL COMPANY and its sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

July 24, 1981

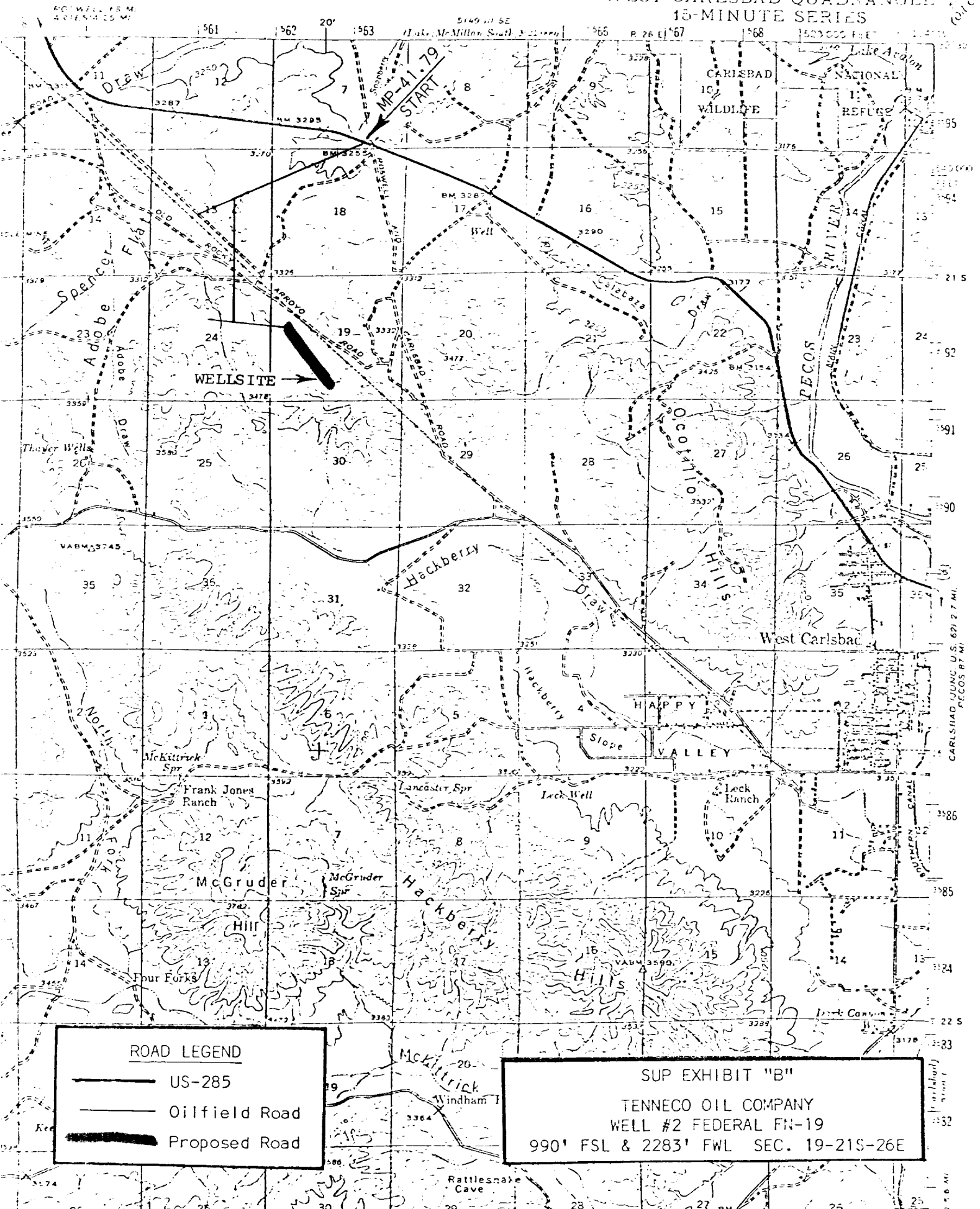
Date

Roy J. Goodwin III.

Roy Goodwin



NEW MEXICO
(EDDY COUNTY)
WEST CARLSBAD QUADRANGLE
15-MINUTE SERIES

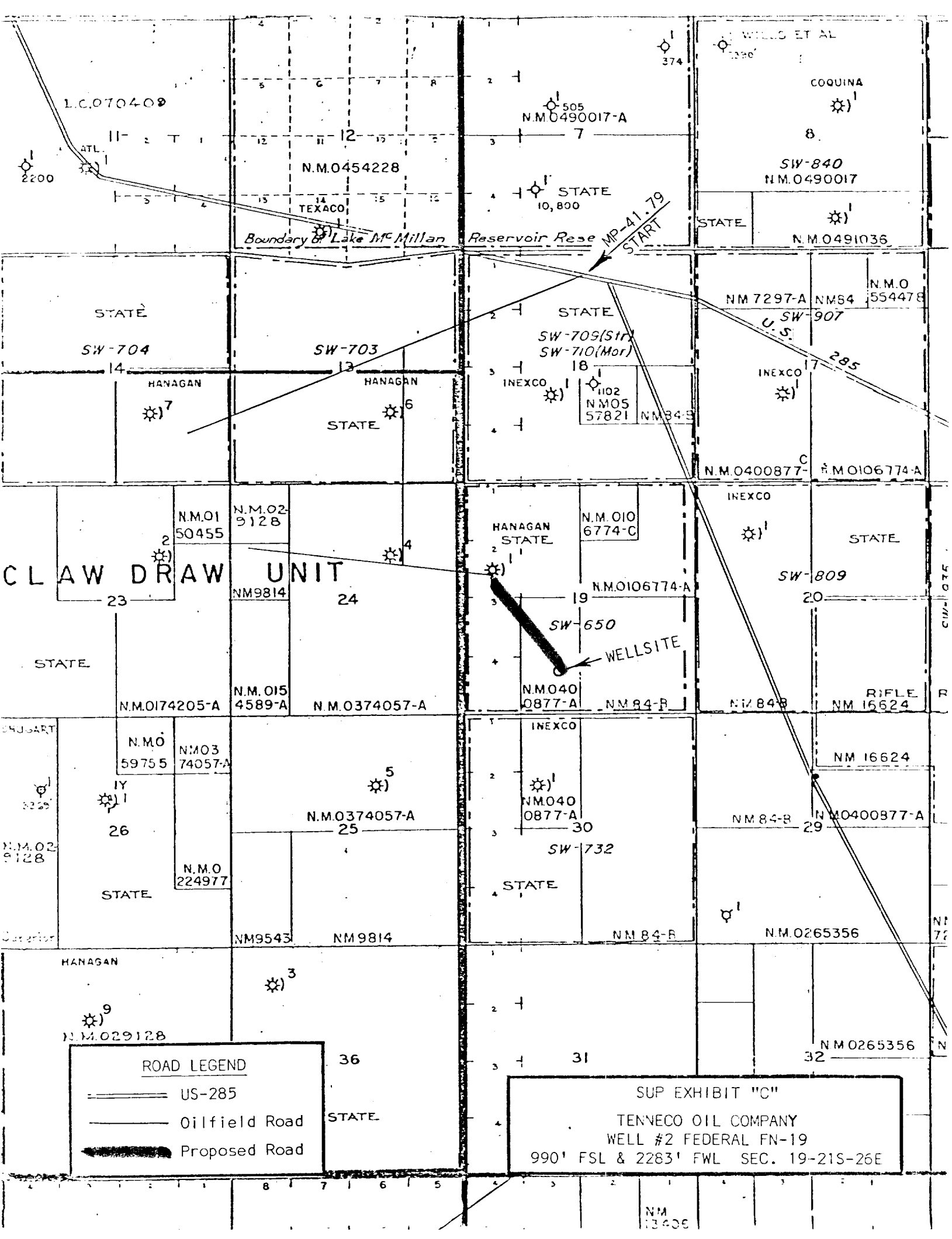


ROAD LEGEND

- US-285
- Oilfield Road
- Proposed Road

SUP EXHIBIT "B"

TENNECO OIL COMPANY
WELL #2 FEDERAL FN-19
990' FSL & 2283' FWL SEC. 19-21S-26E

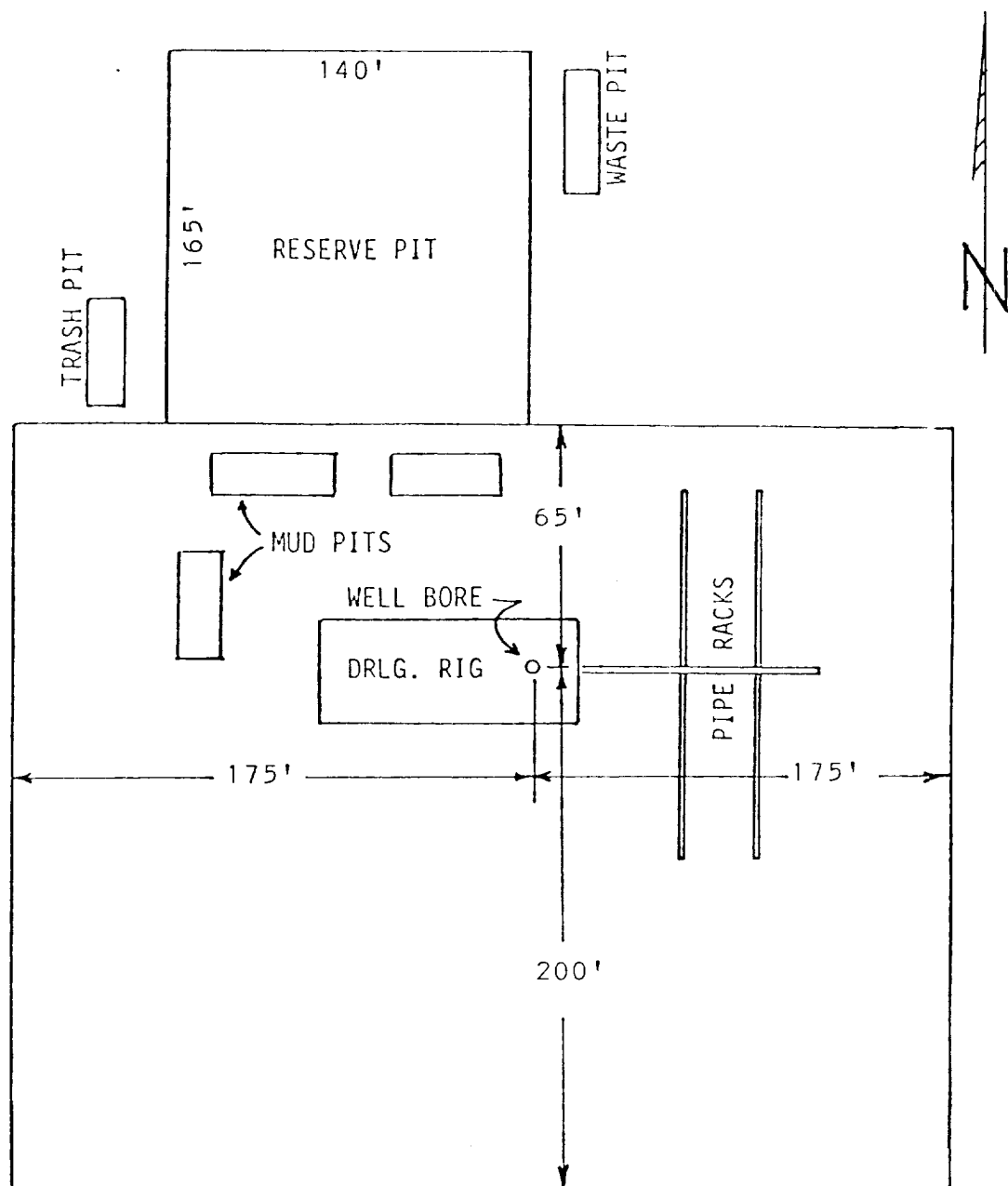


ROAD LEGEND

- US-285
- Oilfield Road
- Proposed Road

SUP EXHIBIT "C"

TENNECO OIL COMPANY
WELL #2 FEDERAL FN-19
990' FSL & 2283' FWL SEC. 19-21S-26E



SUP EXHIBIT "D"

TENNECO OIL COMPANY
WELL #2 FEDERAL FN-19
990' FSL & 2283' FWL SEC. 19-21S-26E