

C/SF

GEOLOGICAL SURVEY

SUBMIT IN TRIPLI
(Other instruction
reverse side)30-015-23975
Form approved
Budget Bureau No. 42-R1425.

NM-0144698

5. LEASE DESIGNATION AND SERIAL NO.

Superior Federal

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

No

7. UNIT AGREEMENT NAME

NZA

8. FARM OR LEASE NAME

Superior Federal

9. WELL NO.

5

10. FIELD AND POOL, OR WILDCAT

East Burton Flat (Morrow)

11. SEC., T., R., M., OR BLM.
AND SURVEY OR AREA

115-K

Section 5-I20S-R29E

12. COUNTY OR PARISH

Eddy

13. STATE

New Mexico

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

The Petroleum Corporation of Dallas

3. ADDRESS OF OPERATOR

3303 Lee Parkway Dallas, Texas 75219

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

At surface

1980' FSL and 1980' FWL

At proposed prod. zone

Same

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

16 miles NE from Carlsbad, NM

15. DISTANCE FROM PROPOSED*

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

1980'

16. NO. OF ACRES IN LEASE

1743.54

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.

2640'

19. PROPOSED DEPTH

11,800

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether L.P., RT., GR., etc.)

GL 3280.0'

22. APPROX. DATE WORK WILL START*

Depends on rig availability

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
15"	11 3/4"	42#	350'	Circ. to surface
11"	8 5/8"	24# & 32#	3100'	Circ. to surface
7 7/8"	4 1/2"	11.6# & 13.5#	11,800'	500 sx, Vol to be determined by caliper.

Adequate BOP's to be installed from 350' to total depth. See attached sketch.

Mud Program: See Exhibit F (page 3)

Gas is not dedicated.

RECEIVED
OCT 2 1981OIL & GAS
U.S. GEOLOGICAL SURVEY
ROSWELL, NEW MEXICOPosted ID-1
API + NL Book
11-6-81

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

TITLE Manager of Operations

DATE

10-1-81

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

OCT 30 1981

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section

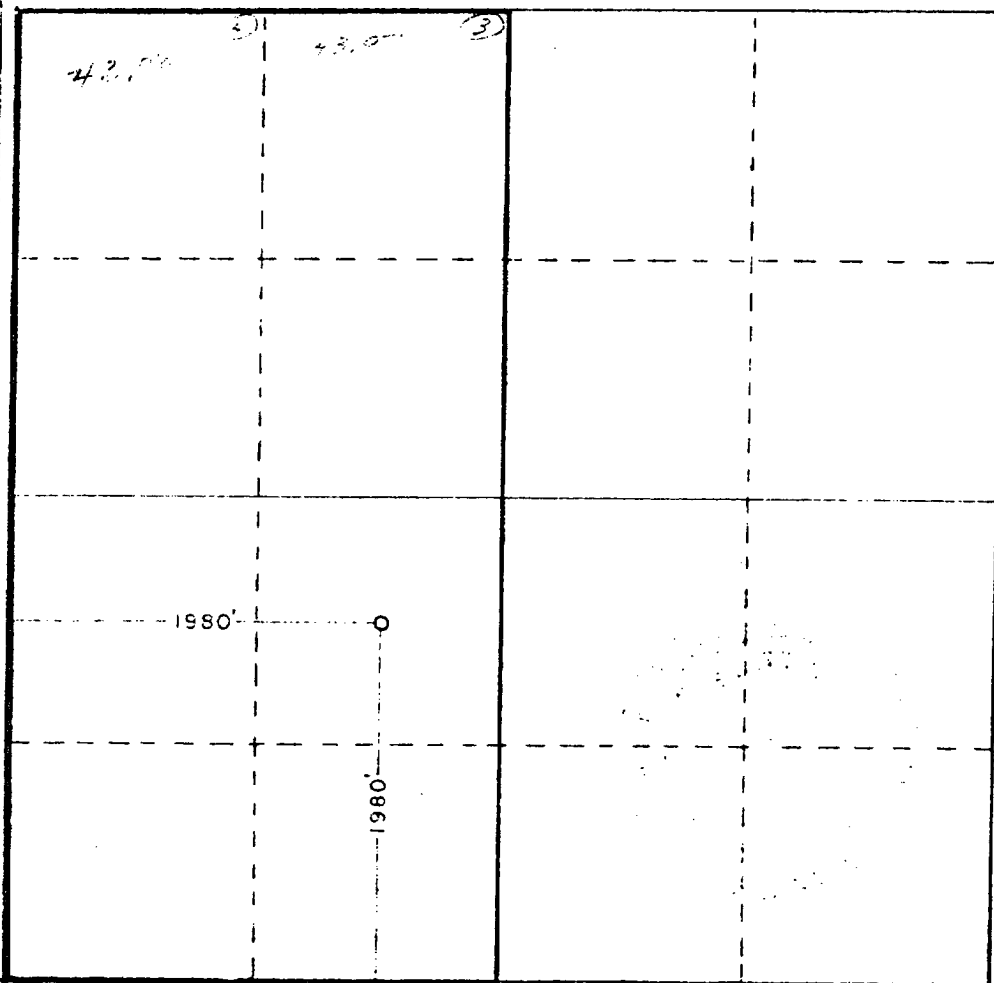
Operator The Petroleum Corp.		Lease Superior Federal		Well No. 5
Unit Letter K	Section 5	Township 20 South	Range 29 East	County Eddy
Actual Footage Location of Well:				
1980 feet from the South line and		1980 feet from the West line		
Ground Level Elev. 3280.0'	Producing Formation Morrow	Pool East Burton Flat (Morrow)	Dedicated Acreage 320 Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- 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.

Name

L. E. Thomas

Position

Manager of Operations

Company

The Petroleum Corp.

Date

October 5, 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

Aug. 5, 1981

Registered Professional Engineer and Land Surveyor

John W. West

Certificate No. **JOHN W. WEST 676**
PATRICK A. ROMERO 6668
Ronald J. F. Allen 7270

APPLICATION FOR DRILLING
The Petroleum Corporation
Superior Federal Well No. 5
1980' FSL and 1980' FWL
Section 5-T20S-R29E
Eddy County, New Mexico

In conjunction with Form 9-331C, Application for Permit to Drill, subject well in Section 5, Township 20 South, Range 29 East, Eddy County, New Mexico, The Petroleum Corporation submits the following ten items of pertinent information in accordance with U.S.G.S. requirements:

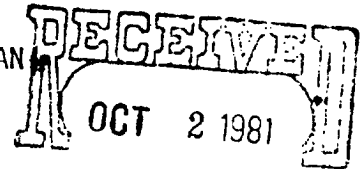
1. The geologic surface formation is Alluvium and Bolson deposits.
2. The estimated tops of geologic markers are as follows:

Yates	1,200'
Seven Rivers	1,425'
Delaware	3,225'
Bone Springs	5,025'
Wolfcamp	9,100'
Strawn	10,200'
Atoka	10,500'
Morrow	10,800'
Barnett Shale	11,450'

3. The estimated depths at which anticipated water, oil or gas formations are expected to be encountered are:
 - Water: At approximately 240 feet.
 - Oil or Gas: Wolfcamp at approximately 9,100'
 - Strawn at approximately 10,200'
 - Atoka at approximately 10,500'
 - Morrow at approximately 10,800'
4. Proposed casing program: See Form 9-331C and Exhibit F (Page 2)
5. Pressure control equipment: See Form 9-331C and Exhibit E
6. Mud program: See Exhibit F (Page 3)
7. Testing, logging and coring programs: See Exhibit F (Page 2)
8. No abnormal pressures or temperatures are anticipated.
9. Anticipated starting date: As soon as possible.

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

The Petroleum Corporation
Superior Federal Well No. 5
1980' FSL and 1980' FWL
Section 5-T20S-R29E
Eddy County, New Mexico
(Development Well)



OIL & GAS
U.S. GEOLOGICAL SURVEY
ROSWELL, NEW MEXICO

The plan is submitted with Form 9-331C, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of necessary surface disturbance involved, and the procedures to be followed in rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effects associated with the operation.

1. EXISTING ROADS.

- A. Exhibit A is a portion of BLM quad color map no. SE-24, on a scale of $\frac{1}{2}$ inch to a mile, showing the area of the proposed wellsite and the roads in the vicinity. The location is situated approximately 16 miles northeast of Carlsbad, New Mexico, via the access road shown in red. Directions to the location are as follows:
- (1) Starting at La Caverna Motel at the intersection of highways 285 and 62/180 in Carlsbad, proceed east on highway 62/180 for 8 miles.
 - (2) Turn left (north) onto a blacktop road. (There is a "Superior Oil Co., Govmt. D Com. #2" sign at this point.)
 - (3) Continue north for approximately 6.0 miles. At this point, the paved road curves to the left. Leave the paved road and turn to the right (east) onto a dirt road.
 - (4) After approximately 1.4 miles, you will pass caliche pits on your left. Continue approximately 0.3 miles beyond the caliche pits.
 - (5) Turn left (north) for a total distance of approximately 2.0 miles, passing two windmills and water tanks en route and continuing north to Texas Oil & Gas Corp., Williamson Federal #1, SW/4, NW/4, Section 9-T20S-R29E.
 - (6) From this well, continue in a northerly direction through a cattle guard after 0.3 miles. Approximately 0.2 miles beyond the cattle guard, you will reach Petroleum Corporation, Superior Federal Well #3, SW/4, NW/4, Section 4-T20S-R29E. Leaving from the northeast corner of the well pad, continue over and then down a slope in a northwesterly direction for approximately 0.2 miles to Petroleum Corporation's Superior Federal well #4, NE/4, SE/4, Section 5, T-20-S, R-29-E. From this well continue approximately $\frac{1}{2}$ mile west to the proposed location.

2. PLANNED ACCESS ROAD.

- A. The proposed new access road will be approximately $\frac{1}{2}$ mile from the point of origin at Superior Federal #4 to the edge of the drilling pad. The road will lie in an East-to-West direction.
- B. The new road will be 12 feet in width (driving surface) except at the point of origin, adjacent to the existing road, at which point enough additional width will be provided to allow heavy trucks and equipment to turn.
- C. The new road will be covered with the necessary depth of caliche. The surface will be crowned, with drainage on both sides. No turnouts will be necessary.
- D. The center line of the new road has been staked and flagged, and the route of the road is clearly visible.

3. LOCATION OF EXISTING WELLS.

- A. There has been considerable drilling activity in the area as indicated in Exhibit B. There are several producing wells in the area, the nearest one being a gas well at 1980' FSL and 660' FEL of Section 5-T20S-R29E.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES.

- A. There is a producing gas well on this lease at the present time, located in the NE/4, SE/4 of Section 5.
- B. In the event that the well is productive, the necessary production facilities will be installed on the drilling pad. If the well is productive of oil, a gas or diesel self-contained unit will be used to provide the necessary power. No power will be required if the well is productive of gas.

5. LOCATION AND TYPE OF WATER SUPPLY.

- A. It is planned to drill the proposed well with a fresh water system. The water will be obtained from commercial sources and will be hauled to the location by truck over the existing and proposed roads shown in Exhibit A.

6. SOURCE OF CONSTRUCTION MATERIALS.

- A. Any caliche required for construction of the drilling pad and the new access road will be obtained from an existing caliche pit located on State-owned surface in Section 29-T19S-R29E.

7. METHODS OF HANDLING WASTE DISPOSAL.

- A. Drill cuttings will be disposed of in the reserve pits.
- B. Drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry.
- C. Water produced during operations will be collected in tanks until hauled to an approved disposal system or a separate disposal application will be submitted to the USGS for appropriate approval.
- D. Oil produced during operations will be stored in tanks until sold.
- E. Current laws and regulations pertaining to the disposal of human waste will be complied with.
- F. Trash, waste paper, garbage and junk will be buried in a separate trash pit and covered with a minimum of 24 inches of dirt. All waste material will be contained to prevent scattering by the wind.
- G. All trash and debris will be buried or removed from the wellsite within 30 days after finishing drilling and/or completion operations.

8. ANCILLARY FACILITIES.

- A. None required.

9. WELLSITE LAYOUT.

- A. Exhibit D shows the dimensions of the well pad and reserve pits, and the location of major rig components.
- B. The ground surface at the drilling location is relatively flat, with a gentle rise toward the east. The pad area will be covered with six inches of compacted caliche.
- C. The reserve pits will be plastic lined.
- D. The pad and pit area has been staked and flagged.

10. PLANS FOR RESTORATION OF THE SURFACE.

- A. After finishing drilling and/or completion operations, all equipment and other material not needed for further operations will be removed. The location will be cleared of all trash and junk, to leave the wellsite in as aesthetically pleasing a condition as possible.

- B. Unguarded pits, if any, containing fluids will be fenced until they have been filled.
- C. If the proposed well is non-productive, all rehabilitation and/or vegetation requirements of the Bureau of Land Management and the United States Geological Survey will be complied with and will be accomplished as expeditiously as possible. All pits will be filled and leveled within 90 days after abandonment.

11. TOPOGRAPHY.

- A. The wellsite and access route are located in a relatively flat area.
- B. The topsoil at the wellsite is moderately soft sand.
- C. The vegetation cover at the wellsite is moderately sparse, consisting primarily of prairie grass, some yucca and cacti, and miscellaneous weeds. No wildlife was observed, but it is likely that typical semi-arid desert wildlife inhabit the area. The area is used for cattle grazing.
- D. There are no ponds, lakes, streams or rivers within several miles of the wellsite.
- E. There are no occupied dwellings in the vicinity of the location. The nearest windmills are located about two miles south and two miles east of the wellsite.
- F. The wellsite is located on federal surface.
- G. There is no evidence of any archaeological, historical, or cultural sites in the vicinity of the location.

12. OPERATOR'S REPRESENTATIVE

- A. The field representative responsible for assuring compliance with the approved surface use plan is:

Don Cox
Drilling & Production Superintendent
1 Marienfeld Place
Suite 555
Midland, Texas 79701
Telephone:
Office: 915-685-3021
Residence: 915-684-6918
Mobile: 915-336-6003

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 The Petroleum Corporation and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

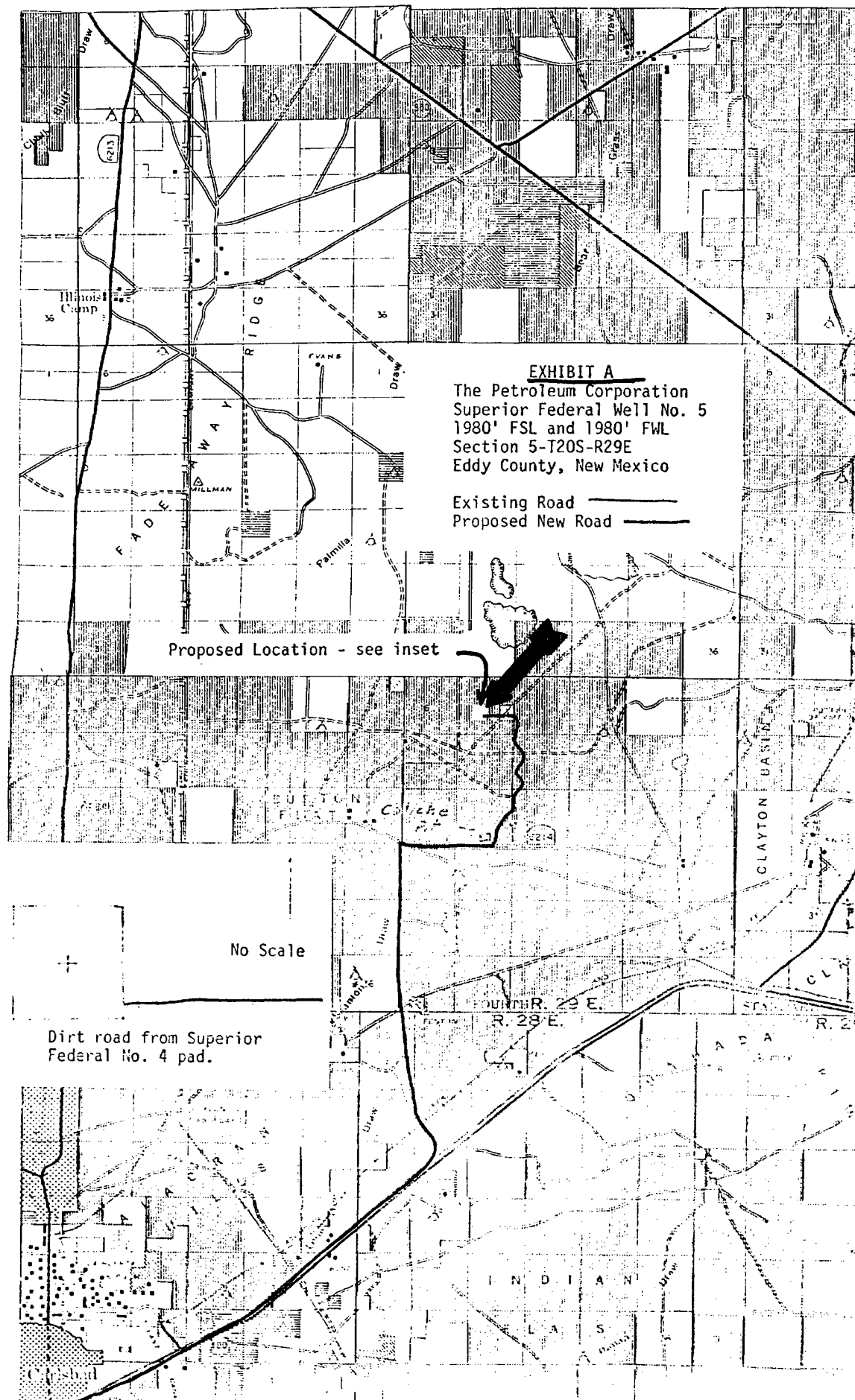
10-1-61
Date

L. E. Thomas
L. E. Thomas
Manager of Operations
The Petroleum Corporation

BUREAU OF LAND MANAGEMENT

R. 28 E.

R. 29 E.



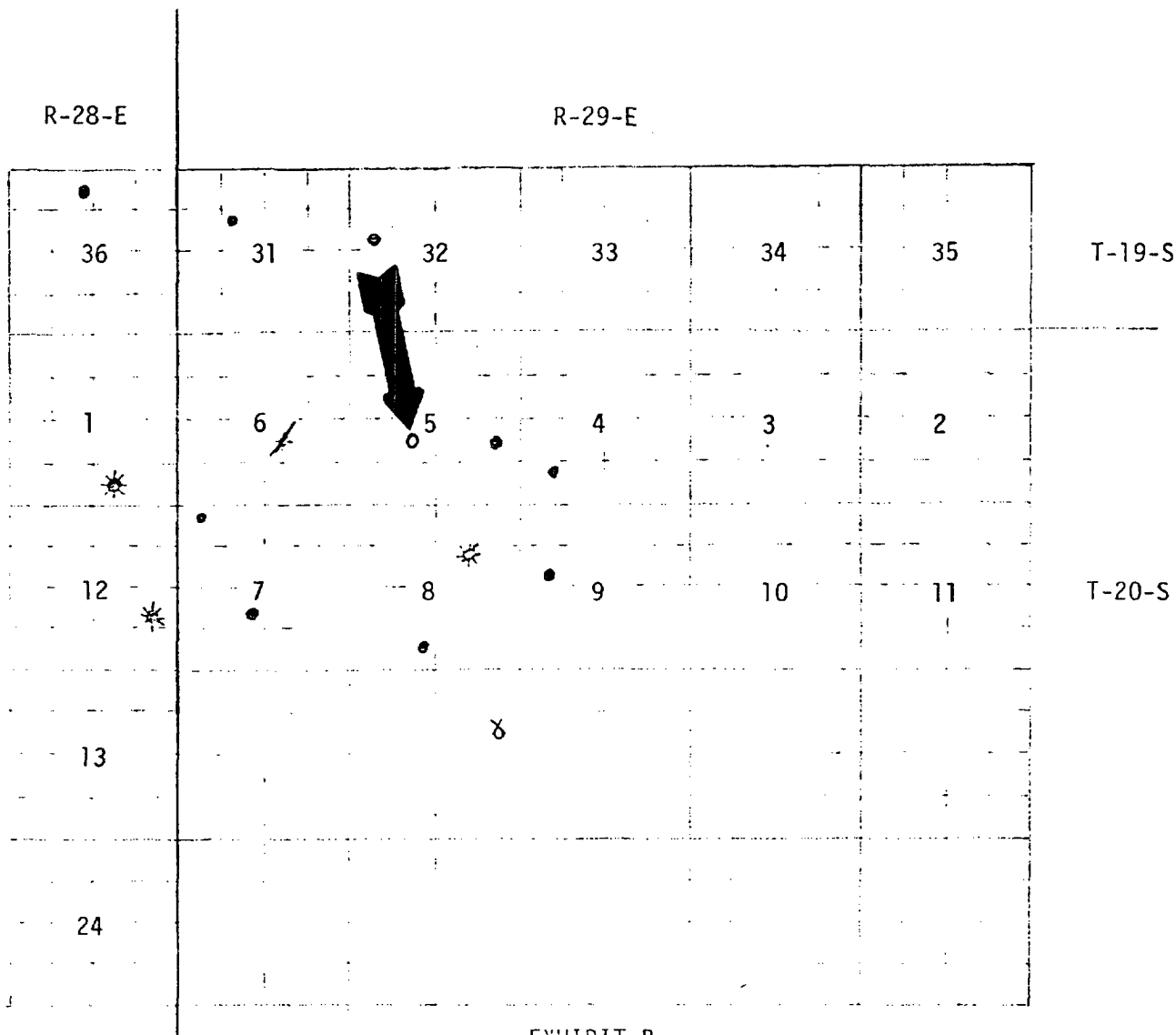


EXHIBIT B

Well Location Map
 The Petroleum Corporation
 Superior Federal Well No. 5
 1930' FWL and 1980' FSL
 Section 5, T20S-R29E
 Eddy County, New Mexico

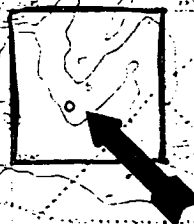
LEGEND

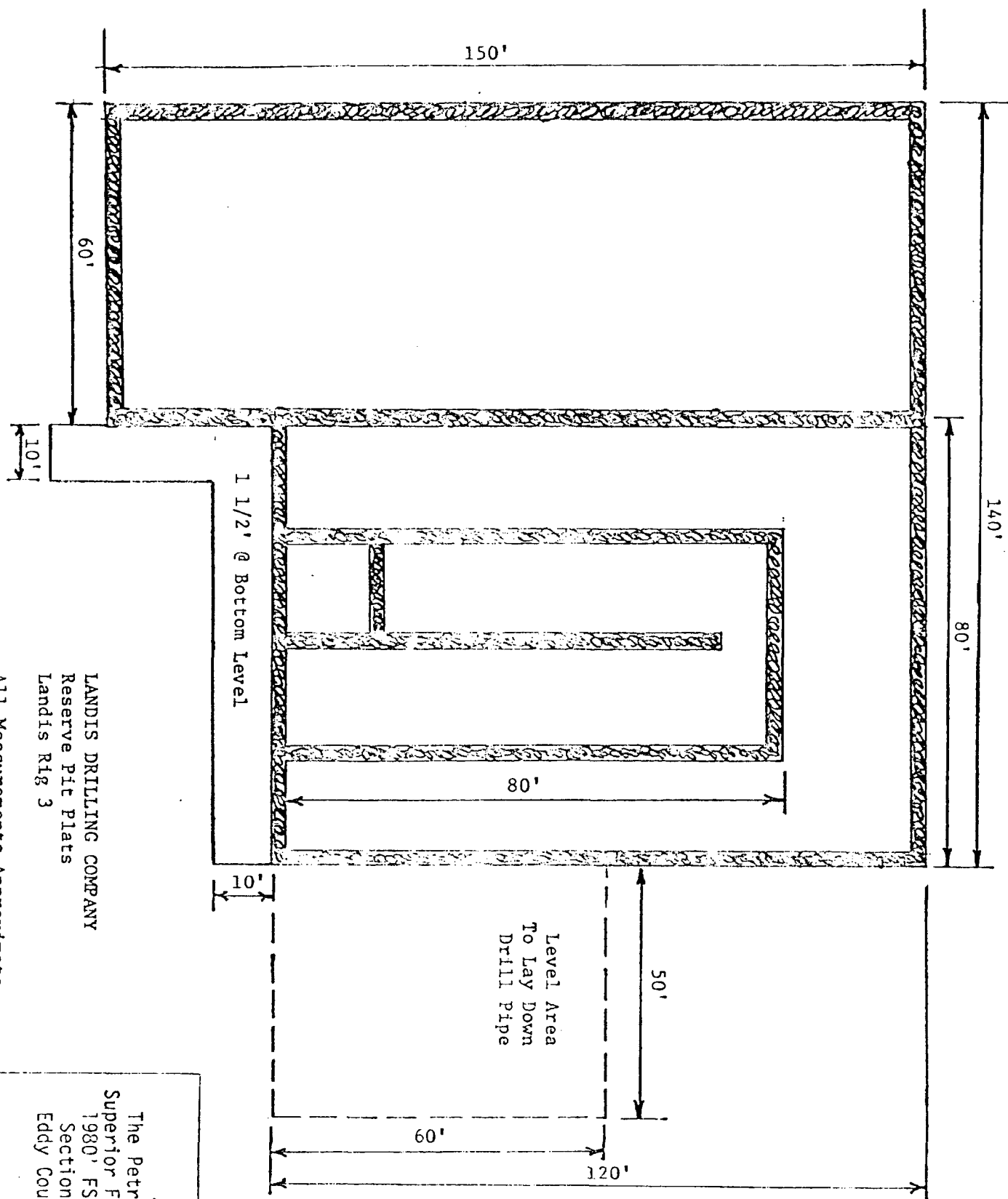
- | | |
|-----------------------|--------------------|
| ○ - Proposed Location | Gas Well Abandoned |
| ● Oil Well | Oil Well Abandoned |
| Gas Well | Windmill |

EXHIBIT C
The Petroleum Corporation
Superior Federal Well No. 5
1930' FSL and 1980' FWL
Section 5-T20S-R29E
Eddy County, New Mexico

Topographic Map

LOCATION





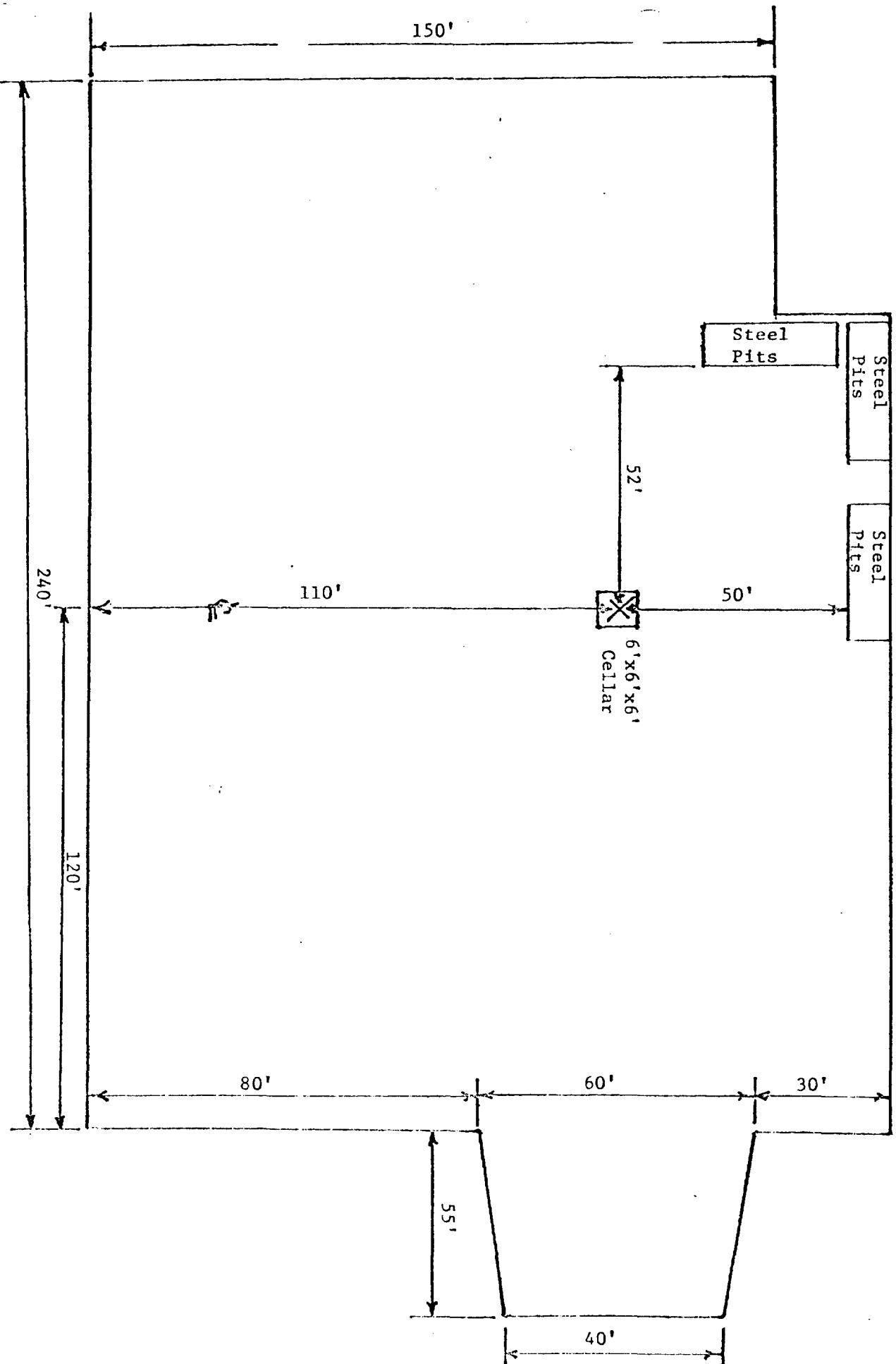
LANDIS DRILLING COMPANY
 Reserve Pit Plats
 Landis Rig 3
 All Measurements Approximate

EXHIBIT D-1
 The Petroleum Corporation
 Superior Federal Well No. 1
 1980' FSL and 1980' FWL
 Section 5-T20S-R29E
 Eddy County, New Mexico

For Reserve Pits
See Attached Drawings

EXHIBIT D-2

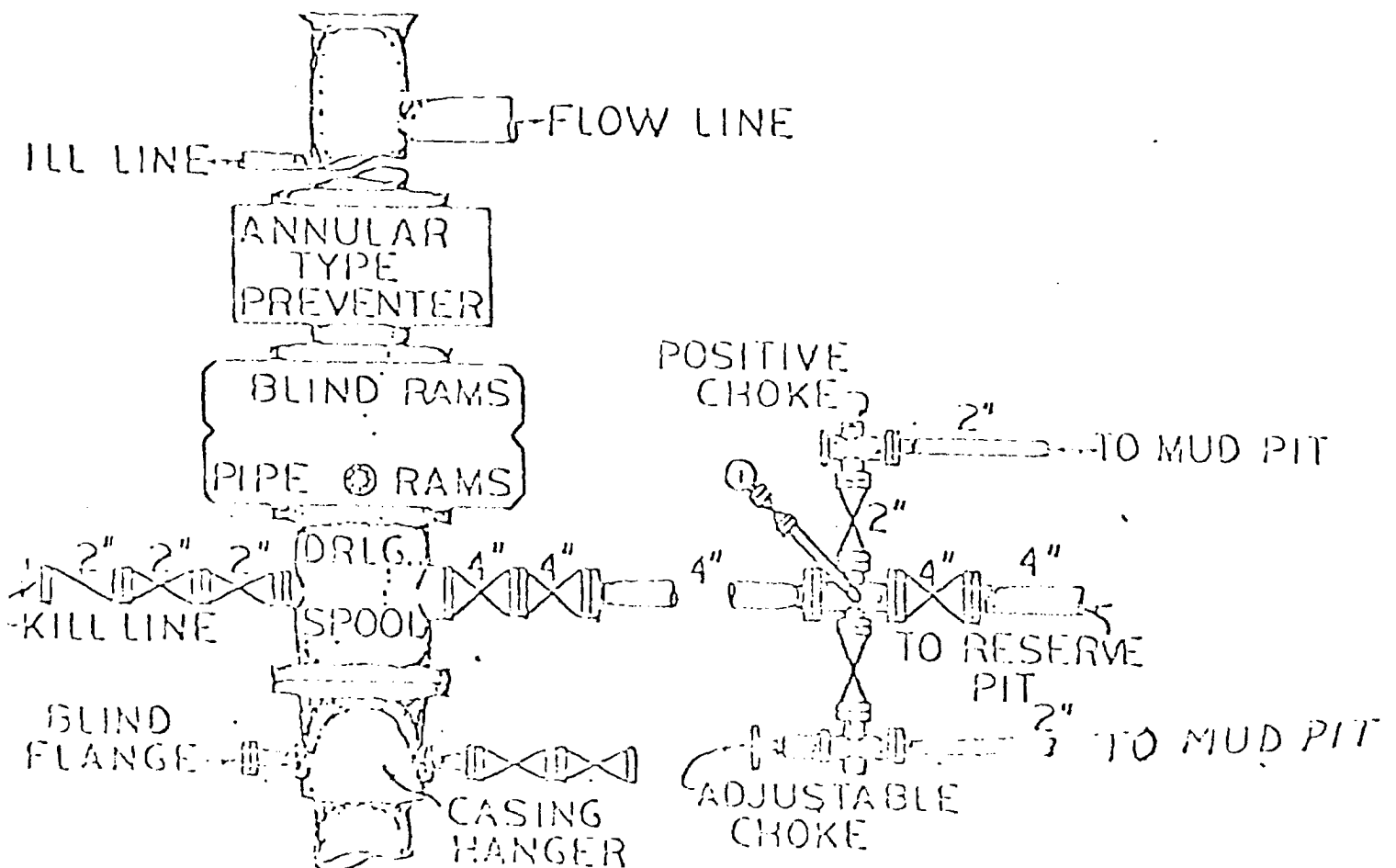
LANDIS DRILLING COMPANY
Standard Location Plat
Landis Rig 3



Scale 1" = 30'

EXHIBIT E
The Petroleum Corporation
Superior Federal Well No. 5
1980' FSL and 1980' FWL
Section 5-T20S-R29E
Eddy County, New Mexico

B.O.P. ARRANGEMENT RIG NO. 3
3000 LB. W.P. B.O.P.
10" CAMERON TYPE-SS HYDRAULIC B.O.P. 3000 P.S.I.
12" G.K. HYDRILL 3000 W.P.
80 GALLON- STATION KOOMEY ACCUMULATOR
3000 LB. W.P. CHOKE MANIFOLD



THE PETROLEUM CORPORATION
OF DELAWARE
3303 Lee Parkway
DALLAS, TEXAS 75219

The Petroleum Corporation
Superior Federal Well No. 5
1980' FSL and 1980' FWL
Section 5-T20S-R29E
Eddy County, New Mexico

DRILLING PROGRAM

SUPERIOR FEDERAL NO. 5
Section 5, T-20-S, R-29-E
Eddy County, New Mexico

LOCATION	1980 feet FSL and 1980 feet FWL of Section 5, T-20-S, R-29-E, Eddy County, New Mexico	
ELEVATION	3,280 feet G. L.	
GENERAL DRILLING PROGRAM	Drill a 15 inch hole to approximately 350 feet and run 11-3/4 inch casing Drill a 11 inch hole to approximately 3,100 feet and run 8-5/8 inch casing Drill a 7-7/8 inch hole to approximately 11,800 feet for total depth	
LOCATION	This will be located on a federal lease and the Bureau of Land Management must be notified prior to any dirt work being done. Also, prior to cementing any casing, the USGS office in Artesia must be notified (505/746- 9838 or 505/746-9839). The man in this office is John Wade. They also require a slush pit and burn pit in addition to the reserve pit. The USGS should also be notified prior to testing the BOP's just before drilling the Wolfcamp formation.	
MUD PROGRAM	15 inch hole	Spud mud
	11 inch hole	Brine water, circulating the reserve pit
	7-7/8 inch hole	Drill with fresh water until reaching 10,000 feet if hole condition will permit; then discontinue circulating reserve pit and use brine water; at 10,000 feet add polymer for control; drill to total depth

Drilling Program
Superior Federal No. 5
Page 2

The Petroleum Corporation
Superior Federal Well No. 5
1980' FSL and 1980' FWL
Section 5 -T20S-R29E
Eddy County, New Mexico

ANTICIPATED FORMATIONS
AND
WELL DEPTHS

Top of Yates	1,200 feet
Top of Seven Rivers	1,425
Top of Delaware	3,225
Top of Bone Springs	5,025
Top of Wolfcamp	9,100
Top of Strawn	10,200
Top of Atoka	10,500
Top of Morrow	10,800
Top of Barnett Shale	11,450

Open hole drill stem tests will be made of all significant shows of hydrocarbons dependent upon satisfactory hole conditions

SAMPLE PROGRAM

Ten foot (10') samples from base of intermediate casing to total depth

ELECTRICAL LOGGING
PROGRAM

Dual Laterolog will be run from 3,100 feet to total depth

Compensated Neutron, Density Log and Borehole Compensated Sonic over all potential zones

SAFETY EQUIPMENT

PVT and flow line sensor from 3,100 feet to total depth. SWACO hydraulic choke from 3,100 feet to total depth. Rotating head, hydril and double ram preventors from 3,100 feet to total depth. Hydril and double ram preventors from 400 feet to 3,100 feet. Blow-out preventors to be pressure tested by Yellow Jacket prior to drilling into the Wolfcamp formation.

CONTRACTOR

Landis Drilling Company Rig No. 3
Hondo Drilling Company, Rig No. 4

CASING PROGRAM

11-3/4 inch	350 feet of 47#/ft, K-55, ST&C
8-5/8 inch	2,200 feet of 24#/ft, K-55, ST&C
	900 feet of 32#/ft, K-55, ST&C
5-1/2 inch	2,000 feet of 11.6#/ft, N-80, Buttress
	8,300 feet of 11.6#/ft, N-80, LT&C
	1,500 feet of 13.5#/ft, N-80, LT&C

THE PETROLEUM CORPORATION
OF DELAWARE
3303 Lee Parkway
DALLAS, TEXAS 75219

The Petroleum Corporation
Superior Federal Well No. 5
1980' FSL and 1980' FWL
Section 5-T20S-R29E
Eddy County, New Mexico

PROPOSED DRILLING FLUIDS PROGRAM

Superior Federal No. 5
Section 5, T-20-S, R-29-E
Eddy County, New Mexico

<u>DEPTH</u>	<u>DRILLING FLUIDS</u>
Surface to 350 feet	Spud mud with fresh water gel and lime; 9.2#/gal; 32 viscosity
Run 11-3/4 inch casing set at 350 feet	
350 feet to 3100 feet	Brine water with salt gel and lost circulation material as required; 9.3#/gal; 30 to 34 viscosity
Run 8-5/8 inch casing set at 3100 feet	
3100 feet to 7500 feet	Fresh water with NaOH for pH control, 8.5#/gal; 28 viscosity
7500 feet to 10,000 feet	Fresh water as long as possible. Discontinue circulating through the reserve pit. Mud up with salt gel. Three to five percent oil may be justified. 9.3#/gal; pH 9.5; 34-36 viscosity
10,000 feet to 10,800 feet	Lower water loss to 6 cc before drilling the Morrow formation. Water loss to be controlled by increasing oil content. 9.8#/gal; 38-46 viscosity