

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

## 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  
MESA PETROLEUM CO. ✓

3. ADDRESS OF OPERATOR  
1000 VAUGHN BUILDING/MIDLAND, TEXAS 79701

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*  
At surface  
660' FNL & 1980' FEL  
At proposed prod. zone  
SAME

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
38 MILES NORTH/NORTHEAST OF ROSWELL, NEW MEXICO

15. DISTANCE FROM PROPOSED\*  
LOCATION TO NEAREST  
PROPERTY OR LEASE LINE, FT.  
(Also to nearest drlg. unit line, if any)  
660'

16. NO. OF ACRES IN LEASE  
640

17. NO. OF ACRES ASSIGNED  
TO THIS WELL  
160

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

19. PROPOSED DEPTH  
4350'

20. ROTARY OR CABLE TOOLS  
ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
4127.5' GR

22. APPROX. DATE WORK WILL START\*  
MAY 12, 1981

5. LEASE DESIGNATION AND SERIAL NO.  
NM 33266

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
RECEIVED

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME  
MAR 25 1981  
HUGGINS FEDERAL

9. WELL NO.  
O.C.D.  
2 ARTERIA OFFICE

10. FIELD AND POOL, OR WILDCAT  
UNDESIGNATED ABO

11. SEC., T., R., M., OR BLM.  
AND SURVEY OR AREA  
U L - B  
SEC. 17, T5S, R24E

12. COUNTY OR PARISH  
CHAVES

13. STATE  
NEW MEXICO

## 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"	48#	800'	CIRCULATE TO SURFACE
11"	8 5/8"	24#	1600'	SUFFICIENT TO ISOLATE WATER, O&G
7 7/8"	4 1/2"	10.5#	4350'	SUFFICIENT TO COVER ALL PAY

Propose to drill 17 1/2" hole on air or foam to 800' or deeper to set 13 3/8" surface casing. Will cement to surface then reduce hole to 11" and drill to 1600'. Will set 8 5/8" casing if water zones have been encountered or omit if not. Will reduce hole to 7 7/8", install ram type BOPs, and drill to total depth using air, foam, or mud as required. After log evaluation, 4 1/2" casing may be run and cemented with sufficient kinds and amounts to isolate and seal off any fresh water, oil, or gas zones encountered.

Gas Sales Are Not Dedicated.

XC: USGS (6), TLS, CEN RCDS, ACCTG, HOBBS, LAND, MEC, PARTNERS, FILE

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 R. E. Thacker TITLE REGULATORY COORDINATOR DATE FEBRUARY 25, 1981

(This space for Federal or State use only)

PERMIT NO. (O&G Sec.) GEORGE H. STINE APPROVAL DATE \_\_\_\_\_

APPROVED BY MAR 23 1981 TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:  
JAMES A. GILLHAM  
DISTRICT SUPERVISOR

\*See Instructions On Reverse Side

**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.

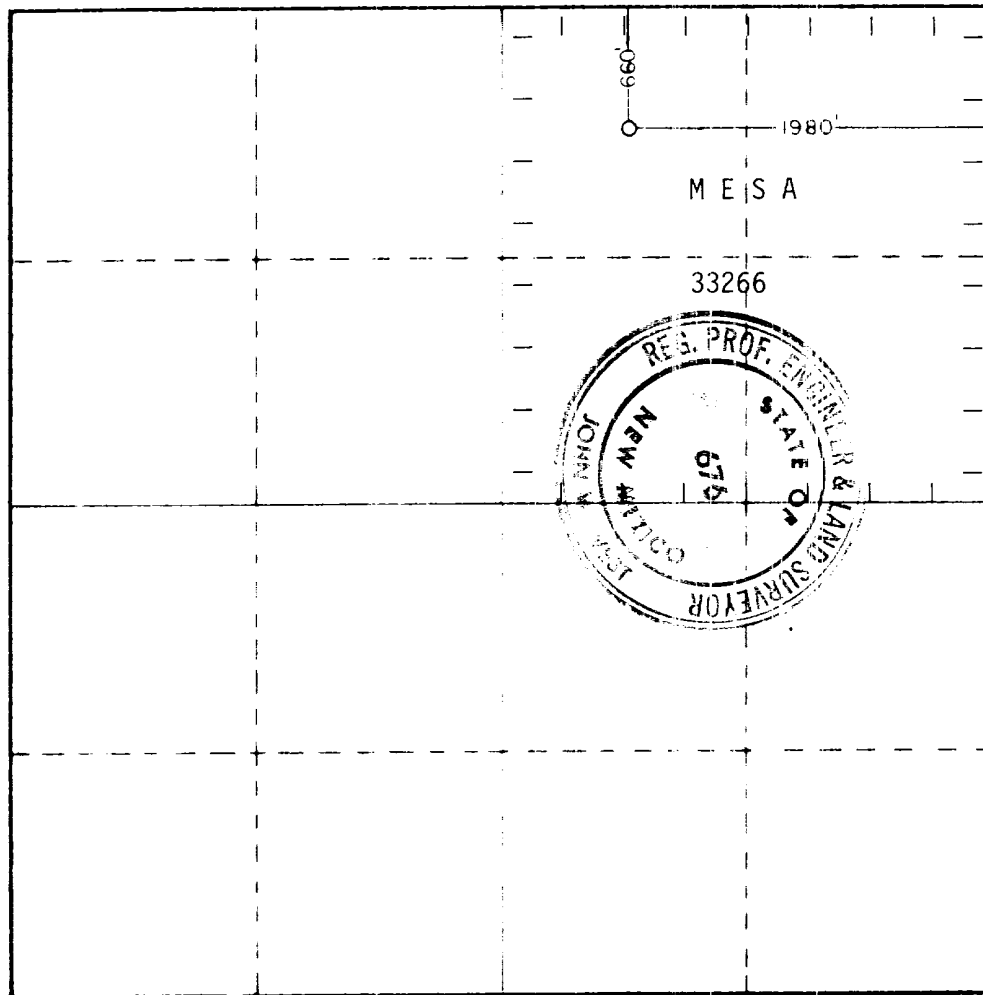
Operator <b>Mesa Petroleum Co.</b>			Lease <b>Higgins Fed.</b>		Well No. <b>2</b>
Unit Letter <b>B</b>	Section <b>17</b>	Township <b>5 S</b>	Range <b>24 E</b>	County <b>Chaves County</b>	
Actual Footage Location of Well: <b>660</b> feet from the <b>North</b> line and <b>1980</b> feet from the <b>East</b> line					
Ground Level Elev. <b>4127.5</b>	Producing Formation <b>ABO</b>	Pool <b>UNDESIGNATED Abo</b>		Dedicated Acreage: <b>NE/4 160</b> Acres	

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 \_\_\_\_\_

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

*R. E. Mathis*

Name  
**R. E. MATHIS**  
Position  
**REGULATORY COORDINATOR**  
Company  
**MESA PETROLEUM CO.**

Date  
**FEBRUARY 25, 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  
**2-9-81**

Registered Professional Engineer and/or Land Surveyor

*John W. West*

Certificate No. **JOHN W. WEST 676**  
**PATRICK A. ROMERO 8868**  
**Ronald J. Eidson 3239**

APPLICATION FOR DRILLING

MESA PETROLEUM CO.  
HUGGINS FEDERAL #2  
660' FNL & 1980' FEL, SEC 17, T5S, R24E  
CHAVES COUNTY, NEW MEXICO

LEASE NO: NM 33266

In conjunction with Form 9-331C, Application For Permit to Drill subject well, the following additional information is provided:

1. Applicable portions of the GENERAL REQUIREMENTS FOR OIL AND GAS OPERATIONS ON FEDERAL LEASES, Roswell District, Geological Survey of September 1, 1980 will be adhered to.
2. Geological markers are estimated as follows:

SEVEN RIVERS	SURFACE
SAN ANDRES	498'
GLORIETTA	1383'
TUBB	2928'
ABO	3588'
HUECO	4288'
3. Hydrocarbon bearing strata may occur in the Abo formation. No fresh water is expected to be encountered below 800'.
4. The Casing and Blowout Preventer Program will be determined by hole conditions as encountered. Anticipate drilling with air or foam using ram type preventer and rotating head for well control. The 13 3/8" casing will be set at approximately 800' to protect any fresh water zones and cemented to the surface. The 8 5/8" casing will be set at approximately 1600' if water zones have been encountered or omitted if not and ram type preventers installed. Sufficient amounts and kinds of cement would be used to ensure any water, gas, or oil zones encountered are isolated and shut off down to the casing point if run. The 4 1/2" production casing will be set at total depth or shallower depending upon the depth of the deepest commercial hydrocarbon bearing strata encountered.
5. No drill stem tests or coring program is planned. The logging program may consist of a GR-CNL from surface to total depth and FDC from casing point to total depth.
6. Anticipated drilling time is fifteen days with completion operations to follow as soon as a completion unit is available.

## MULTI-POINT SURFACE USE AND OPERATION PLAN

MESA PETROLEUM CO.  
HUGGINS FEDERAL #2  
660' FNL & 1980' FEL, SEC 17, T5S, R24E  
CHAVES COUNTY, NEW MEXICO

LEASE NO: NM 33266

This plan is submitted with the Application for Permit to Drill the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operational plan in both the actual and post drilling-completion operations.

### 1. Existing Roads

- A. Exhibit I is a portion of a highway map showing the location of the proposed well as staked. The proposed well is approximately 38 miles north/northeast of Roswell, New Mexico.
- B. Directions: Travel north of Roswell on US Highway 285 for approximately 24 miles (marker 139) then travel east/northeast for 11.5 miles on county road. Turn west on lease road (Stancel Fed #1) and follow northwesterly (past the Stancel Fed #2, Huggins Fed #1, Camack Fed 1 & 2) for 3.7 miles (3/10 mile past Camack Fed #2) and then turn south 1/2 mile then west 1/10 mile to the location.

### 2. Planned Access Road

- A. Length and width: The new access road will be 12' wide (16' ROW) and approximately 7/10 mile of new road and 3.7 miles of ROW approved under APD's for the Stancel Fed #1 & #2, Huggins Fed #1 & Camack Fed #1 and #2. (See USGS records for Roswell area).  
(See Exhibit II)
- B. Construction: The new road will be constructed by grading and topping with compacted caliche. The surface will be crowned, with drainage on both sides. (See Exhibit III)
- C. Culverts, Gates and Cattleguards: One cattleguard will be installed.
- D. Cut and Fill: In order for the location to be level, approximately 3' of cut from the north side will be moved to the south side for fill.

### 3. Location of Existing Wells

Existing wells within a one-mile radius are depicted by Exhibit IV.

4. Location of Existing and/or Proposed Facilities

If the well proves to be commercial, the necessary production facilities, gas separation-process equipment and tank battery, will be installed on the drilling pad.

5. Location and Type of Water Supply

It is planned to drill the proposed well with air. If water is needed, it will be obtained from commercial sources and will be trucked to the wellsite over the existing roads and the proposed access road shown on Exhibits I and II or piped in by temporary line from a nearby source.

6. Source of Construction Materials

Caliche for surfacing the road and the wellsite pad will be obtained by the dirt contractor from the Federal Government or private sources. Top soil from the location will be stockpiled near the location for future rehabilitation use. No surface materials will be disturbed except for those necessary for the actual grading and leveling of the drillsite and access road. Probable pit is located: NE/4, Sec. 22, T5S, R24E, Chaves County, New Mexico.

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. All pits will be fenced with normal fencing material to prevent livestock from entering the area.
- D. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or separate disposal application will be submitted to the USGS for approval.
- 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 finished and/or completion operations.

## Multi-Point Surface Use and Operation Plan

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8. Ancillary Facilities: None required.

9. Wellsite Layout:

- A. Exhibit V shows the relative location and dimensions of the well pad, reserve pits, and major rig components. The pad and pit area has been staked and flagged.
- B. Some leveling of the wellsite will be required. See Exhibit III for additional details.
- C. The reserve pit will be plastic lined.

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 location cleaned of all trash and junk to leave the wellsite in an aesthetically pleasing a condition as possible.
- B. Any unguarded pits containing fluids will be fenced until they are 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, if drying conditions permit.

11. Other Information:

- A. Topography: The land surface in the vicinity of the wellsite is gently sloping to the south.
- B. Soil: The topsoil at the wellsite is sandy loam.
- C. Flora and Fauna: The vegetative cover consists of Tabosa and other prairie grasses, creosote bush, yucca, cactus, prairie flowers and other miscellaneous desert growth. Wildlife in the area probably includes those typical of semi-arid desert land. The area is used for grazing.
- D. Ponds and Streams: Huggins Draw is 1.2 miles to the south.
- E. Residences and Other Structures: There are no residences or other structures in the vicinity of the proposed well.
- F. Land Use: Grazing.
- G. Surface Ownership: The wellsite is on private surface (B. M. Corn).

# Multi-Point Surface Use and Operation Plan

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- H. There is no evidence of any major archaeological, historical, or cultural sites in the area. NMAS, Inc. has conducted an archaeological study of this site and provides this report to interested parties.

## 12. Operator's Representatives:

- A. The field representatives responsible for assuring compliance with the approved surface use and operations plan are as follows:

J. Wootten  
P. O. Box 1756  
Hobbs, New Mexico  
(505-393-4425) - Office  
(505-393-6033) - Home

C. C. Wheeler  
1000 Vaughn Building  
Midland, Texas 79701  
(915-683-5391) - Office  
(915-683-5391) - Home

## 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 Mesa Petroleum Co. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

February 25, 1981  
\_\_\_\_\_  
Date

*Michael P. Houston*  
\_\_\_\_\_  
Michael P. Houston  
Operations Manager

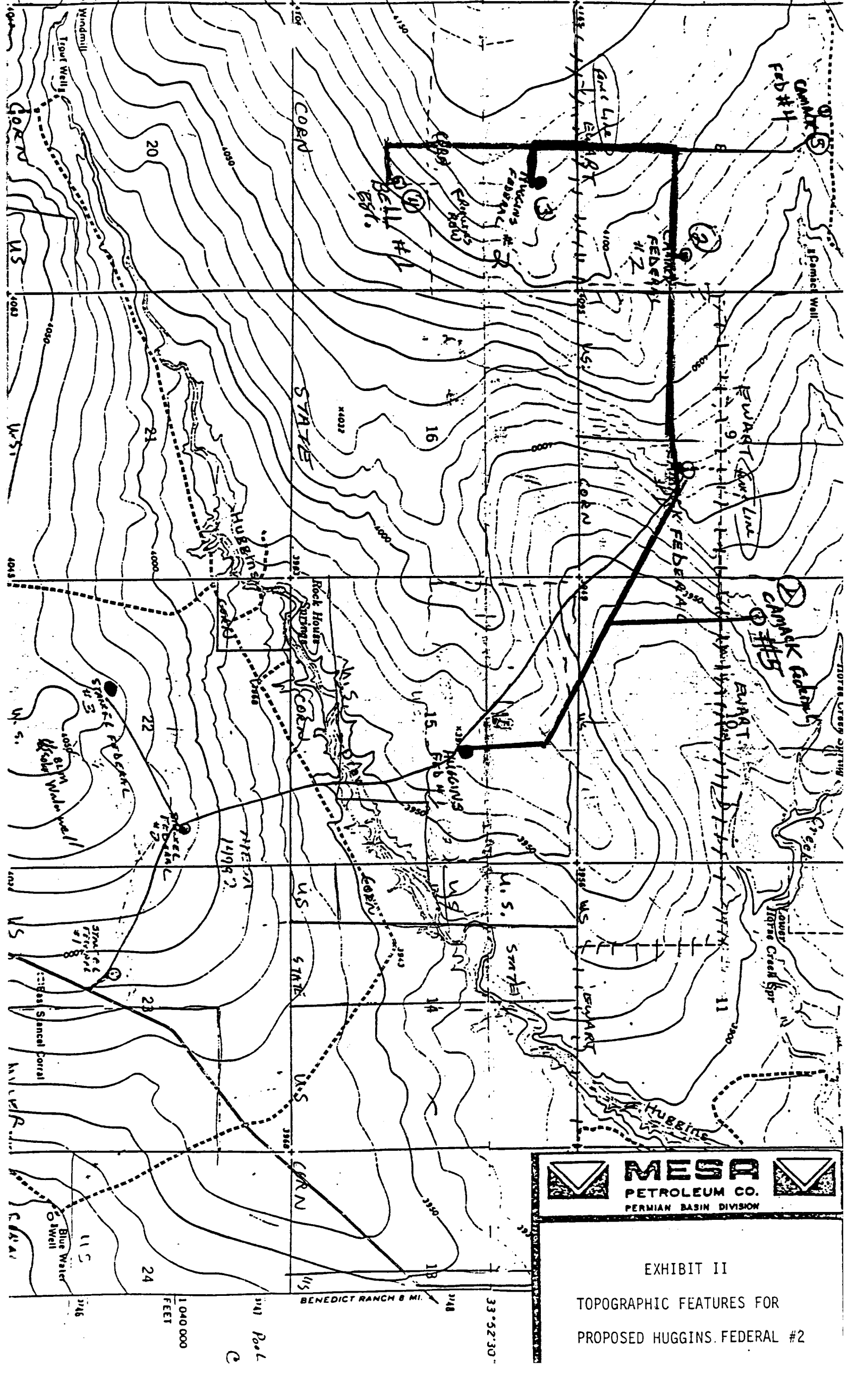


EXHIBIT II  
TOPOGRAPHIC FEATURES FOR  
PROPOSED HUGGINS FEDERAL #2

1:040,000  
FEET

BENEDICT RANCH 8 MI.

33°52'30"

114°00'00"

Pool

Windmill  
Toot Well  
GORN  
US  
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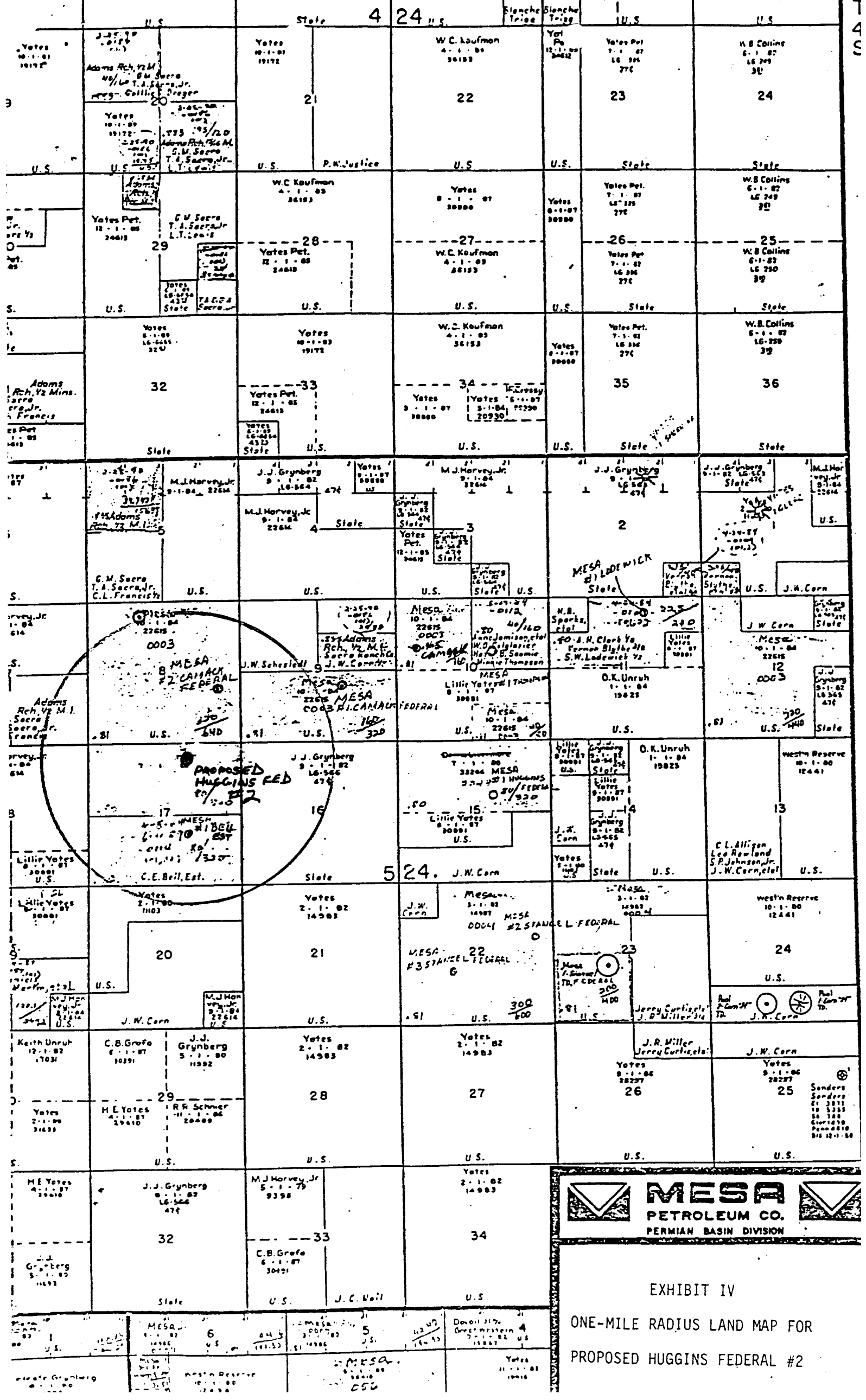
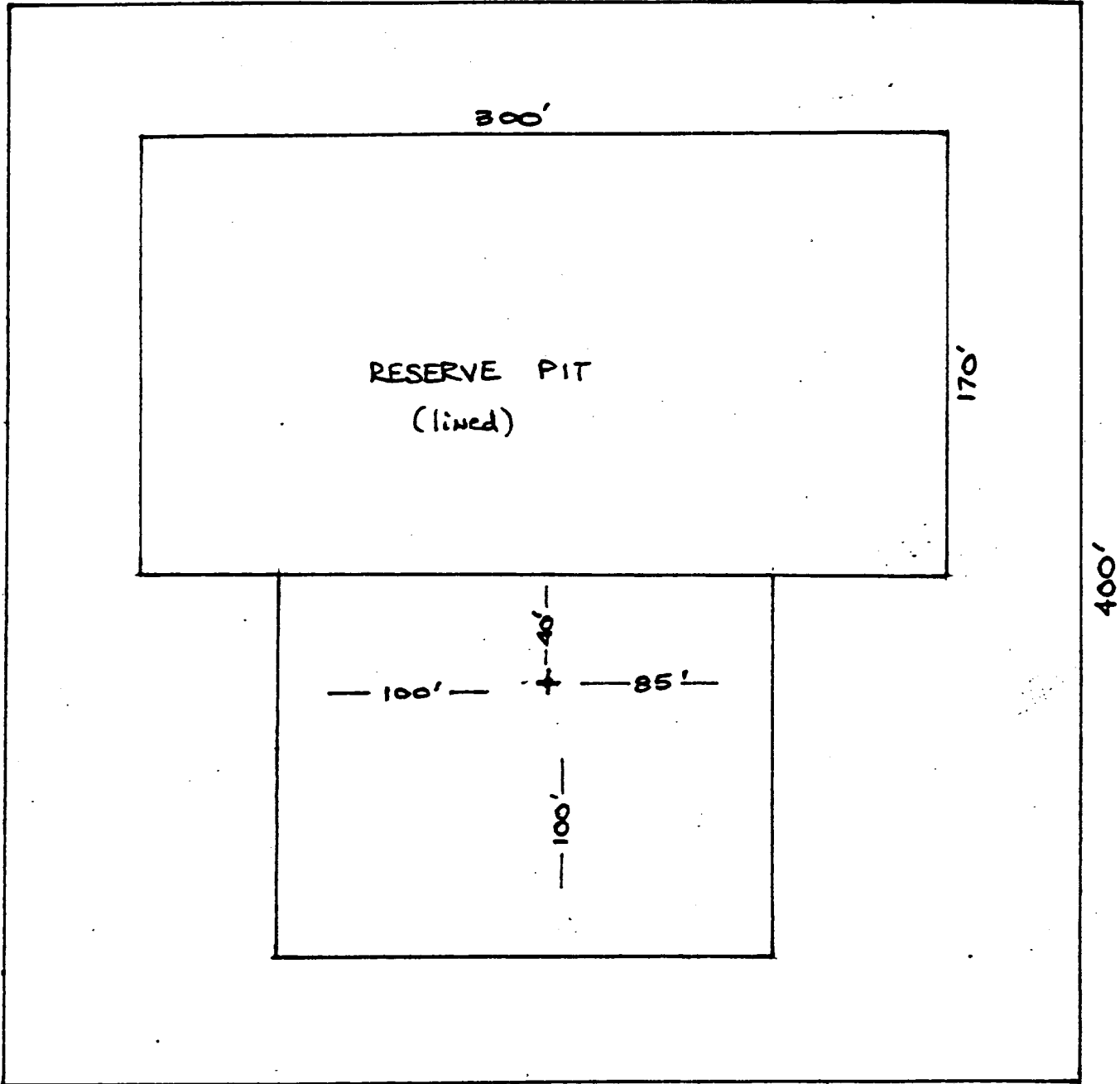
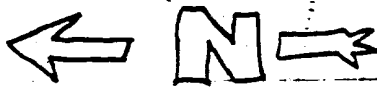


EXHIBIT IV  
ONE-MILE RADIUS LAND MAP FOR  
PROPOSED HUGGINS FEDERAL #2



ACCESS  
ROAD

