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.

30-005-61089

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: NM 36647

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

RECEIVED
AUG 21 1981
O. C. D.
ARTESIA, OFFICE

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

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

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: MACHO FEDERAL

2. NAME OF OPERATOR: MESA PETROLEUM CO.

9. WELL NO.: 5

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

10. FIELD AND POOL, OR WILDCAT: UNDESIGNATED ABO

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

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

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: UL P
SEC 6, T7S, R23E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 27 MILES NORTH OF ROSWELL

12. COUNTY OR PARISH: CHAVES

13. STATE: NEW MEXICO

15. 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	17. NO. OF ACRES ASSIGNED TO THIS WELL
1980'/660'	2209.13	160
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
2700'	3450'	ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 4109.6' GR

22. APPROX. DATE WORK WILL START*: DECEMBER 1, 1981

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	8 5/8"	24#	1500'	SURFACE
7 7/8"	4 1/2"	10.5#	3450'	ISOLATE WTR, O&G

Propose to drill 12 1/4" hole to approximately 1500' to set 8 5/8" surface casing and cement to surface. Will nipple up ram type BOP's and reduce hole to 7 7/8" to drill to total depth. Drilling medium will be 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 Dedicated.

Master ID-1
API + NL B...
8-27-81

XC: USGS (6), TLS, CEN RCDS, ACCTG, ROSWELL, MEC, LAND, 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. Mathis TITLE REGULATORY COORDINATOR DATE AUGUST 13, 1981

(This space for Federal or State office use)

APPROVED
(Orig. Sgd.) GEORGE H. STEWART
AUG 19 1981

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

FOR JAMES A. GILLHAM
DISTRICT SUPERVISOR

*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	Lease	Well No.
MESA PETROLEUM COMPANY	MACHO FEDERAL	5

Unit Letter	Section	Township	Range	County
P	6	7 South	23 East	Chaves

Actual Footage Location of Well:
660 feet from the South line and 660 feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
4109.6'	ABO	UNDESIGNATED Abo	SE/4 160 Acres

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

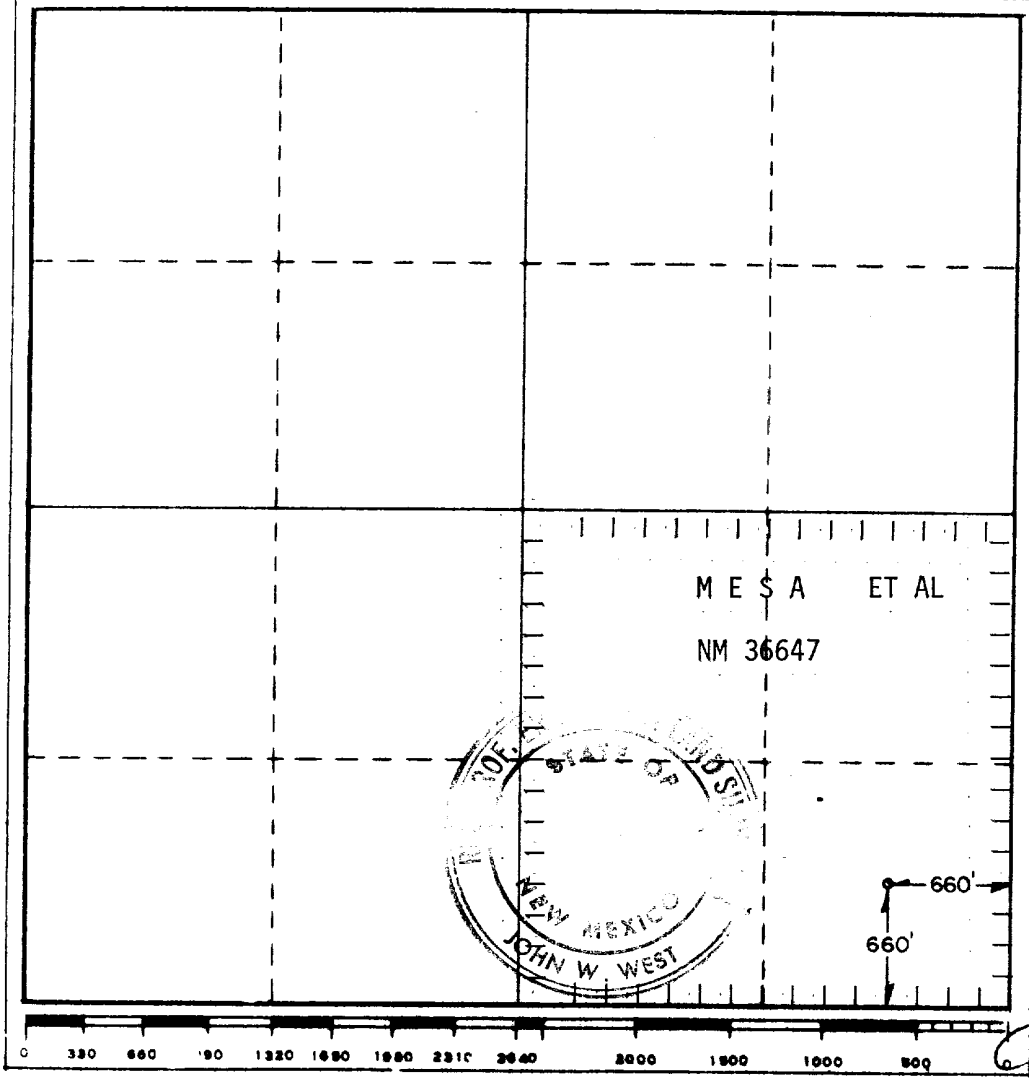
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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.

R. E. Mathis

Name: R. E. MATHIS

Position: REGULATORY COORDINATOR

Company: MESA PETROLEUM CO.

Date: AUGUST 13, 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: 6/29/81

Registered Professional Engineer and/or Land Surveyor

John W. West

Certificate No. JOHN W. WEST 676
PATRICK A. ROMERO 6668
Ronald J. Eidson 3239

APPLICATION FOR DRILLING

MESA PETROLEUM CO.
MACHO FEDERAL #5
660' FSL & 660' FEL, SEC 6, T7S, R23E
CHAVES COUNTY, NEW MEXICO

LEASE NO: NM 36647

In conjunction with Form 9331-C, 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:

SAN ANDRES	SURFACE
GLORIETA	656'
YESO	834'
TUBB	2182'
ABO	2817'

3. Hydrocarbon bearing strata may occur in the Abo formation(s). No fresh water is expected to be encountered below 1000'.

4. The Casing and Blowout Preventer Program will be determined by hole conditions as encountered. (See Exhibit VI) Anticipate drilling with air or foam using ram type preventer and rotating head for well control. The 8 5/8" casing will be set at approximately 1500' to protect any fresh water zones and cemented to the surface. 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. 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.

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 ten days with completion operations to follow as soon as a completion unit is available.

MULTI-POINT SURFACE USE AND OPERATION PLAN

MESA PETROLEUM CO.
MACHO FEDERAL #5
660' FSL & 660' FEL, SEC 6, T7S, R23E
CHAVES COUNTY, NEW MEXICO

LEASE NO: NM 36647

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 27 miles North of Roswell, New Mexico.

B. Directions: Travel North from Roswell on US Highway 285 to just past Mile Marker 132 and turn West thru cattleguard for approximately 3 miles. Turn South at ranch house 3/10 mile then cross the Macho Draw and follow lease 1 1/2 miles to the location.

2. Planned Access Road:

A. Length and width: The new access road will be 12' wide (20' ROW) and approximately 1/2 mile of upgraded 2-track.

(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: None.

D. Cut and Fill: In order for the location to be level, approximately 3' to 5' will be excavated to form pits.

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 needed, water will be obtained from commercial sources and will be trucked to the wellsite over the existing roads and proposed access road shown on Exhibits I and II or piped in from a nearby source.

6. Source of Construction Materials:

Caliche for surfacing the road and wellsite pad will be obtained by the dirt contractor from an approved pit. Probable pit is located: Near US 285.

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.

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 may be required. See Exhibit III for additional details.

C. The reserve pit will not 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 karst in nature with typical arrid drainage patterns in all directions.

B. Soil: The topsoil at the wellsite is sandy loam.

C. Flora and Fauna: See the Archaeological Report filed by NMAS, Inc. for a description of vegetative types.

D. Ponds and Streams: China Draw is 1000' to the Southwest and Arroyo del Macho is 1/2 mile to the East.

E. Residences and Other Structures: None.

F. Land Use: Grazing.

G. Surface Ownership: The wellsite is on Federal surface.

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. James
P. O. Box 298
Roswell, New Mexico
(505-622-0992) - Office
(505-622-0234) - Home

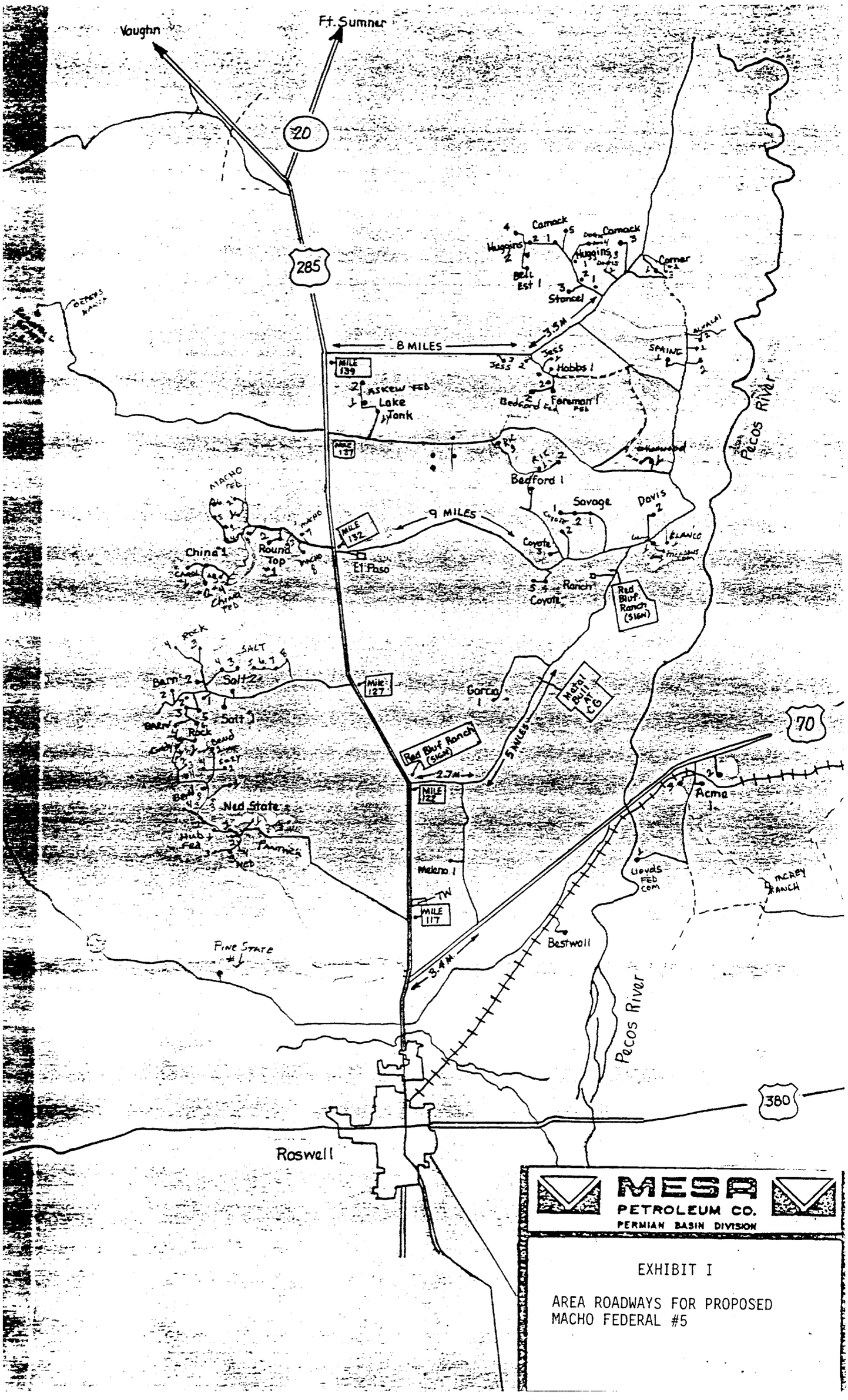
W. R. Miertschin
1000 Vaughn Building
Midland, Texas 79701
(915-683-5391) - Office
(915-682-6535) - Home

13. Certification:

I hereby certify that I, or person 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.

August 13, 1981
DATE

Michael P. Houston
MICHAEL P. HOUSTON
OPERATIONS MANAGER



MESA PETROLEUM CO.
PERMIAN BASIN DIVISION

EXHIBIT I

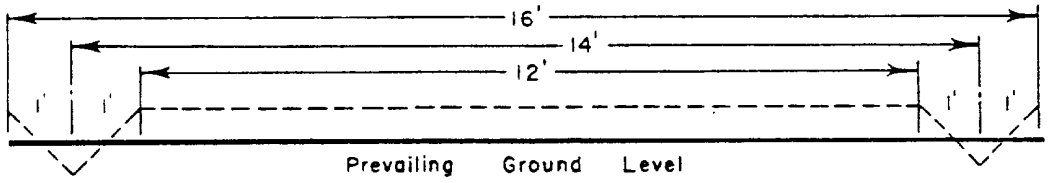
AREA ROADWAYS FOR PROPOSED
MACHO FEDERAL #5

MESA
PETROLEUM CO.
PERMIAN BASIN DIVISION

EXHIBIT II

TOPOGRAPHIC FEATURES FOR PROPOSED
MACHO FEDERAL #5

R - O - W 16'



ROADWAY CROSS SECTION

Horizontal Scale 1" = 3'

LOCATION CROSS SECTION

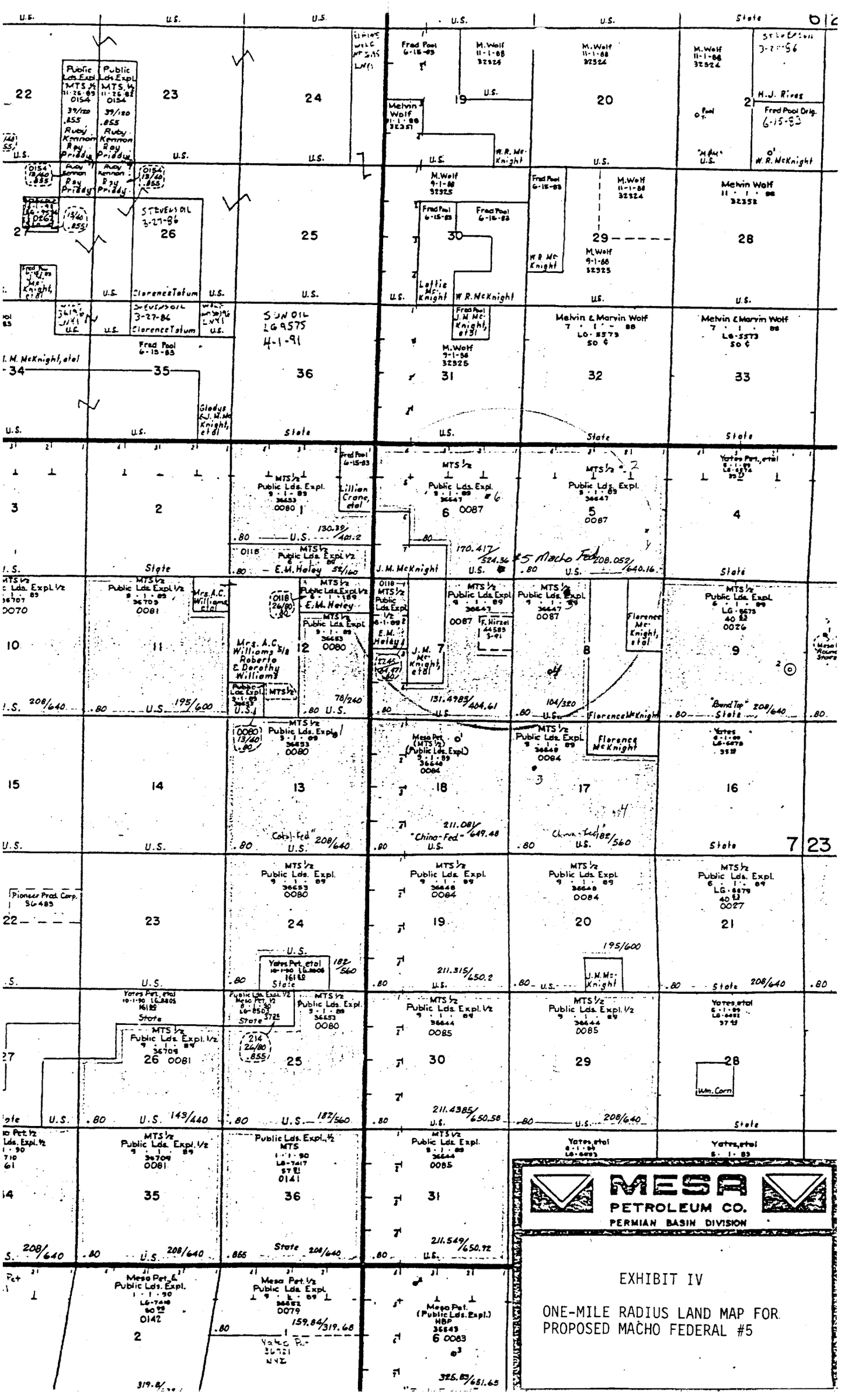
Horizontal Scale 1" = 50'

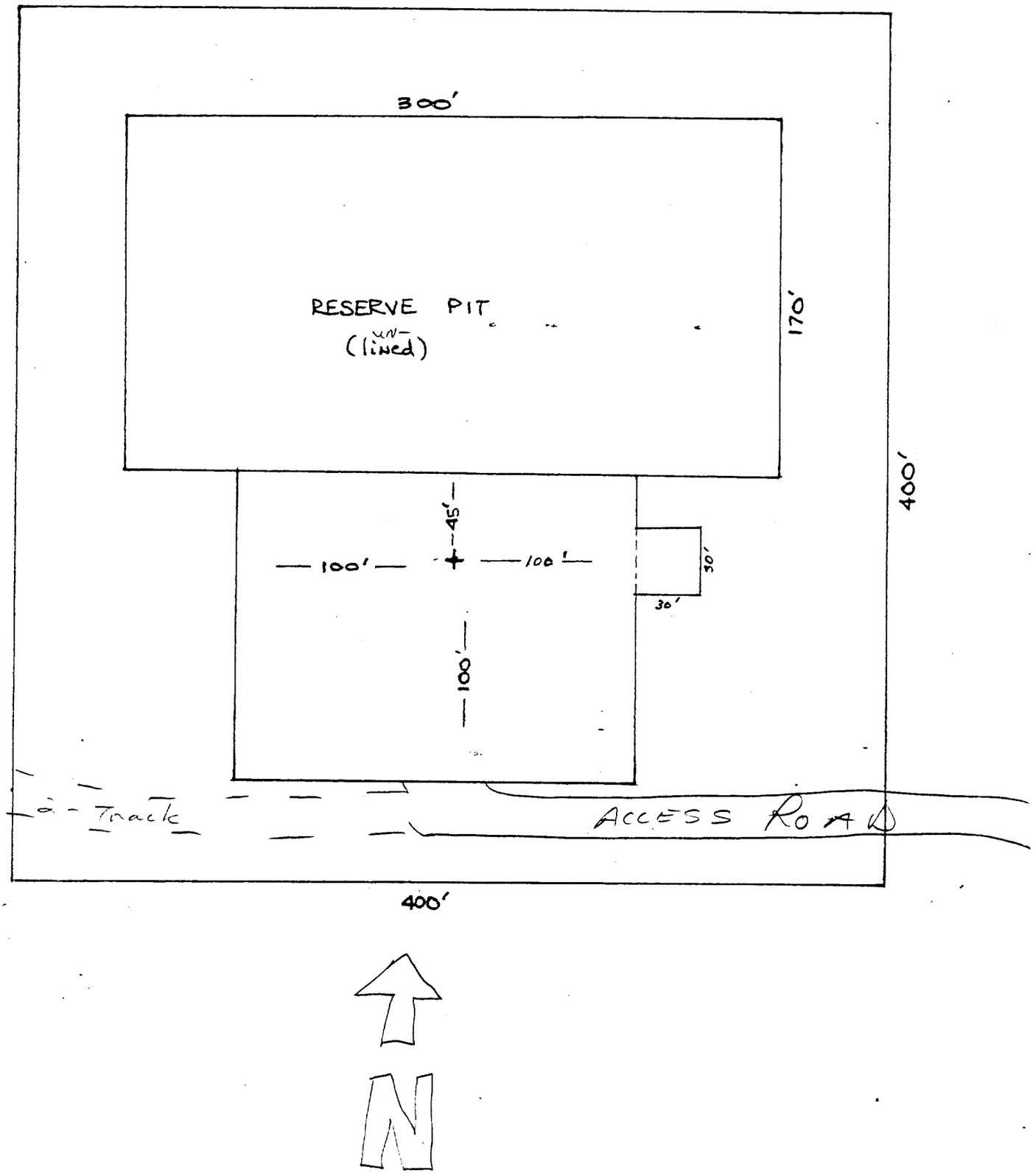
MESA PETROLEUM CO.
PERMIAN BASIN DIVISION

EXHIBIT III

LOCATION CONSTRUCTION

BY REM	DRAWN BY: M.L.P.
DATE 3-5-80	SCALE AS NOTED


MESA
PETROLEUM CO.
PERMIAN BASIN DIVISION
EXHIBIT IV
ONE-MILE RADIUS LAND MAP FOR
PROPOSED MACHO FEDERAL #5

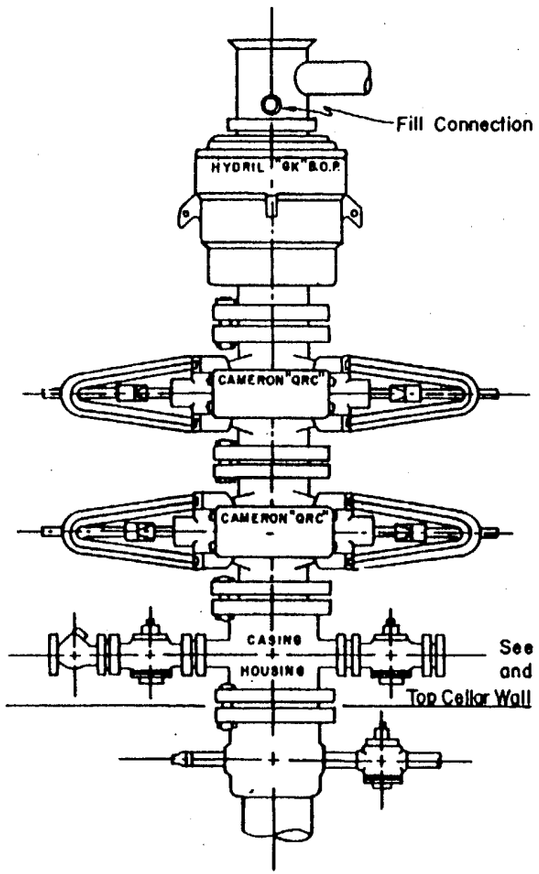


MESA PETROLEUM CO.
PERMIAN BASIN DIVISION

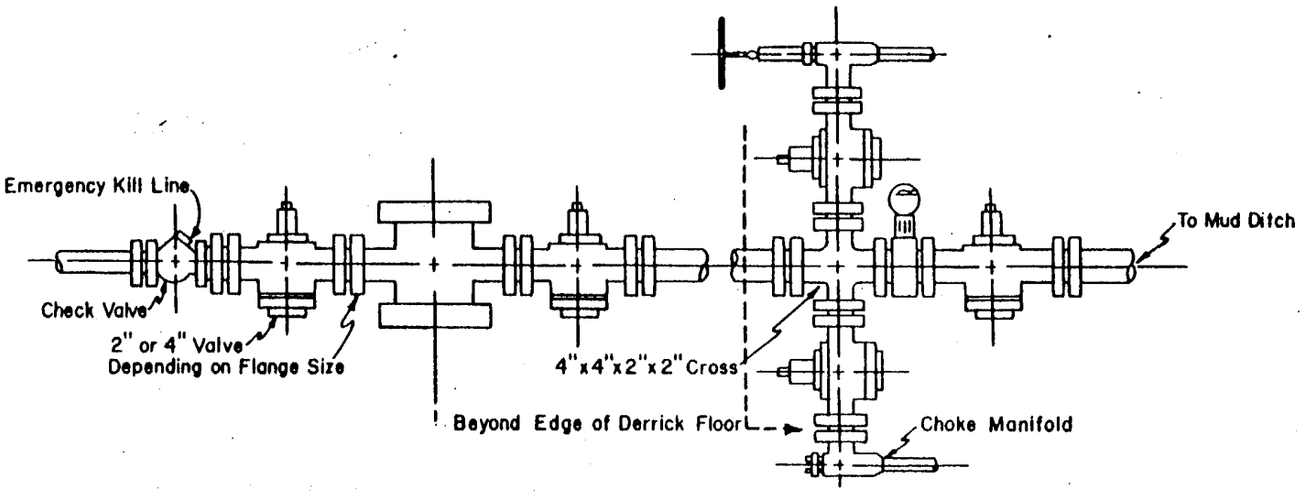
EXHIBIT V

FOR PROPOSED MACHO FEDERAL #5

Blow-out Preventers hydril and choke manifold are all 900 Series



3,000 PSI WORKING PRESSURE
BLOW-OUT PREVENTER HOOK-UP



3,000 PSI WORKING PRESSURE
KILL, CHOKE, AND FILL CONNECTIONS

DETAIL OF 4" FLOW LINE CHOKE ASSEMBLY

Minimum assembly for 3,000 PSI working pressure will consist of three preventers. The bottom and middle preventers may be Cameron.

NOTE: HYDRIL not installed on shallow-low pressure wells. RAM type BOPs are API 10" X 3000 PSI.

MESA
PETROLEUM CO.
PERMIAN BASIN DIVISION

E X H I B I T

V I

BY:
DATE:
DRAWN BY:
SCALE: