

Form 9-331 C
(May 1963)

SUBMIT IN TRIPLICATE*
(Other instructions on
reverse side)

Form approved.
Budget Bureau No. 42-R1425.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

30-005-61121

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 79701-4493

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)
At surface 660' FNL & 660' FWL NW/4/NW/4 ARTESIA, OFFICE
At proposed prod. zone SAME

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

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

15. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.
2640'

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
3768' GR

23. 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'	SURFACE
11"	8 5/8"	24#	1600'	ISOLATE WATER, OIL & GAS
7 7/8"	4 1/2"	10.5#	4400'	COVER ALL PAY

Propose to drill 17 1/2" hole to approximately 800' to set 13 3/8" surface casing and cement to surface. Will reduce hole to 11" and drill to approximately 1600' to set 8 5/8" casing. Will then nipple up RAM type BOPs, reduce hole to 7 7/8" and drill to total depth. Drilling medium will be air, foam, or mud as required.

Gas Sales Are Dedicated.

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. S. Mack TITLE REGULATORY COORDINATOR DATE SEPTEMBER 2, 1981

(This space for Federal or State office use)

PERMIT NO. APPROVED APPROVAL DATE SEP 18 1981

APPROVED BY JAMES A. GILHAM TITLE DISTRICT SUPERVISOR DATE SEP 18 1981

FOR
JAMES A. GILHAM
DISTRICT SUPERVISOR *See Instructions On Reverse Side

N MEXICO OIL CONSERVATION COMMISS
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
 Supersedes C-12H
 Effective 1-1-65

All distances must be from the outer boundaries of the Section

Operator Mesa Petroleum Co.			Lease Alkali Fed.			Well No. 4		
First Letter D	Section 22	Township 5 South	Range 25 East	County Chaves				
Actual Footage Location of Well:								
660 feet from the NORTH line and			660 feet from the WEST line					
Ground Level Elev. 3768.0	Producing Formation ABO		Pool UNDESIGNATED			Dedicated Acreage NW/4 160		

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 _____

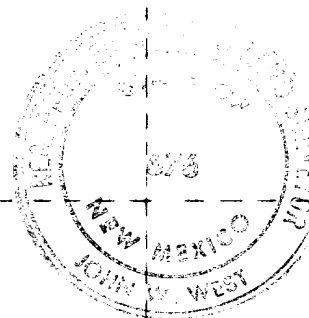
If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

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.

660'
660'

MESA ET AL

NM 40029



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
SEPTEMBER 2, 1981

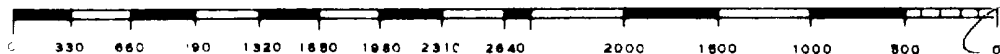
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
8-17-81

Registered Professional Engineer and/or Land Surveyor

John W. West

Certificate No. **JOHN W. WEST 676**
PATRICK A. ROMERO 6863
Ronald J. Eidson 3239



APPLICATION FOR DRILLING

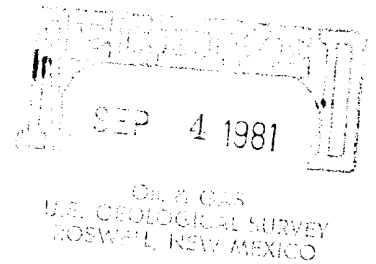
MESA PETROLEUM CO.
ALKALI FEDERAL #4
660' FNL & 660' FWL, SEC 22, T5S, R25E
CHAVES COUNTY, NEW MEXICO

LEASE NO: NM 40029

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:

SEVEN RIVERS	SURFACE
SAN ANDRES	616'
GLORIETA	1591'
YESO	1826'
TUBB	3075'
ABO	3708'
3. Hydrocarbon bearing strata may occur in the Abo formation(s). 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. (See Exhibit VI) 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 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.
ALKALI FEDERAL #4
660' FNL & 660' FWL, SEC 22, T5S, R27E
CHAVES COUNTY, NEW MEXICO

LEASE NO: NM 40029

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 45 miles North and Northeast of Roswell, New Mexico.
- B. Directions: Travel North of Roswell on US Highway 285 to Mile Marker 139, turn East on County Road 8 miles, then Northeast 5 miles, turn East (just before cattleguard) on lease road for 1 1/2 miles then South 1/2 mile (Corner #2) then turn East one mile then South 1/2 mile 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: One cattleguard will be installed.
- D. Cut and Fill: In order for the location to be level, approximately 3' will be moved from the West to the East for fill.

3. Location of Existing Wells:

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

Multi-Point Surface Use and Operation Plan

Page 2

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.

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: SW/SW, Sec 16, T5S, R25E.

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.

Multi-Point Surface Use and Operation Plan

Page 3

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 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: See NMAS, Inc. Archaeological Report.
- B. Soil: The topsoil at the wellsite is sandy loam.
- C. Flora and Fauna: See NMAS, Inc. Archaeological Report for vegetative types.
- D. Ponds and Streams: Cacklebur Draw is 1/4 mile to the East and Red Spring Draw is 1/2 mile to the South.
- E. Residences and Other Structures: None.

Multi-Point Surface Use and Operation Plan

Page 4

- F. Land Use: Grazing.
- G. Surface Ownership: The wellsite is on Federal surface.
- H. 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.

September 2, 1981

DATE

Michael P. Houston

MICHAEL P. HOUSTON
OPERATIONS MANAGER

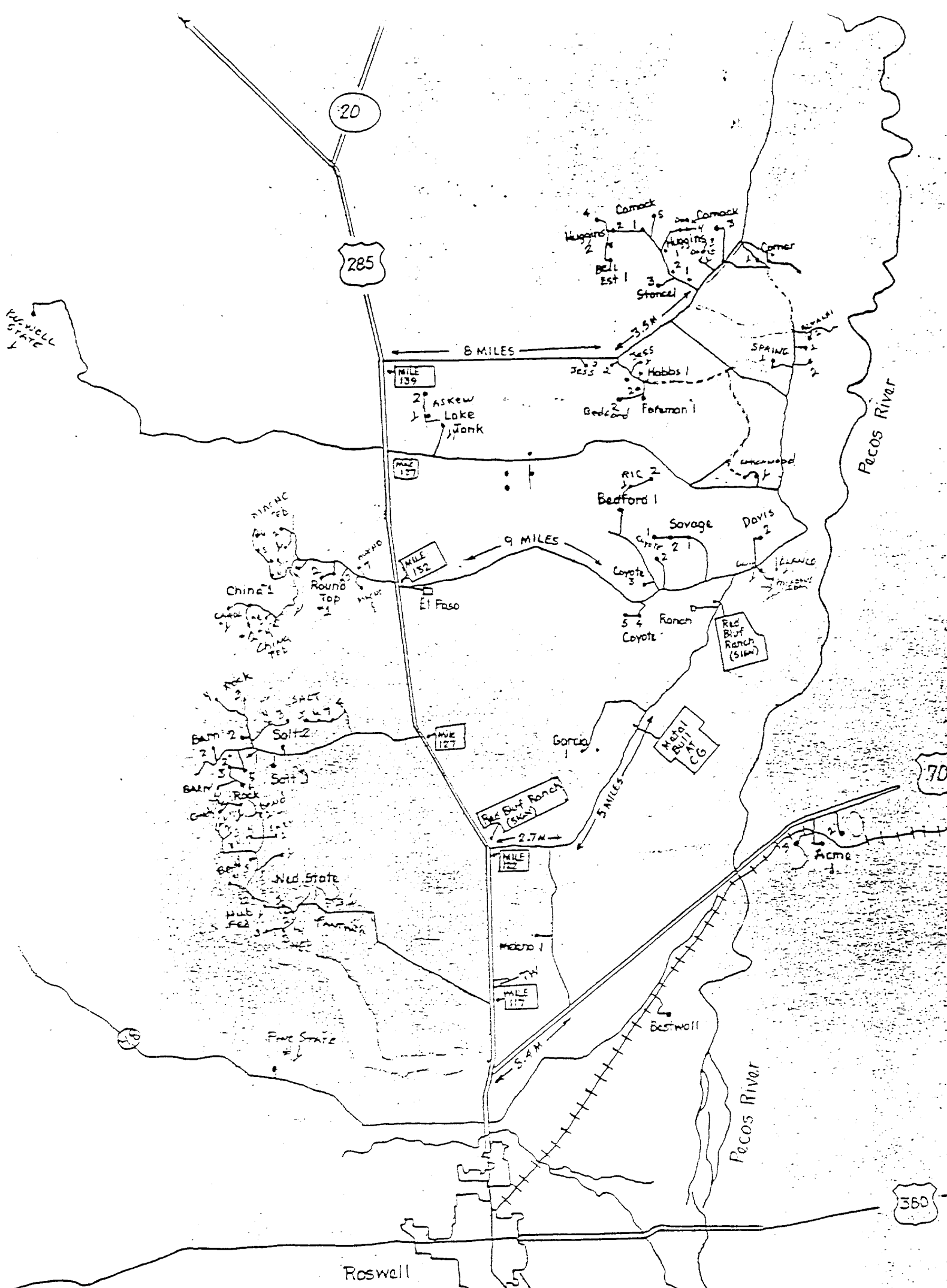


EXHIBIT I
AREA ROADWAYS FOR PROPOSED
ALKALI FEDERAL #4

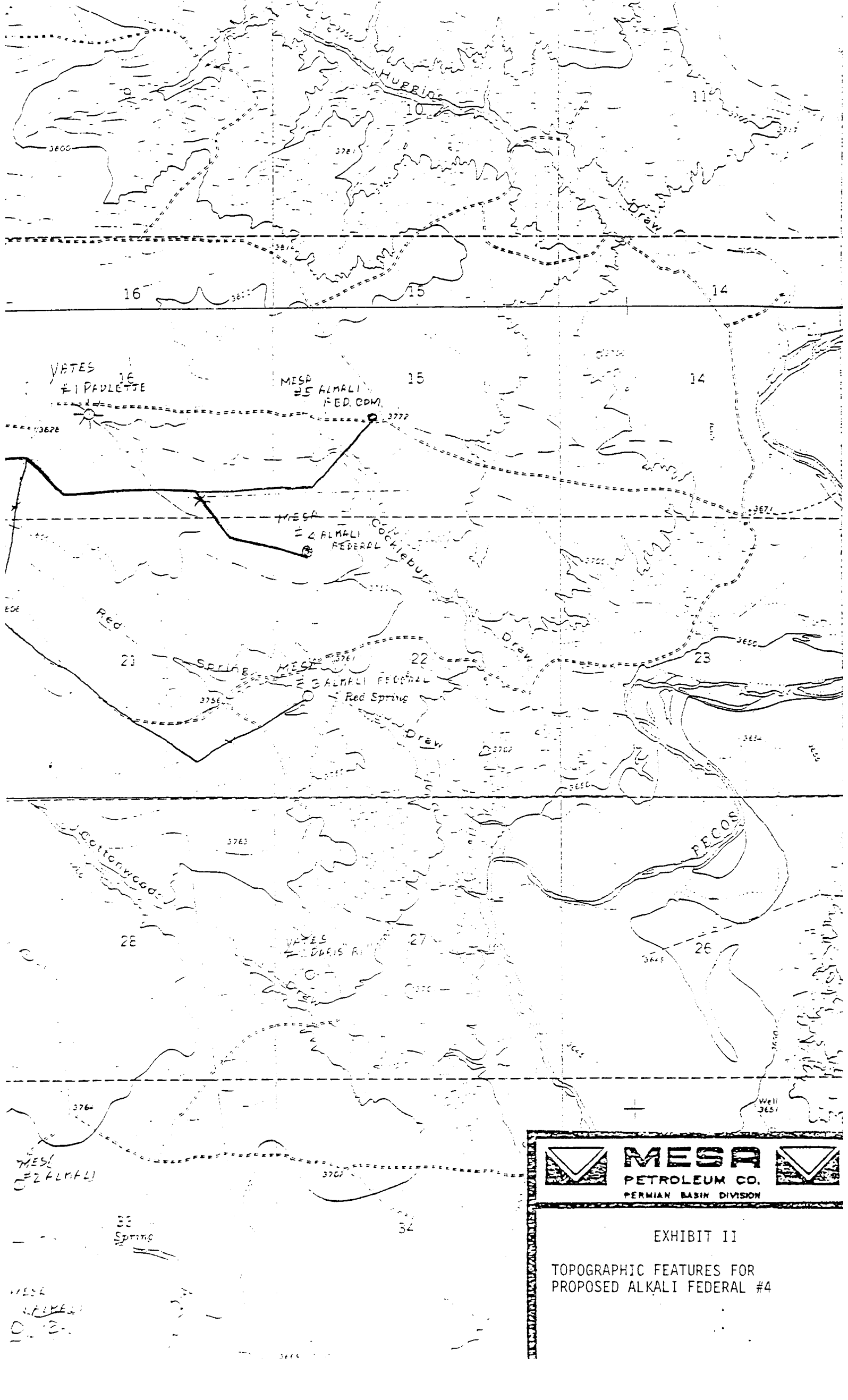
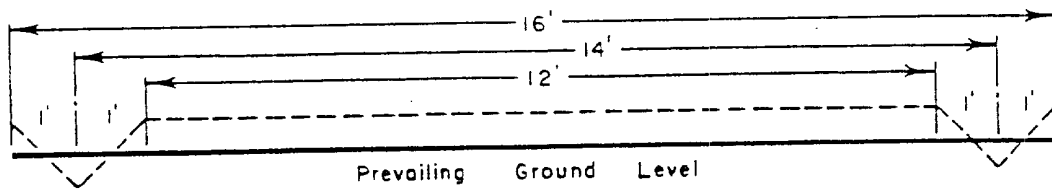


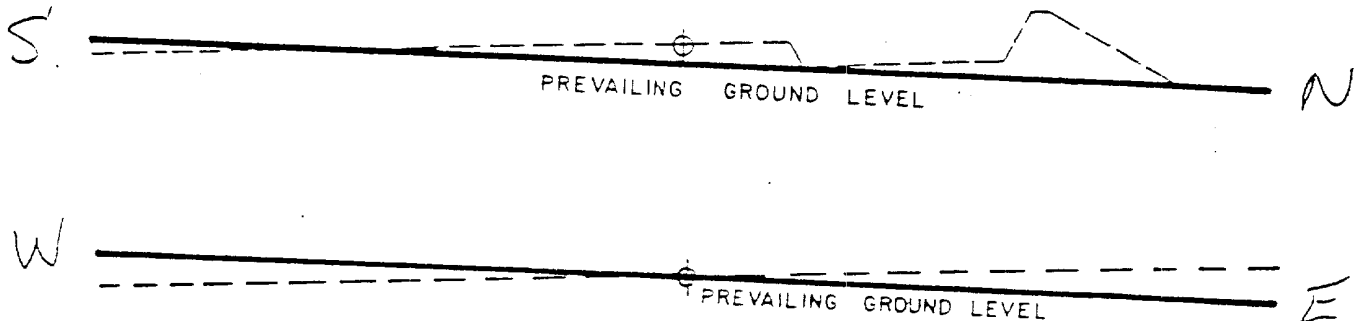
EXHIBIT II
TOPOGRAPHIC FEATURES FOR
PROPOSED ALKALI FEDERAL #4

R - O - W 16'





ROADWAY CROSS SECTION

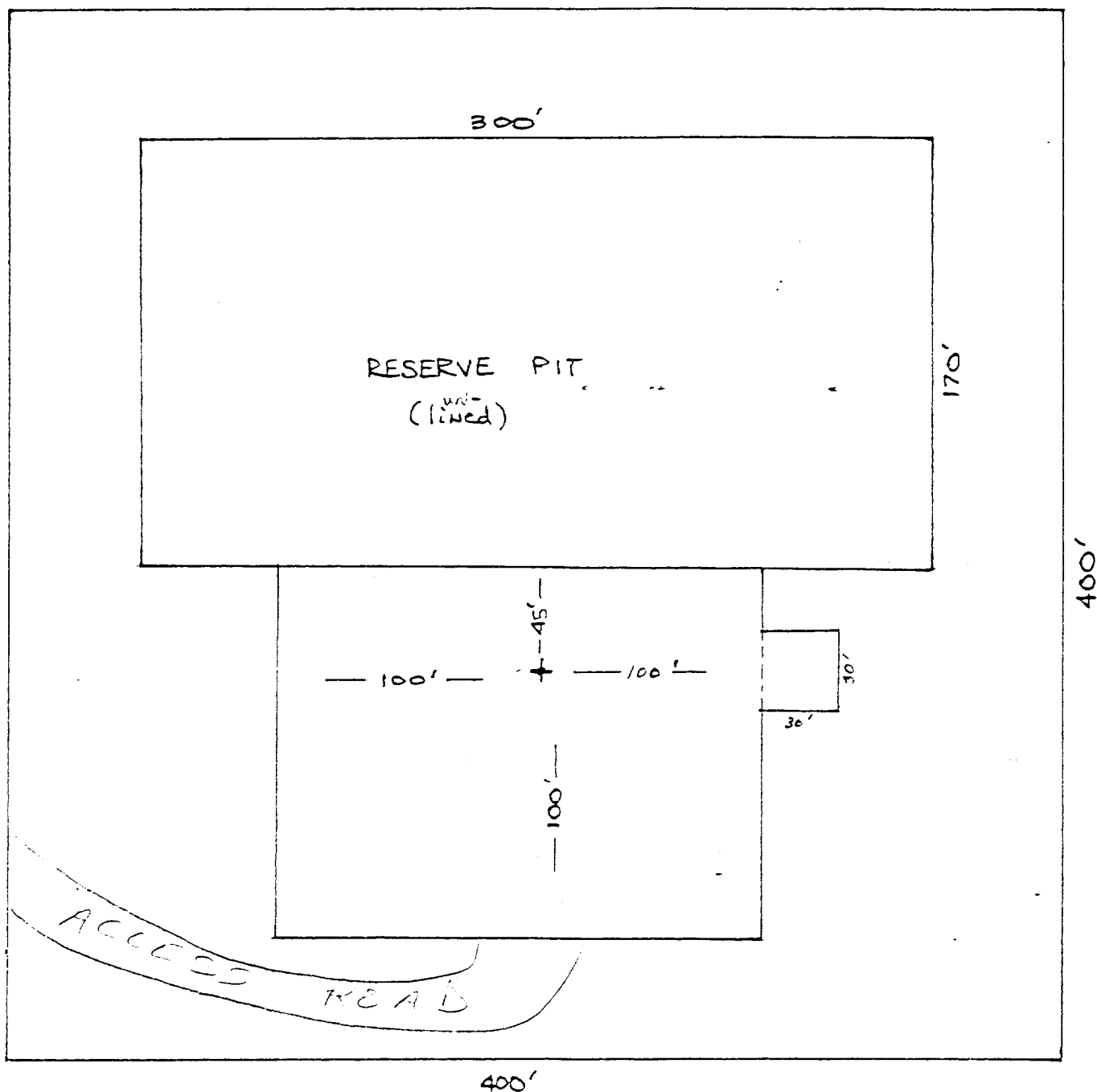
Horizontal Scale 1" = 3'



LOCATION CROSS SECTION

Horizontal Scale 1" = 50'

	MESA PETROLEUM CO. PERMIAN BASIN DIVISION	
EXHIBIT III		
LOCATION CONSTRUCTION		
BY: HFD	DATE: 3-5-80	SCALE: AS NOTED





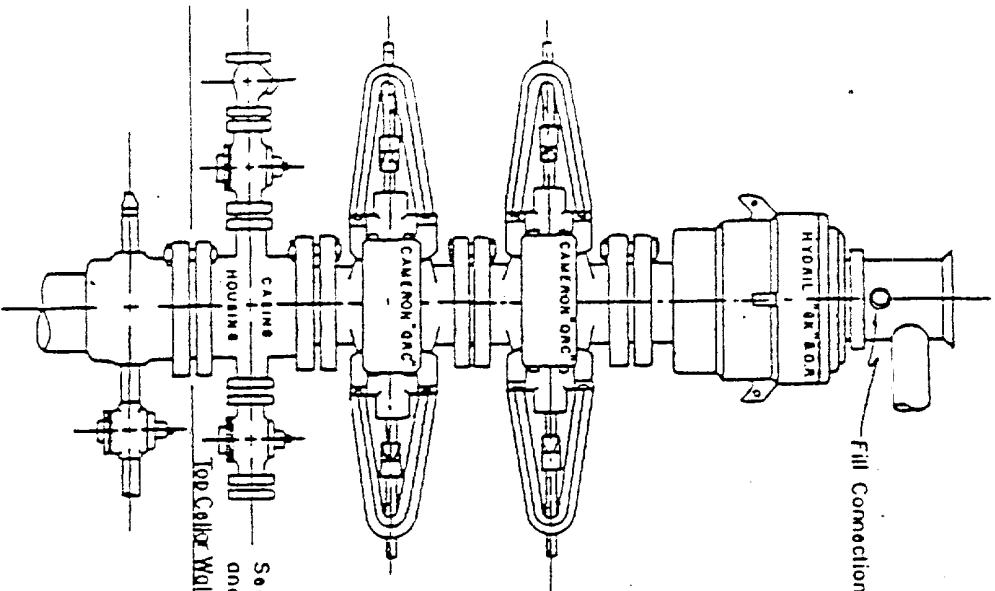
	MESA PETROLEUM CO. PERMIAN BASIN DIVISION	
---	--	---

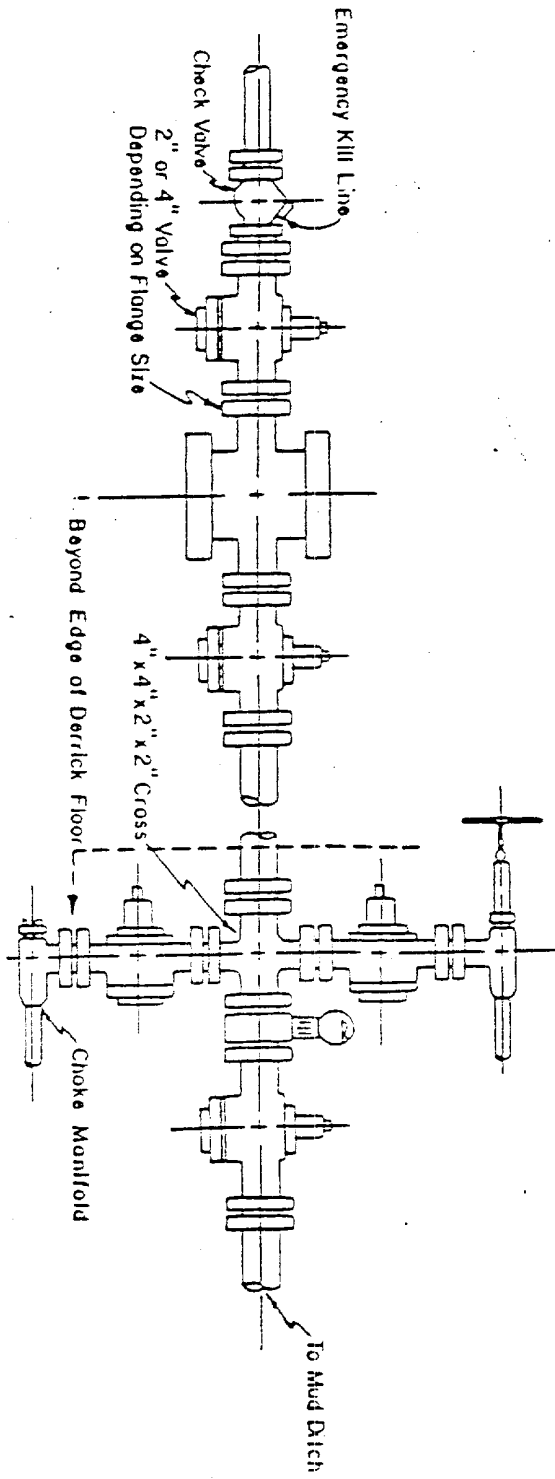
EXHIBIT V

PROPOSED ALKALI FEDERAL #4

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.
RVM type BOPs are API 10" X 3000 PSI



E X H I B I T

V I