Form 9-331 C
(May 1963)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

30-005-60791

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

RECEIVED
OCT 10 1980
O. C. D.
ARTESIA, OFFICE

SEP 19 1980
U. S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

5. LEASE DESIGNATION AND SERIAL NO.: NM - 20337

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

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

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

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: BEDFORD FEDERAL COM

2. NAME OF OPERATOR: MESA PETROLEUM CO

9. WELL NO.: 1

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: 1650' FSL & 1980' FEL
At proposed prod. zone: Same

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: SEC 31, T6S, R25E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 28 miles north/northeast 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
660'	273.01	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**
N/A	4400'	ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 3960.9' GR

22. APPROX. DATE WORK WILL START*: DECEMBER 24, 1980

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#	500'	200"C"/Sufficient to circulate
11"	8 5/8"	24#	1500'	200"C"
7 7/8"	4 1/2"	10.5#	4400'	460 HLW/300 POZ"C"

Propose to drill 17 1/2" hole to 500', cement 13 3/8" casing, reduce hole to 11" drill to 1500' without BOPs or wellhead. After cementing 8 5/8" casing at 1500' and installing bradenhead, will nipple up 10" API 3000 psi BOPs and drill 7 7/8" hole to total depth of 4400'. (A 10" spool will be used even if no casing is run.) Drilling fluid will consist of fresh water gel and soda ash from surface to 1500' and fresh water with caustic soda (pH 9.0-9.5) and chemicals for corrosion control to 3500' then mud up with starch and soda ash to total depth. After log evaluation, 4 1/2" casing may be run to total depth and cemented to surface.

A-80-139
A-80-016
A-77-199

Gas sales are not dedicated.

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 SEPTEMBER 18, 1980

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY (ORIG. SGD.) GEORGE H. STEWART — TITLE ACTING DISTRICT ENGINEER — DATE OCT 08 1980

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

XC: USGS (6), TLS, JRW, JWH, CEN RCDS, ACCT, MEC, JBH, PARTNERS, FILE

NE.. MEXICO OIL CONSERVATION COMMISSI

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 Co.	Bedford Federal Com	1

Unit Letter	Section	Township	Range	County
J	31	6 South	25 East	Chaves

Actual Footage Location of Well:
1650 feet from the South line and 1980 feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3960.9	ABO	UNDESIGNATED	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.

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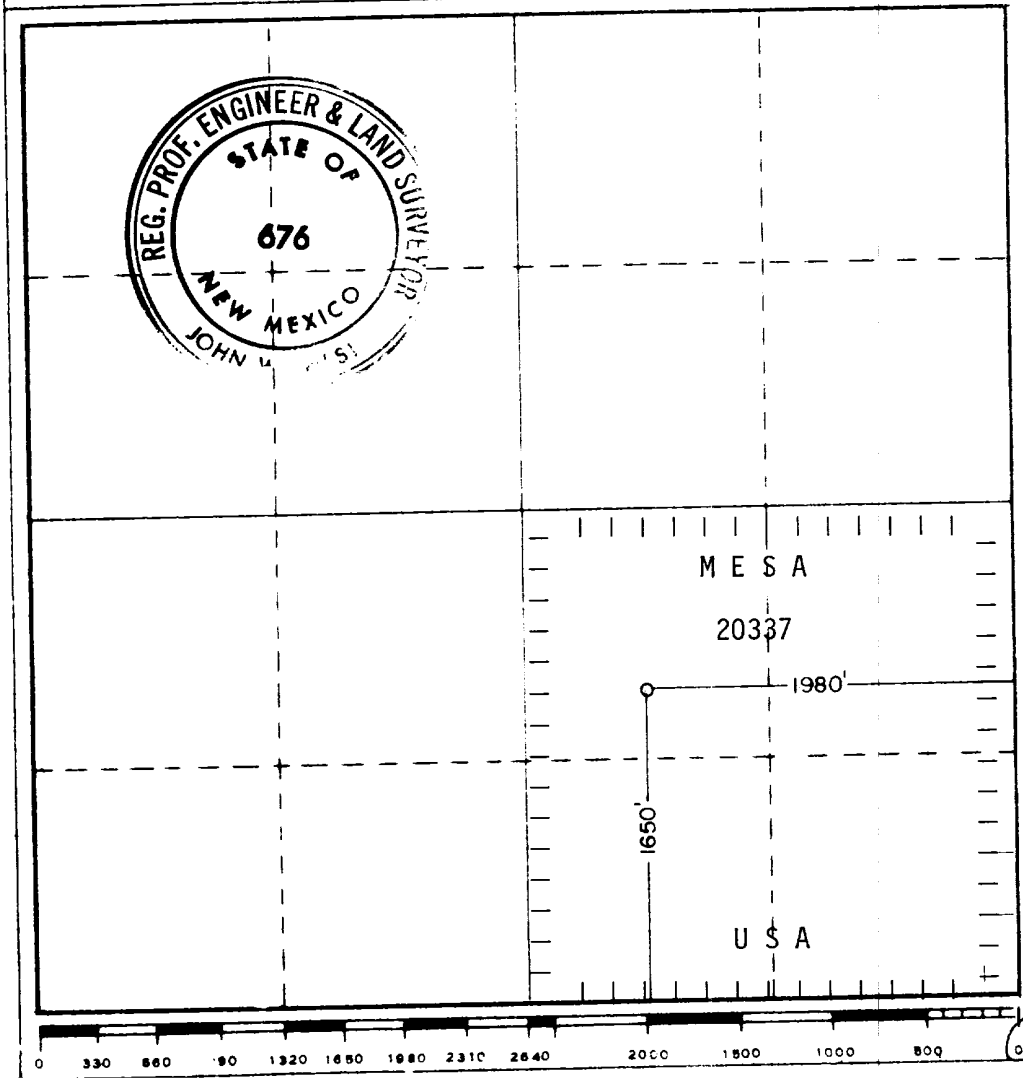
ARTESIA, NEW MEXICO



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 16, 1980

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: **September 6, 1980**

Registered Professional Engineer and/or Land Surveyor

John W. West

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

United States Department of the Interior

GEOLOGICAL SURVEY

SPECIAL APPROVAL STIPULATIONS

RECEIVED
OCT 10 1980
O. C. D.
ARTESIA, OFFICE

THE FOLLOWING DATA IS REQUIRED ON THE WELL SIGN:

MESA PETCO	BEDFORD FED COM No.1
OPERATOR	WELL DESIGNATION
31-6S-25E	CHAVES
S-T-R	COUNTY
NM-20357	
LEASE NO.	

THE SPECIAL STIPULATIONS CHECK MARKED BELOW ARE APPLICABLE TO THE ABOVE-DESCRIBED WELL AND APPROVAL OF THIS APPLICATION TO DRILL IS CONDITIONED UPON COMPLIANCE WITH SUCH STIPULATIONS. EACH PERMITTEE HAS THE RIGHT OF ADMINISTRATIVE APPEAL TO THESE SPECIAL STIPULATIONS PURSUANT TO TITLE 30 CFR 290.

[X] A. 13 3/8" surface casing should be set in the Rustler Anhydrite formation and cement circulated to the surface. If surface casing is set at a lesser depth, the _____ casing must be cemented from the casing shoe to the surface or cemented to the surface through a stage tool set at least 50 feet below the top of the Rustler after cementing around the shoe with sufficient cement to fill to the base of the salt section.

[X] B. Before drilling below the 8 5/8" casing, the blowout preventer assembly will consist of a mirimum of ~~one annular type and~~ two ram type preventers.

[ ] C. Casing protectors will be run on drill pipe while drilling through the _____ casing. Protectors will be of sufficient number and of sufficient outside diameter to protect the casing.

[ ] D. Minimum required fill of cement behind the _____ casing is to _____

[X] E. After setting the 8 5/8" casing string and before drilling into the Tubb formation, the blowout preventers and related control equipment shall be pressure tested to rated working pressures. ~~by an independent service company~~. Any equipment failing to test satisfactorily shall be repaired or replaced. ~~This office should be notified in sufficient time for a representative to witness the tests and shall be furnished a copy of the pressure test report.~~

[ ] F. Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be installed and operating before drilling into the _____ formation and used until production casing is run and cemented. Monitoring equipment shall consist of the following:

(1) A recording pit level indicator to determine pit volume gains and losses.

(2) A mud volume measuring device for accurately determining mud volume necessary to fill the hole on trips.

(3) A flow sensor on the flow-line to warn of any abnormal mud returns from the well.

[X] G. All pits containing toxic liquids will be fenced and covered with a fine mesh netting, if necessary for the protection of livestock or wildlife.

[X] H. Above ground permanent structures and equipment shall be painted in accordance with the Painting Guidelines. The paint color is to simulate:

[X] Sandstone Brown, Fed. Std. 595-20318 or 30318

OR [X] Sagebrush Gray, Fed. Std. 595-26357 or 36357

[ ]

[X] I. A kelly cock will be installed and maintained in operable condition.

[X] J. The ARTESIA Sub-District Office is to be notified in sufficient time for a representative to witness:

(a) Spudding ✓

(b) Cementing casing

_____ inch

_____ inch

_____ inch

(c) ~~BOP tests~~

[ ] K. A Communitization Agreement covering the acreage dedicated to the well must be filed for approval with the U. S. Geological Survey, P. O. Box 26124, Albuquerque, New Mexico 87125. The effective date of the agreement must be prior to any sales.

[ ] L. A Gamma Ray-Compensated Neutron log is required from the base of the salt section to the surface with cable speed not to exceed 30 feet per minute.

[X] M. At least one working day prior to constructing the well pad, access roads and/or related facilities, the operator or dirt contractor shall notify the authorized officer (Bureau of Land Management, ROSWELL area). He shall also notify the Authorized Officer within two working days after completion of earth-moving activities.

[X] N. All access roads constructed in conjunction with the drilling permit (APD) will be limited to a 12 foot wide driving surface, excluding turn-arounds. Surface disturbance associated with construction and/or use of the road will be limited to 25 feet in width. If well is a producer, all roads will be adequately drained to control runoff and soil erosion. Drainage facilities may include ditches, water bars, culverts and/or any other measures deemed necessary by the authorized officer of the BLM. The following is a general guide for the spacing of water bars:

% Slope	
less than 2%	200 ft.
2% to 4%	100 ft.
4% to 5%	75 ft.
more than 5%	50 ft.

[X] O. Other special stipulations

Any permanent pit containing waste oil must be fenced and covered with mesh wire.

APPLICATION FOR DRILLING

MESA PETROLEUM CO
BEDFORD FEDERAL COM #1
1650' FSL & 1980' FEL SEC 31, T6S, R25E
CHAVES COUNTY, NEW MEXICO

LEASE NO: NM-20337

In conjunction with Form 9-331 C, Application for Permit to Drill subject well, the following items of pertinent information are submitted in accordance with U.S.G.S. requirements:

1. The geologic surface formation is Seven Rivers.

2. Estimated tops of geological markers are as follows:

San Andres	490'
Glorieta	1375'
Tubb	2920'
Abo	3580'
Hueco	4300'

3. The estimated depths at which anticipated water, oil, or gas formations are expected to be encountered:

   Water - San Andres at approximately 800' - brackish in this area
   Gas - Abo at approximately 3700'

4. Casing and Blowout Preventer Program

   Surface: 500' of 13 3/8", 48#, H40, ST&C casing cemented with 200 sx Class "C" + 2% CaCl around the casing shoe with sufficient additional cement to circulate to surface. Cement will be circulated using conventional methods or redimix down the annulus if necessary. Will install flowline, but no BOPs and drill out the cement inside the casing after WOC approximately 8 hours and testing casing to 600 psi for 30 minutes.

Intermediate: 1500' of 8 5/8", 24#, K55, ST&C casing cemented with 200 sacks Class "C" + 2% CaCl mixed at 14.8 ppg and yielding 1.32 cuft/sx.

NOTE: This string may be omitted if conditions are favorable. In any event, a 10" API 3000 psi spool with 2" API 2500 psi ball valve will be installed and then we will nipple up 10" API 3000 psi WP double BOP with pipe rams (bottom) and blind rams and test to 600 psi for 30 minutes. Drill 7 7/8" hole to total depth.

Production: 4400' of 4 1/2", 10.5#, K55, ST&C casing cemented with 460 sx Howco Light + 1/4# flocele + 10# salt mixed 12.7 ppg and yielding 1.87 cutft/sx. Tailed in with 300 sx 50-50 POZ + 2% gel + 8# salt + 3/10% CFR-2 mixed at 14.1 ppg and yielding 1.30 cuft/sx. Choke, kill, and fill lines are indicated on Exhibit I. A full opening safety valve, to fit the drill string in use, will be kept on the rig floor at all times. The kelly cock, safety valve, choke and kill lines will be tested at the same time that BOPs tests are run. Operational opening and closing checks on all BOPs will be run on each trip, with daily operational check of pipe rams.

5. Circulating medium and control equipment

0'-1500' Use fresh water spud mud with fresh water gel and soda ash or lime. Treat with lost circulation material as hole conditions dictate. If total lost circulation occurs, mix 2 or 3 viscous slugs with LCM and attempt to regain circulation. If unsuccessful, consider drilling without returns to casing point and spot 150 ± bbls viscous slug treated with LCM on bottom to run pipe.

1500'-3000' Drill out 8 5/8" casing (if set) with fresh water circulating reserve pit. Add caustic soda for pH 9.0 - 9.5 and chemicals for corrosion control. Mix paper as needed to control seepage or to sweep the hole.

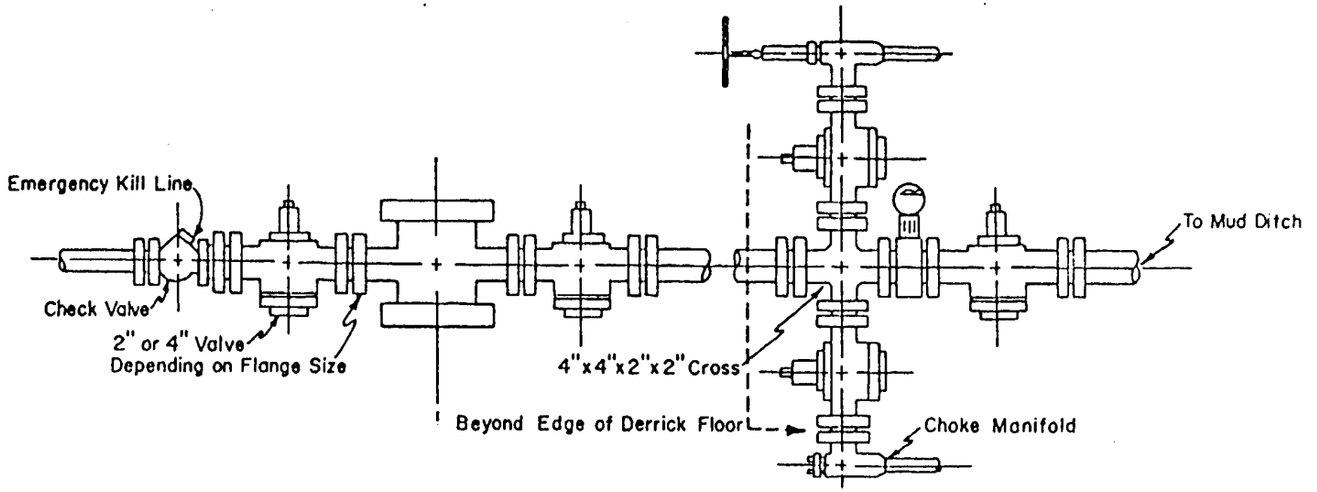
3000'-4400'	Maintain mud weight less than 10 ppg with additions of fresh water while keeping chloride-ion concentration of 40,000 - 50,000 + ppm and KCL 3.0%. At 3500 mud up with starch and soda ash to control API water loss to 20 - 25 cc to TD. Sea Mud or Salt Water Gel will be added to sweep hole or to raise viscosity of system sufficiently to clean hole to run logs and casing.

6. There is no coring program or drill stem tests planned for this well. The logging program may consist of a gamma ray log from total depth to surface, compensated neutron-density-caliper log and dual laterolog-micro spherically focused log run from 1500' to total depth.

7. Maximum anticipated bottom hole pressure is 1500 psi at 4400' based upon bottom hole pressure on other area wells. Mud weight required to offset this pressure is 9.0 ppg. It is probable that leaching of expected salt stringers could increase the mud weight to 10.0 - 10.2 ppg. Bottom hole temperature should not exceed 120° F. No sour gas is expected.

8. Anticipated spud date is December 24, 1980, with completion of drilling operations expected by December 31, 1980. Completion operations (perforations and stimulation) will follow successful drilling operations as soon as a completion unit is available.

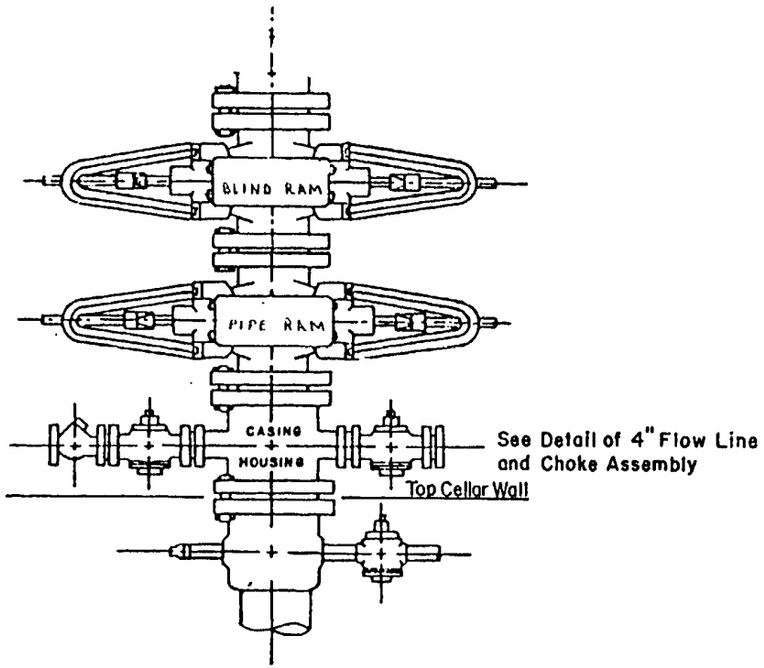
Blow-out Preventers and choke manifold are all 900 Series



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.

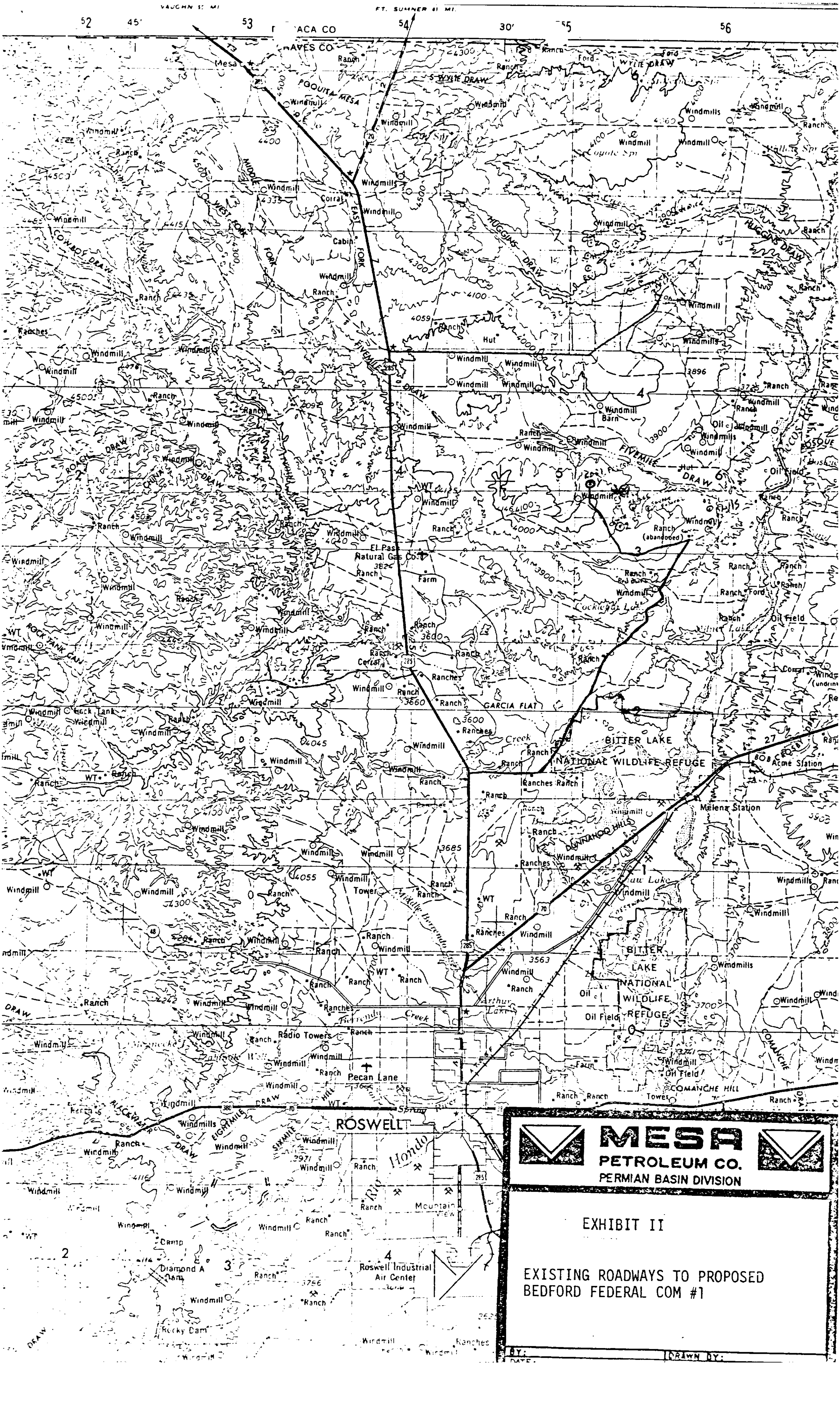


3,000 PSI WORKING PRESSURE
BLOW-OUT PREVENTER HOOK-UP

MESA
PETROLEUM CO.
PERMIAN BASIN DIVISION

EXHIBIT I

BLOWOUT PREVENTER SCHEMATIC FOR



MESA PETROLEUM CO.

PERMIAN BASIN DIVISION

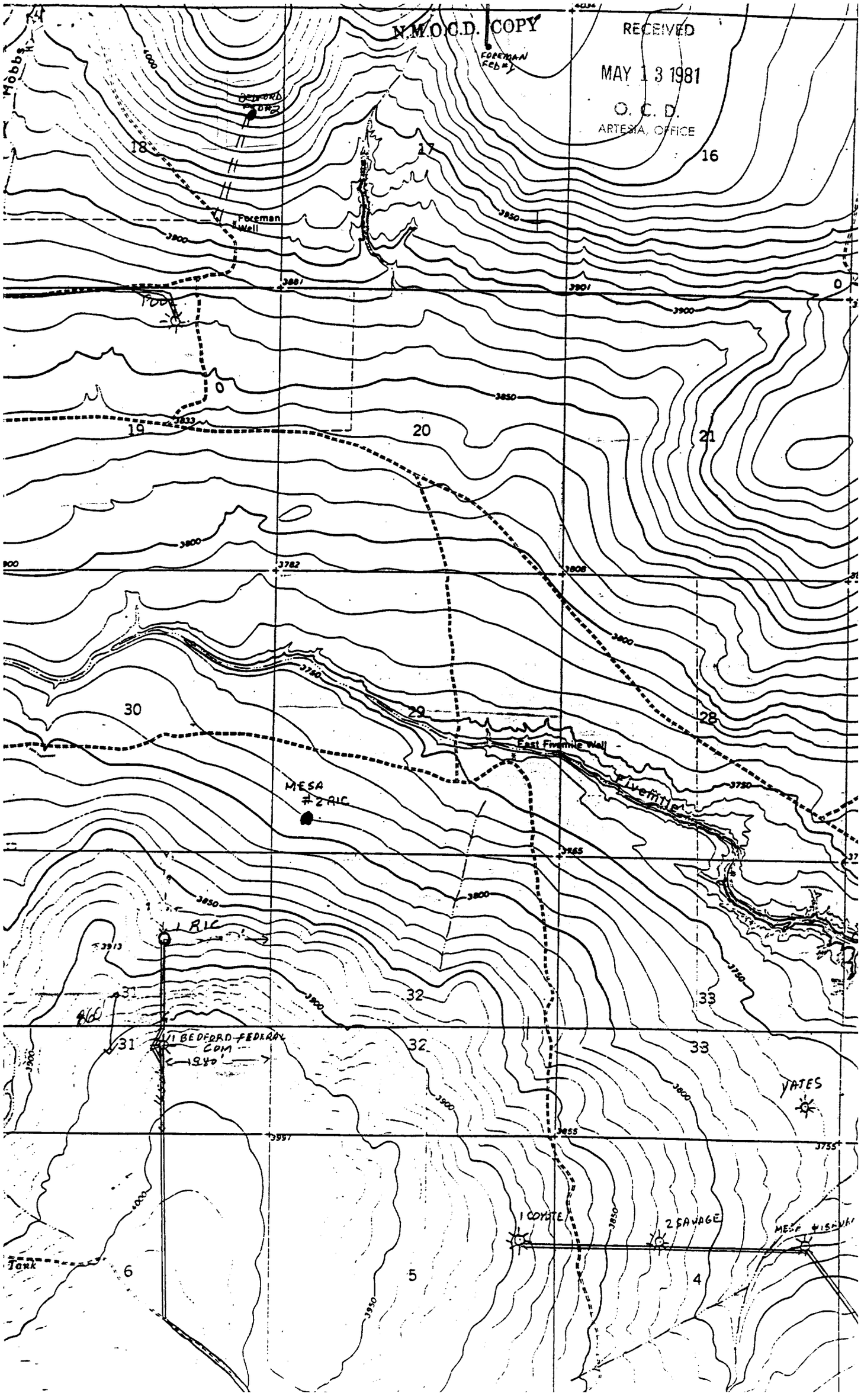
EXHIBIT II

EXISTING ROADWAYS TO PROPOSED BEDFORD FEDERAL COM #1

BY:

DATE:

DRAWN BY:


N.M.O.C.D. COPY
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MAY 13 1981
O. C. D.
ARTESIA, OFFICE
Hobbs
Foreman Fed #1
Bedford Fed #2
Foreman Well
East Fivemile Well
Fivemile
MESA #2 RIC
1 RIC
1 BEDFORD FEDERAL COM
1980'
860'
1 COYOTE
2 SAVAGE
MESA WISHBONE
YATES
Tank
18
17
16
19
20
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MAY 13 1981

O. C. D.
ARTESIA, OFFICE

MESA
PETROLEUM CO.

March 23, 1981

USGS
P O DRAWER 1857
Roswell NM 88201

Gentlemen:

Subject: Bedford Fed Com #1
SE/4 Sec 31, T6S, R25E
Chaves County, New Mexico
Lease No. NM - 20337

Attached please find amended Exhibit III showing continuation of the lease access road beyond subject well.

Sincerely,

R. E. Mathis
Regulatory Coordinator

/pm

XC: USGS (6), TLS, ROSWELL, MEC, LAND, FILE

APPROVED
GEORGE H. STEWART
MAY 8 1981
FOR
JAMES A. GILLHAM
DISTRICT SUPERVISOR

RECEIVED
MAR 25 1981
OIL & GAS
U.S. GEOLOGICAL SURVEY
ROSWELL, NEW MEXICO

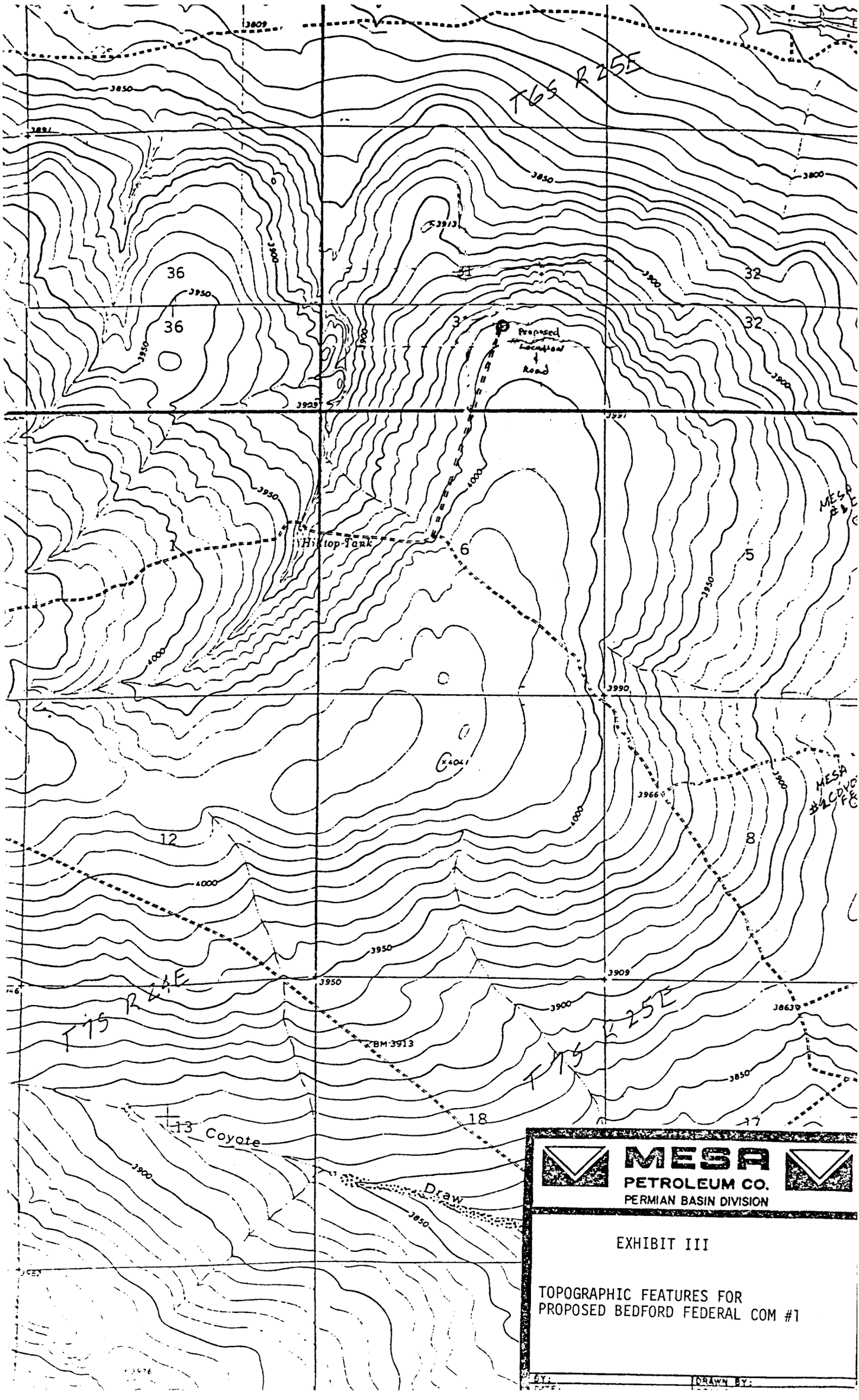
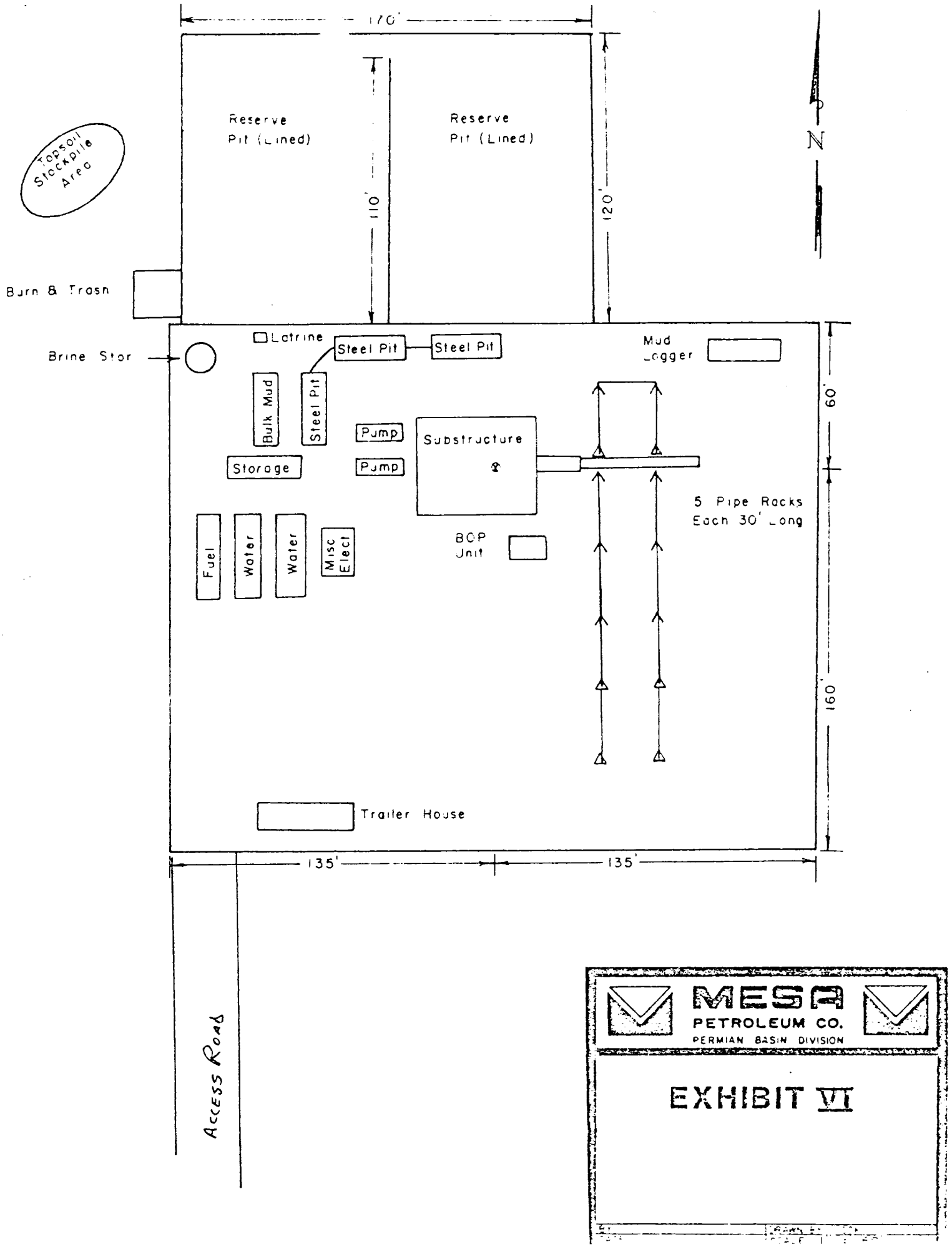


EXHIBIT III

TOPOGRAPHIC FEATURES FOR
PROPOSED BEDFORD FEDERAL COM #1

BY:

DRAWN BY:



MESA PETROLEUM CO.
PERMIAN BASIN DIVISION

EXHIBIT VI