N.M.O.C.D. COPY

Form 9-331 C
(May 1963)

SUBMIT IN T[illegible]LICATE*
(Other instru[illegible]ns on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

30-015-22991

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

RECEIVED
AUG 20 1979
U.S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

RECEIVED
AUG 27 1979
O. C. C.
ARTESIA, OFFICE

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

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [X] 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: 1980' FSL & 1980' FWL
At proposed prod. zone: Same

5. LEASE DESIGNATION AND SERIAL NO.: NM 4030

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Fuller Fed

9. WELL NO.: 1

10. FIELD AND POOL, OR WILDCAT: Undesignated Atoka-Morrow

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: K Sec 10, T16S, R27E

12. COUNTY OR PARISH: Eddy

13. STATE: New Mexico

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: Approximately 11 miles east and south of Lake Arthur, New Mex

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	480	320
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	8750	Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): GR 3544

22. APPROX. DATE WORK WILL START*: September 15, 1979

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#	350'	400 sx Class C - Circ to surf
11"	8 5/8"	24#	1550'	650 sx LW + 200 sx C - circ
7 7/8"	4 1/2"	10.5#-11.6#	8750'	750 sx Class H or sufficient to cover all pay.

Propose to drill to 350' without BOPs. After cementing 13 3/8" casing, will drill 11" hole to approx 1550' using fresh water - LCM drill fluid; BOPs will be 10" API 3000 psi WP (double hydraulic ram - pipe and blind). Will cement 8 5/8" casing string at 1550' and drill 7 7/8" hole to total depth of approximately 8750' with fresh water - KCL system. Will utilize 10" API 3000 psi WP double hydraulic ram with hydril. Maximum anticipated mud weight is 7.5 - 7.6 PPG near total depth, based upon offset wells in the area. Mud weight of 9.3 - 9.4 will be in the hole @ total depth. See attached BOP and mud programs for details.

Gas sales are not dedicated to a purchaser.

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. P. Nash TITLE Regulatory Coordinator DATE 8-20-79

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE 8-24-79

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

VC - TLS MEC USGS FILE [illegible]

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 CO	FULLER FED.	1

Unit Letter	Section	Township	Range	County
K	10	16 SOUTH	27 EAST	EDDY

Actual Footage Location of Well:
1980 feet from the SOUTH line and 1980 feet from the WEST line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage
3544.1	Atoka - Morrow	Undesignated	W/2 320 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).

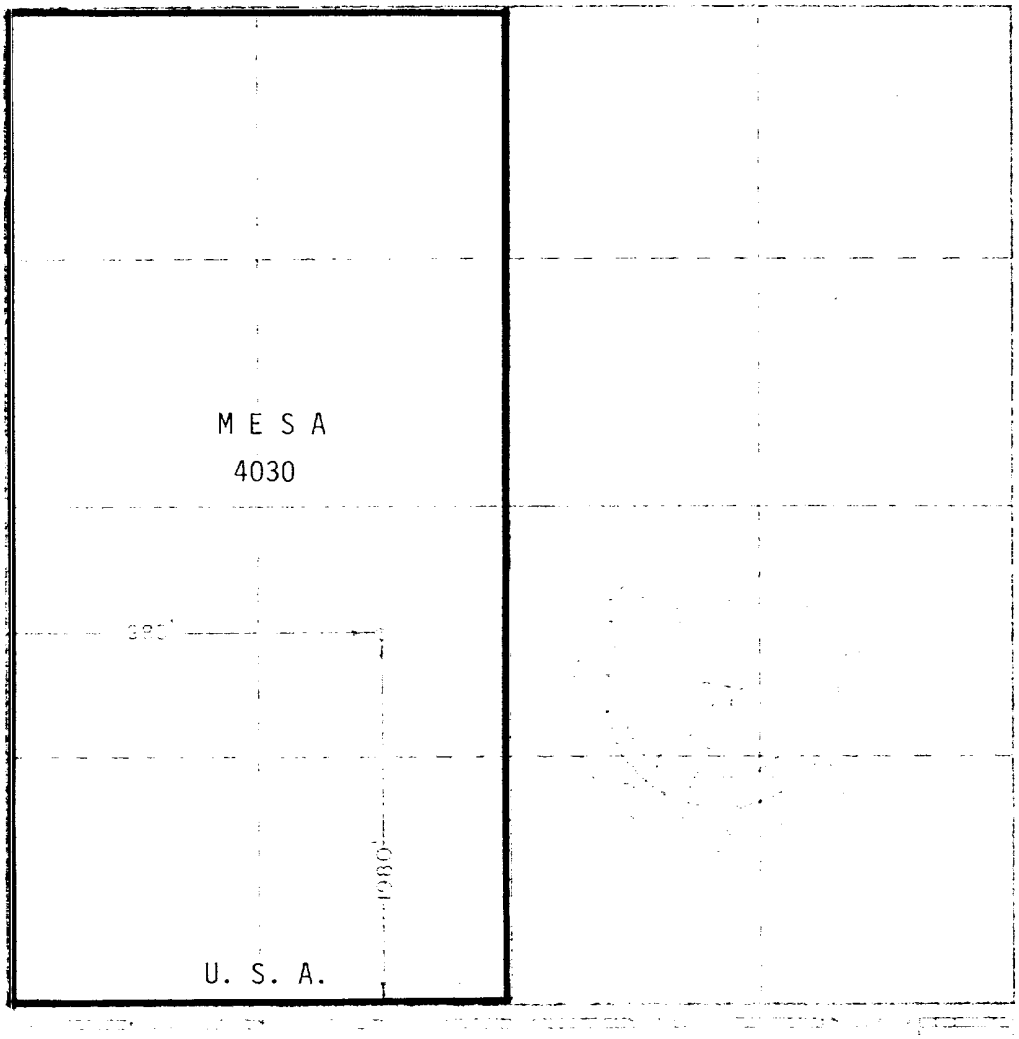
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ 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.

RECEIVED
AUG 20 1979
U.S. GEOLOGICAL SURVEY
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
August 20, 1979

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.

AUGUST 17TH, 1979

Date Surveyed

Registered Professional Engineer and/or Land Surveyor

Certificate No.

N.M.O.C.D. COPY

United States Department of the Interior

GEOLOGICAL SURVEY
P. O. Drawer U
Artesia, New Mexico 88210

RECEIVED
AUG 27 1979
O. C. C.
ARTESIA, OFFICE

August 24, 1979

Mesa Petroleum Company
1000 Vaughn Building
Midland, Texas 79701

Gentlemen:

MESA PETROLEUM COMPANY Fuller Federal No. 1 1980 FSL 1980 FWL Sec. 10 T.16S R.27E Eddy County Lease No. NM-4030
Above Data Required on Well Sign

Your APPLICATION FOR PERMIT TO DRILL the above-described well to a depth of 8,750 feet to test the Morrow is hereby approved subject to compliance with the OIL AND GAS OPERATING REGULATIONS (30 CFR 221) and the following conditions:

1. Drilling operations authorized are subject to compliance with the attached General Requirements for Oil and Gas Operations on Federal Leases, dated July 1, 1978.

2. Prior to commencing construction of road, pad, or other associated developments, operator will provide the dirt contractor with a copy of the Surface Use Plan and these Conditions of Approval including the attached General Requirements.

3. Submit a Daily Report of Operations from spud date until the well is completed and the Well Completion Report (form 9-330) is filed. The report should not be less than 8" x 5" in size and each page should identify the well.

4. All permanent above-ground structures and equipment shall be painted in accordance with the attached Painting Guidelines. The color used should simulate Sandstone Brown (Federal Standard No. 595A, color 20318 or 30318).

5. Before drilling below the 8-5/8" casing, the blowout preventer assembly will consist of a minimum of one annular type and two ram type preventers.

6. A kelly cock will be installed and maintained in operable condition.

7. After setting the 8-5/8" casing string and before drilling into the Wolfcamp 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.

8. Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be installed and operating before drilling into the Wolfcamp 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.

9. Cement behind the 13-3/8" and 8-5/8" casing must be circulated.

10. Please have anyone contacting the Survey in regard to this well to identify the well with all of the information required above for the well sign.

Sincerely yours,

ALBERT R. STALL

Albert R. Stall
Acting District Engineer

APPLICATION FOR DRILLING

MESA PETROLEUM CO
FULLER FED WELL #1
1980' FSL & 1980' FWL
Section 10-T16S-R27E
EDDY COUNTY, NEW MEXICO

In conjunction with Form 9-331 C, Application for Permit to Drill subject well, Mesa Petroleum Co submits the following items of pertinent information in accordance with USGS requirements.

1. The geologic surface formation is Permian-Guadalupian Artesia Group.

2. The estimated tops of geologic markers are as follows: RKB = 3545' (est)

FORMATION	DEPTH	SUB-SEA
Queen	825'	+2720
San Andres	1520'	+2025
Glorieta	2910'	+ 635
Tubb	4270'	- 725
Abo	5005'	-1460
Wolfcamp	6210'	-2665
Bursum	6986'	-3441
Strawn	8001'	-4456
Atoka	8400'	-4855
Morrow	8506'	-4961
Miss. Chester Sh.	8596'	-5051
Miss. Chester Ls.	8730'	-5185
TD	8760'	-5215

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

   Water: at approx 2800', 3350', and 4400'
   Gas and Water: at approximately 7290' to 8030'
   Gas: at approximately 8310' to 8410' and approximately 8500'

4. CASING AND BLOWOUT PREVENTER PROGRAM:

   Surface: Drill a 17-1/2" hole to approximately 350'. Run deviation survey at 100', 200', and 350'. Limit deviation to 1°. Run 13-3/8" casing with guide shoe and insert float (one joint up) to total depth. Thread lock and tack weld bottom two joints. Run centralizer in the middle of joints 1,3, and 5. Cement with 400 sacks Class "C" plus 2% CaCl with pipe on bottom. Cement must circulate. Pump down backside through 1" pipe if necessary. WOC 4 hours and commence cut off and nipple up. Install 13-3/8" slip-on 12" API 3000 psi bradenhead. Nipple up 12" API 3000 psi WP double BOP with pipe rams (bottom) and blind rams. WOC 18 hours, then test casing to 500 psi.

Intermediate: Drill an 11" hole to approximately 1550' (into top of San Andres). Run deviation surveys every 300'. Limit deviation to 1°. Run 8-5/8" casing with guide shoe and insert float (2 joints up) to total depth. Thread lock and tack weld all connections through the top of insert float. Run centralizer in the middle of joints 1, 3, and 5. Cement with 650 sacks light weight + 5# gilsonite + 1/4# flocele + 2% CaCl. Tail in with 200 sacks Class "C" + 2% CaCl. Cement must circulate. Pump down backside through 1" pipe with Class "C" + 2% CaCl if necessary. WOC 6-8 hours, nipple down, and set slips with full weight of 8-5/8" casing. Cut off casing and install 12" API 3000 psi x 10" API 3000 psi casing spool. Nipple up 12" API 3000 psi WP double BOP & 10" API 3000 psi WP hydril, same as previous. Hook up 3000 psi choke manifold. Test BOP stack and choke manifold to 1500 psi, hydril to 1000 psi. WOC time should be determined by cementing company as the time required for the bottom 320' of cement to reach a compressive strength of 500 psi. Test casing to 1000 psi for 30 minutes with a maximum of 9.0#/gal fluid in the hole. Install pit level indicator, pit volume totalizer, and flow show prior to drilling into the Wolfcamp at approximately 6000'. Also, test BOP stack and choke manifold to working pressure by an independent testing company prior to drilling into the Wolfcamp.

Production: Drill 7-7/8" hole to total depth of approximately 8750'. Run deviation surveys every 500' or on dull bit less than 500'. Limit deviation to 5°. After evaluating logs, run 4-1/2" production casing with downjet float shoe and float collar (2 joints up) to total depth. Thread lock all connections through float collar. Run centralizer in the middle of joints 1,3,5,7, and 9. Also one centralizer per joint across any prospective pay zones. Pump 20 barrels KCL water and cement with 750 sacks Class "H" + 5/10% Halad 22 + 2/10% CFR-2 + 5# KCL. Displace top plug with 3% KCL water. Top of cement calculated at 6000' based on gauge hole plus 35% excess. Actual cement volume will be based on upon evaluating log as to uppermost zone to be completed and actual calipered hole size. Pick up BOP stack and set slips with full weight of 4-1/2" casing. Nipple up 10" API 3000 psi x 6" API 3000 psi tubing spool.

Blowout Prevention:

1. Operational opening and closing checks will be run on all BOPs each trip. Checks will be reported on IADC reports.

2. Valve on casing head will be utilized only for emergency. Kill line will not be used to fill up the hole. Inside BOP and safety valve will be readily available on rig floor. BOP drills will be conducted on a regular basis and reported on the IADC (International Assoc. of Drilling Contractors) report.

5. CIRCULATING MEDIUM

0 - 350'	Spud with fresh water gel mud floculated with lime. Pretreat with 8# per bbl hulls, 3# per bbl fiber, 1# per bbl paper for possible loss zone from 100' to 200'. If necessary to blind drill to 350' TD, mix 150 bbls viscous mud with 12 to 15# per bbl LCM and spot on bottom before running casing.
350-1550'	Drill out with fresh water, through controlled section of reserve pit. Add paper and fiber for seepage as needed. When hole is completed, flush hole with 150 bbls viscous fluid with 4 to 6# LCM per bbl before running casing.
1600-7000'	Drill with fresh water. Use paper and sea mud as needed for seepage and hole sweep. Maintain 10 pH. Good possibility of encountering lost returns beginning at 2700'.
7000-8400'	Return to steel pits and mud up with 35 to 40 sec/1000 cc viscosity. Lower WL to 10 cc or less and add 3% KCL.
8400- TD	Maintain viscosity 35 to 40 sec/1000 cc, WL 6 cc or less, 3% KCL and 10 pH with caustic.

6. TESTING, CORING, AND LOGGING PROGRAMS:

a. One set of washed samples with logged depth will be caught each 10' from bottom of 8-5/8" casing, tied in 100' bundles and stored in a clean, dry location at the rig.

b. Possible drill stem test - Strawn 8000'-8400'

c. Mud logging from 6000' to TD

d. Logging: (1) GR Neutron - surface to TD
(2) Density - approximately 1550' to TD
(3) Dual LL/RXO - approximately 1550' to TD

7. Maximum anticipated bottom hole pressure is 3300 psi at approximately 8500' based on offset well data. Mud weight required to offset this pressure is 7.5 ppg. Bottom hole temperature approximately 130° F. No sour gas is expected.

8. Anticipated starting date: As soon as possible after approval, with completion of drilling operations approximately 30 days thereafter. Completion operations (perforating and stimulating) will immediately follow the drilling operations.

MULTI-P..NT SURFACE USE AND OPERATIONS PLAN

MESA PETROLEUM CO
FULLER FED WELL #1
1980' FSL and 1980' FWL, Section 10, T16S, R27E
EDDY COUNTY, NEW MEXICO
(DEVELOPMENT WELL)

This 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 operations.

1. EXISTING ROADS

A. Existing roads in the vicinity of the proposed location are shown in yellow on Exhibit I, attached. As indicated, the drillsite is located at a driving distance of approximately 12-1/4 miles east and south of Lake Arthur, New Mexico, including 11.2 miles of existing roads to the Wells Federal #1 and approximately 1.0 miles of proposed new road to the location.

B. Travel east from Lake Arthur on highway 507, located at the northern edge of Lake Arthur. This road originates from alternate route 285 at a point recognizable by a former gasoline station, now a residence, painted white with green trim, on the west side of alternate route 285. The black top surface of the road changes to gravel after about 1.7 miles and 0.55 miles beyond this point, passes over a bridge across the Pecos River. Turn left after crossing the bridge and continue in a generally eastbound direction for about 2.05 miles. Take a right (southeast) turn at this point and continue for approximately 3.2 miles. Turn right (south) on a road adjacent to a doublewire high line and continue for approximately 3.3 miles, then turn right (west) for about 0.4 miles to the drilling pad of the Wells Federal #1, located at 1980' FNL and 1980' FWL, Sec 11, T16S, R27E. The proposed new access road to the location of the Fuller Fed Well #1 will originate from the southwestern edge of this pad.

2. PLANNED ACCESS ROAD

A. The new access road is indicated in red on Exhibits I and II. This road will originate from the well pad at the Wells Federal #1, as indicated above, and the route of the new road is clearly marked with surveyor ribbons. The total length of the new road will be about 1.0 miles, including approximately 0.2 miles on federally owned surface in Section 10 and 0.5 miles on fee surface in Section 10 and approximately 0.3 miles on federally owned surface in Section 11.

B. The route of the new road will be in a generally east to west then southwest direction, and will meet the drillsite pad at the southeast corner of the pad. This road will also serve a proposed well (Cook Fed Com #1) located at 1980' FNL and 660' FEL of Section 10, 16S, 27E, before angling southwesterly. The road will be constructed by grading and topping with compacted caliche. The

driving surface of the road will be 12 feet in width (20' right-of-way width, as shown in Exhibit IV), with drainage on both sides of the road. One turnout will be constructed at the midpoint in the length of the road. No fences are involved and no cattleguards or culverts will be necessary.

C. The center line of the proposed new road has been staked and flagged, and is clearly visible.

3. LOCATION OF EXISTING WELLS

A. All wells within a one-mile radius of the proposed well are indicated in Exhibit III.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

A. The nearest activity to this lease is the Wells Federal #1, located at 1980' FNL and 1980' FWL of Section 11, T16S, R27E. This well has been completed and is presently awaiting pipeline connection. As mentioned, the proposed Cook Fed Com #1 will be drilled at a location 1980' FNL and 660' FEL of Section 10, 16S, 27E.

B. No drilling activities have taken place on this lease. If the proposed well proves to be commercial, the necessary production facilities and battery will be installed on the drilling pad. Gas sales are not dedicated, however, the successful pipeline company would construct the necessary pipelines leading from the location.

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 privately owned or commercial sources and will be hauled to the location by truck over the existing and proposed new access roads shown in Exhibits I and II.

6. SOURCE OF CONSTRUCTION MATERIALS

A. 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. With the exception of the 6" compacted caliche top coat, all construction materials will be of local origin. Caliche required for construction will be obtained from an existing pit located on federally owned surface at Diamond Mound in Section 12, T16S, R27E.

7. METHODS OF HANDLING WASTE DISPOSAL

A. Drill cuttings will be disposed of in the reserve pits, which will be plastic lined.

B. Drilling fluid 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. Oil produced during operations will be stored in tanks until sold.

F. Current laws and regulations pertaining to the disposal of human waste will be complied with.

G. 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.

H. All trash and debris will be buried or removed from the wellsite within 30 days after drilling and/or completion operations have been finished.

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.

B. Only minor leveling will be required to construct the location. The ground surface at the wellsite is relatively level, with only minor undulations and a gradual downward slope from east to west. It is estimated that a cut of approximately 2' will be necessary in the east portion of the drilling pad area. The access road route is also comparatively level, with only minor undulations in the surface. The road and pad surface will be covered with 6 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 drilling and/or completion operations have been finished, all equipment and other materials not needed for further operations will be removed. Pits will be filled and the location cleaned of all trash and junk, so as to leave the wellsite in as aesthetically pleasing a condition as possible.

B. Any unguarded pits 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 BLM and the USGS 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. OTHER INFORMATION

A. Topography: The proposed wellsite is located in a relatively level area, with only minor surface undulations. The surface feature, Diamond Mound, is approximately 2-1/2 miles east of the proposed location.

B. The topsoil at the wellsite is moderately soft sandy loam.

C. Flora and fauna: The vegetation cover at the wellsite is moderately heavy for semi-arid desert land, and consists of mesquite, broomweed, and miscellaneous prairie flowers and weeds. No wildlife was observed, but the area is inhabited by antelope, deer, rabbits, badgers, lizards, and other wildlife typical of semi-arid desert areas. The area is used for cattle grazing.

D. There are no ponds, lakes, or flowing streams or rivers in the immediate vicinity of the wellsite.

E. The nearest dwelling and windmill are located approximately three miles north of the proposed wellsite.

F. The wellsite is located on federally owned surface with federally owned minerals. A portion of the proposed new access road will cross fee owned surface in Section 10, and federally owned surface in Section 11.

G. An archaeological survey has been conducted by New Mexico Archaeological Services, Inc., P. O. Box 1341, Carlsbad, New Mexico, and their Archaeological Clearance Report will be submitted to all interested government agencies.

12. OPERATOR's REPRESENTATIVES

A. The Mesa Petroleum Co representatives responsible for assuring compliance with the approved surface use and operations plan are:

J. W. Hart
P. O. Box 1756
Hobbs, New Mexico 88240
(505) 393-4425 / office
(505) 393-4317 / residence

M. P. Houston or Steve Douglas
1000 Vaughn Building
Midland, Texas 79701
(915) 683-5391 / office
(915) 694-3442 / residence
or 682-5540 / residence

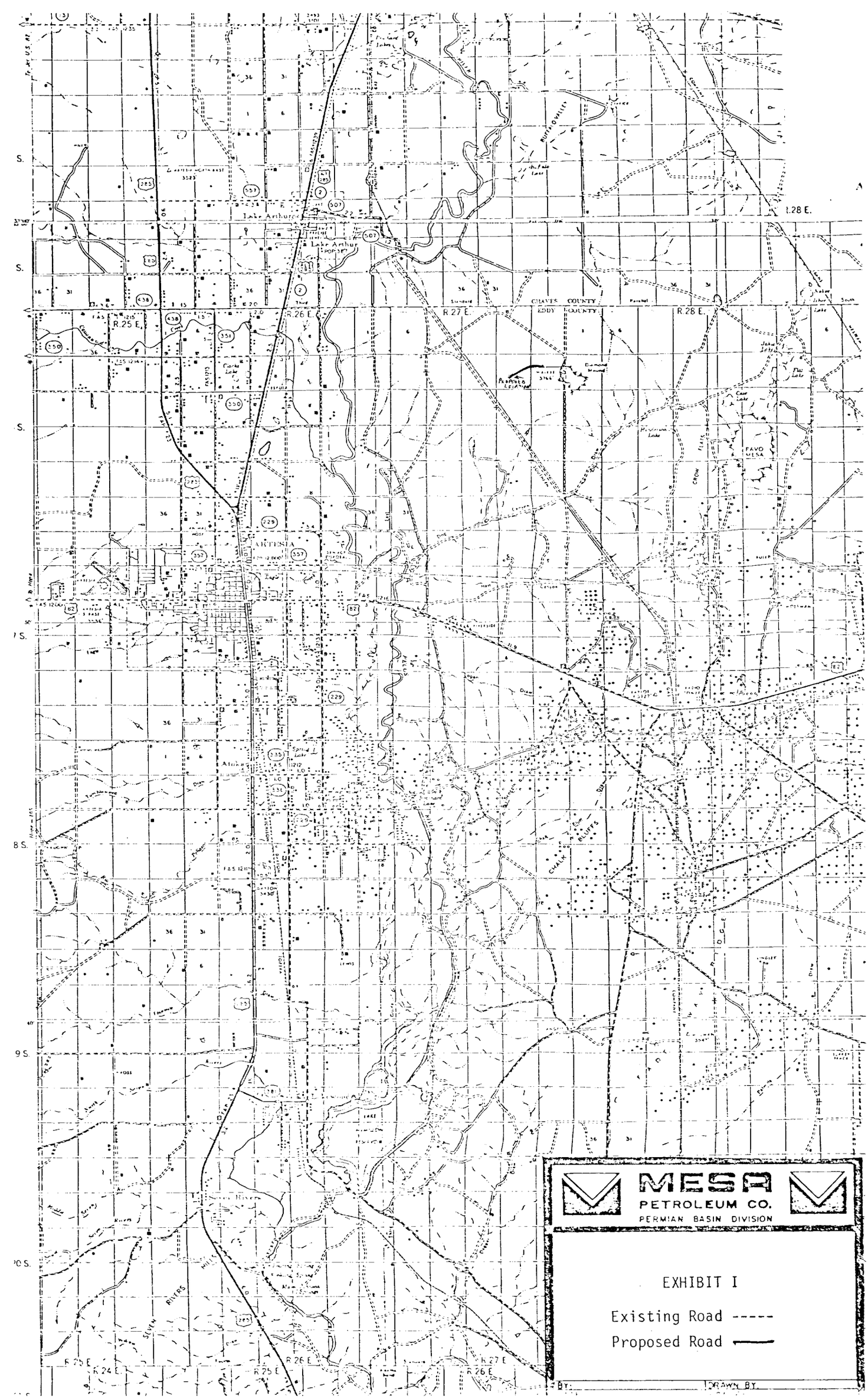
13. CERTIFICATION

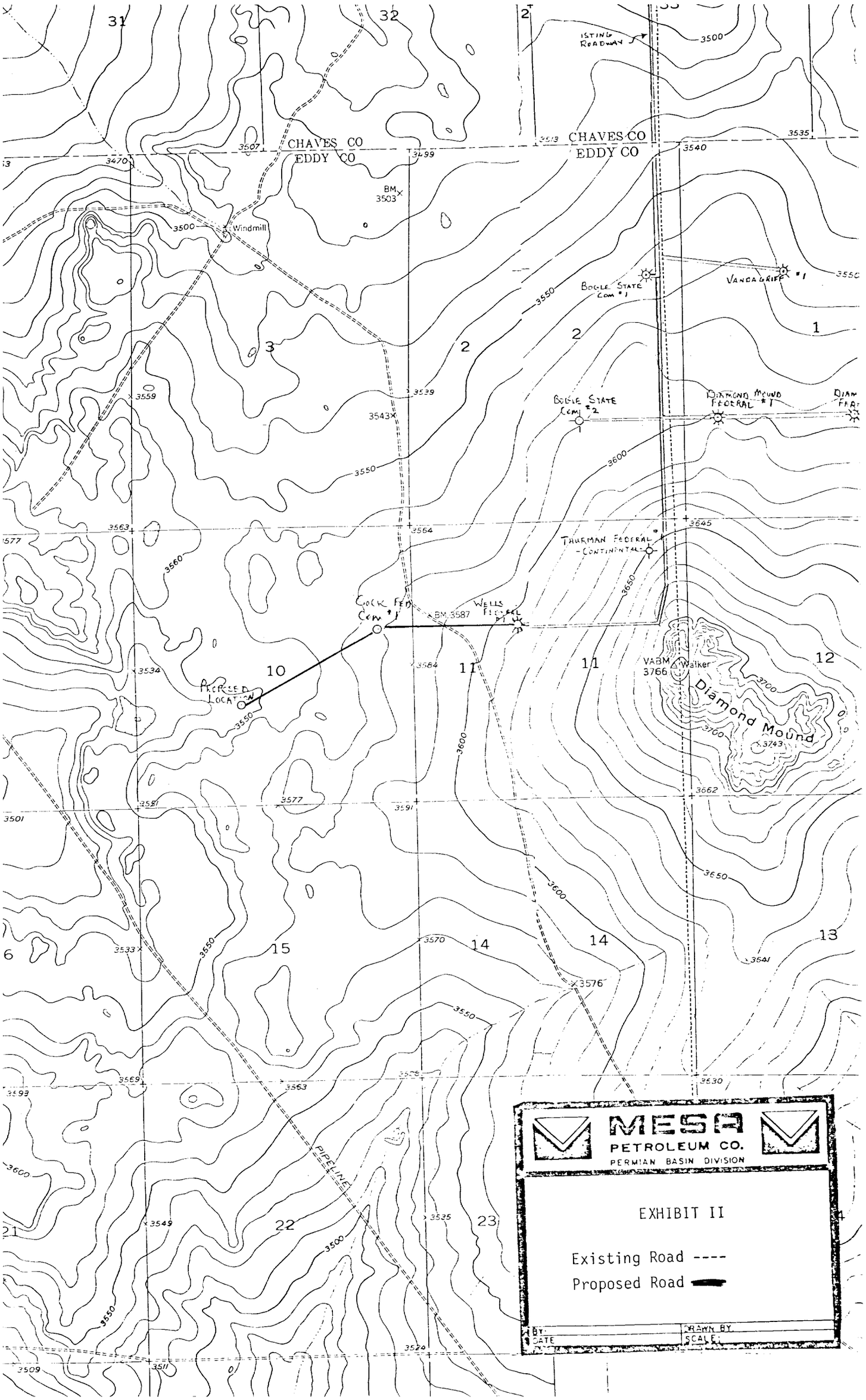
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated 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.

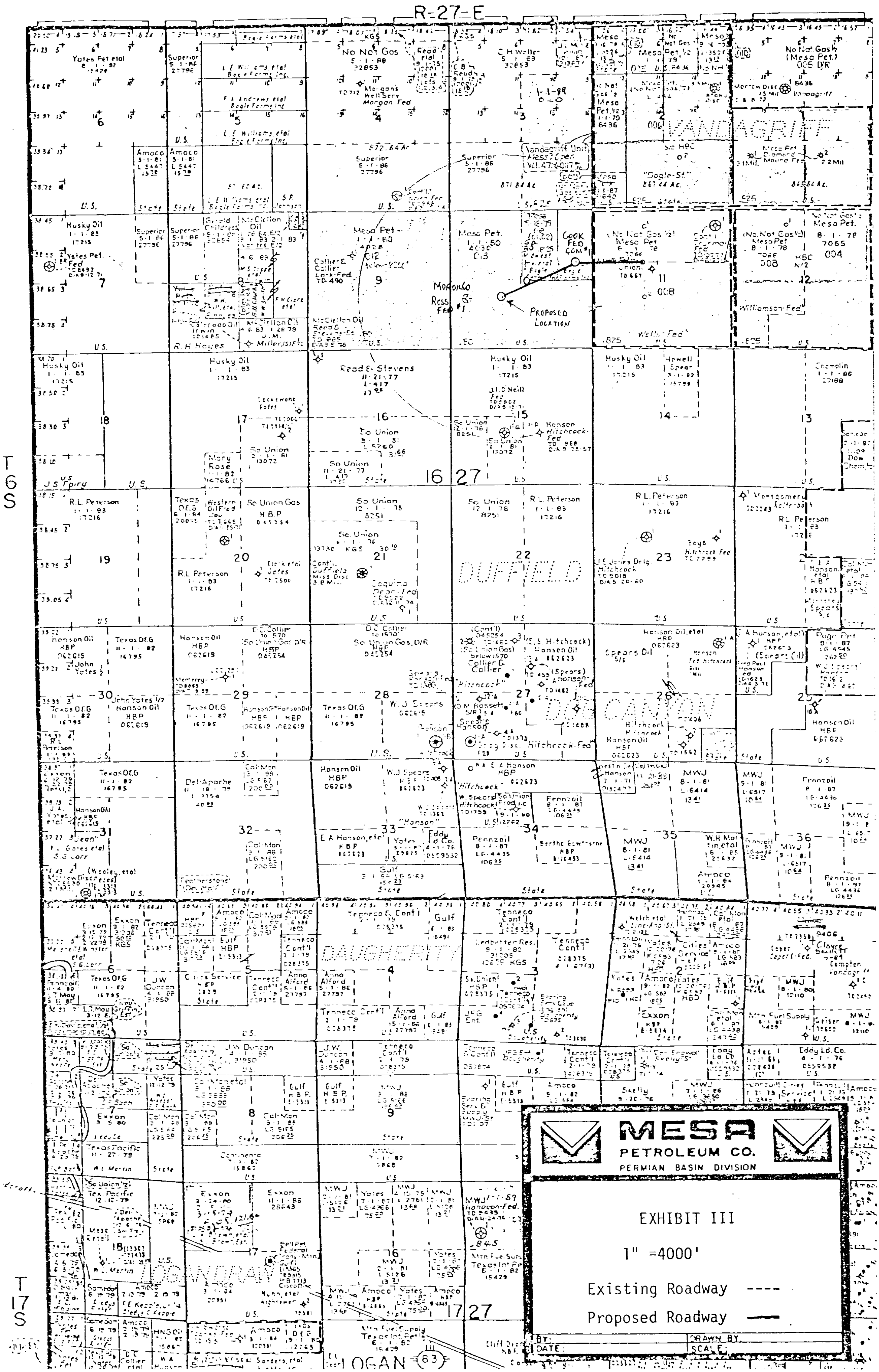
DATE 8-20-79

Michael P. Houston

Michael P. Houston / Operations Manager

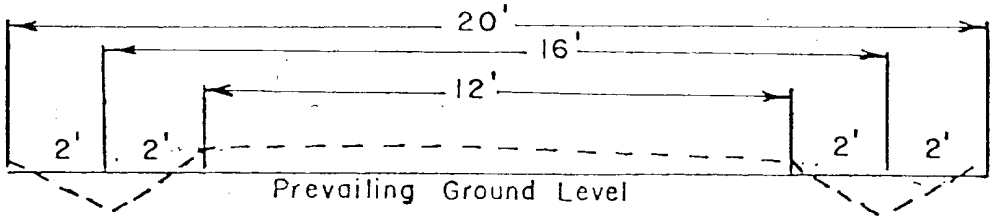

R. 28 E.
R. 25 E.
R. 26 E.
R. 27 E.
R. 28 E.
EDDY COUNTY
CHAVES COUNTY
Lake Arthur
ARTESIA
Atoka
FAVO MESA
CHALK BLUFFS
PECOS RIVER
SEVEN RIVERS
R. 23 E.
R. 24 E.
R. 25 E.
R. 26 E.
R. 27 E.
R. 26 E.
MESA
PETROLEUM CO.
PERMIAN BASIN DIVISION
EXHIBIT I
Existing Road -----
Proposed Road ——
BY:
DRAWN BY


CHAVES CO
EDDY CO
CHAVES CO
EDDY CO
EXISTING ROADWAY
Windmill
BM 3503
BOGLE STATE COM #1
VANDAGRIFF #1
BOGLE STATE COM #2
DIAMOND MOUND FEDERAL #1
THURMAN FEDERAL - CONTINENTAL
COCK FED COM #1
BM 3587
WELLS FEDERAL
PROPOSED LOCATION
VABM 3766 Walker
Diamond Mound
3743
PIPELINE
MESA
PETROLEUM CO.
PERMIAN BASIN DIVISION
EXHIBIT II
Existing Road ----
Proposed Road
BY:
DATE
DRAWN BY
SCALE



R-27-E
T6S
T17S
VANDAGRIFF
DUFFIELD
DOG CANYON
DAUGHERTY
LOGAN DRAW
PROPOSED LOCATION
COOK FED COM #1
MESA PETROLEUM CO.
PERMIAN BASIN DIVISION
EXHIBIT III
1" =4000'
Existing Roadway ----
Proposed Roadway ——
BY:
DATE:
DRAWN BY:
SCALE:

R - O - W 20'



ROADWAY CROSS SECTION

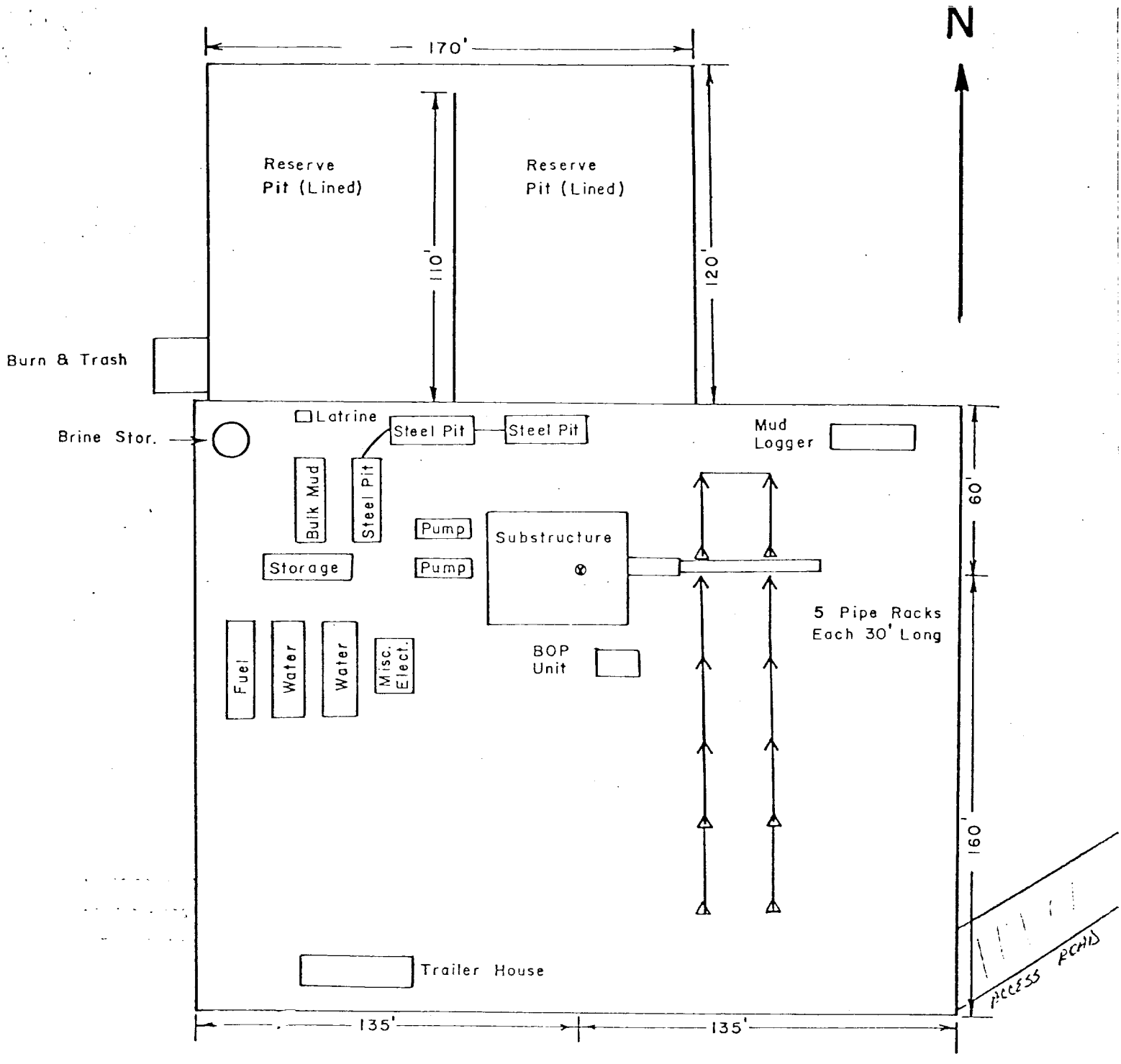
Horizontal Scale 1" = 4'

MESA PETROLEUM CO.
PERMIAN BASIN DIVISION

EXHIBIT IV

Construction Details

BY:	DRAWN BY:
DATE:	SCALE:



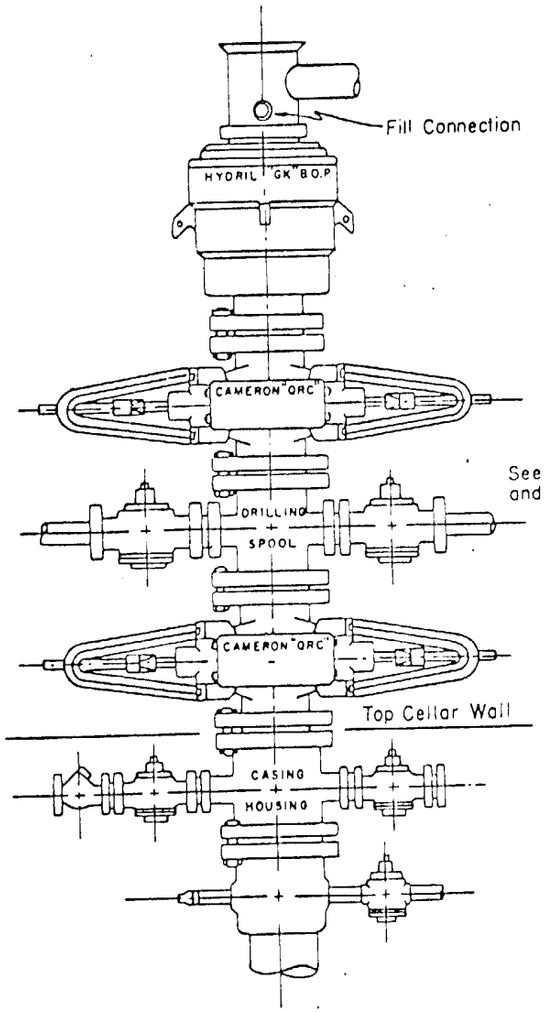
MESA
PETROLEUM CO.
PERMIAN BASIN DIVISION

EXHIBIT V

Rig Layout

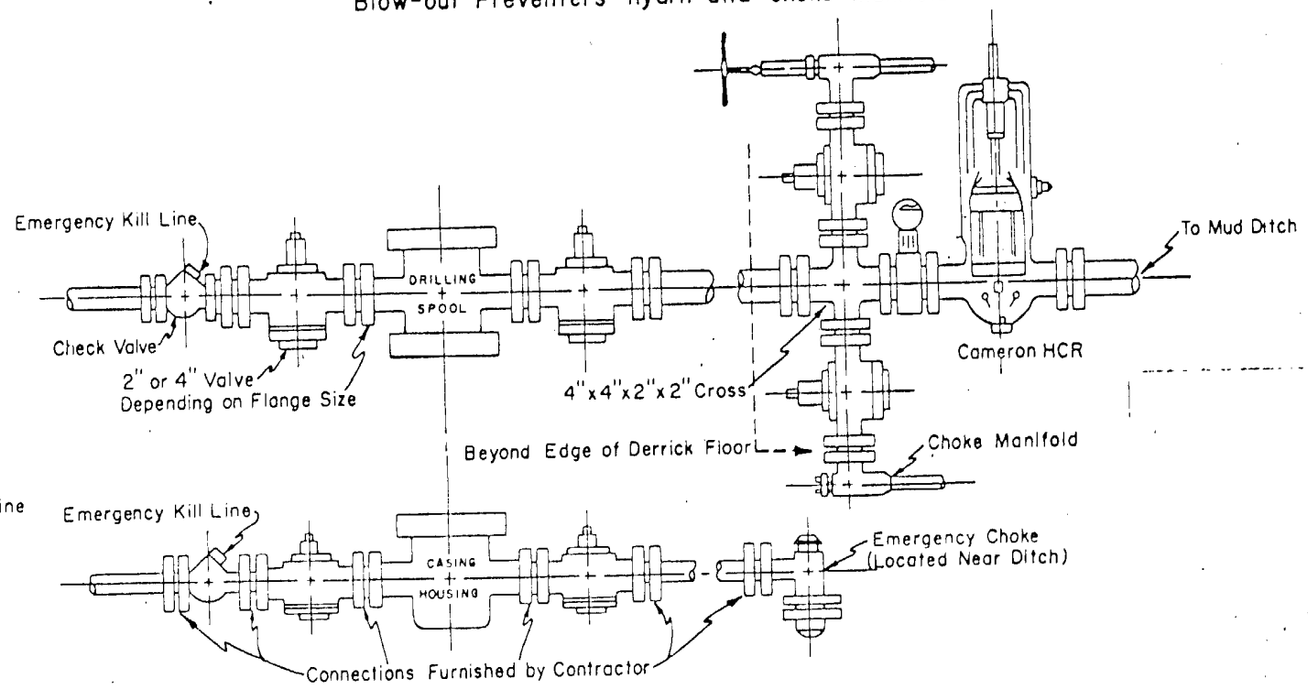
BY: DRAWN BY

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



See Detail of 4" Flow Line and Choke Assembly

3000 PSI WORKING PRESSURE
BLOW-OUT PREVENTER HOOK-UP



3000 PSI WORKING PRESSURE
KILL, CHOKE, AND FILL CONNECTIONS

DETAIL OF 4" FLOW LINE CHOKE ASSEMBLY

Minimum assembly for 3000 PSI working pressure will consist of three preventers.

MESA PETROLEUM CO.
PERMIAN BASIN DIVISION

EXHIBIT VI

BOP Details

BY:
DATE
DRAWN BY
SCALE:

Archaeological Clearance Report

for

Mesa Petroluem Co.

Fuller Fuller Federal Well No. 1
Unit H

Prepared

By

Dr. J. Loring Haskell

Submitted

By

Dr. J. Loring Haskell
Principal Investigator
New Mexico Archaeological Services, Inc.
Carlsbad, New Mexico

17 August 1979

Permit No. 79-NM-166

Introduction

On 17 August 1979, New Mexico Archarological Services, Inc., (NMAS), Carlsbad, undertook for Mesa Petroleum Co., Midland, an archaeological reconnaissance of lands administered by the Bureau of Land Management in Eddy County, New Mexico. Reconnoitered areas will be impacted by the construction of a drill location and an associated access road. This project was advanced by Mr. R.E. Mathis, Mesa Petroleum Co., and expedited by Dr. J. Loring Haskell, Principal Investigator, NMAS, Inc. Dr. Haskell was assisted in the field by Mr. Charles A. Aylward, Staff Archaeologist, NMAS.

Survey Technique

For this investigation, Mesa Petroleum's proposed Fuller Federal Well No. 1 was reconnoitered for evidence of man's past activities by walking it in a series of 20 ft wide, close interval (15^{o} or less), zigzag transects. In addition, an added zone embracing 20 ft on each side of the staked 400 X 400 ft location, and hence lying outside the work area, was reconnoitered by a similar means, as was the access road. Methodologically, this procedure served to promote optimal conditions for the visual examination of areas to be impacted by construction-related activities.

Fuller Federal Well No. 1

Location

Mesa Petroleum's proposed location will measure 400 X 400 ft on federal lands and will be situated 1980 ft from the

south line and 1980 ft from the west line of:

Section 10, T16S, R27E, NMPM, Eddy County, NM

Thus it will be situated in the:

NE¼SW¼, Section 10, T16S, R27E, NMPM, Eddy County, NM

Its associated access road will measure 12 X 5000 ft on federal lands and will be situated in the:

SE¼NW¼, Section 11, T16S, R27E, NMPM, Eddy County, NM
SW¼NW¼, Section 11, T16S, R27E, NMPM, Eddy County, NM
SE¼NE¼, Section 10, T16S, R27E, NMPM, Eddy County, NM
SW¼NE¼, Section 10, T16S, R27E, NMPM, Eddy County, NM
NW¼SE¼, Section 10, T16S, R27E, NMPM, Eddy County, NM
NE¼SW¼, Section 10, T16S, R27E, NMPM, Eddy County, NM

Map Reference: USGS ARTESIA NE QUADRANGLE, 7.5 Minute Series, 1955.

Terrain

This landform is marked by a gently trending outwash plain situated due west of Diamond Mound. Drainage is provided by a troughlike feature which funnels runoff toward the west-southwest. Low ridges demarcate this feature on the north and south and are mantled by limestones of probable Mesozoic age. Elsewhere, hummocks, consisting of loamy sands and sandy loams, characteristically distinguish areas marked by sheet-wash. In general, the contemporary surface, as a whole, is subject to flooding and heavy runoff emanating from Diamond Mound. Observed soils include: Typic Paleorthids, Typic Gypsiorthids, Calcic Gypsiorthids, Tyipc Torripsamments, and Typic Torriorthents. Inclusions consist of occasional chert, quartzite, and limestone cobbles and gravles.

Floristics

Locally, the crests of ridges support an overstory of Condalia ericoides and occasional Yucca glauca. Gutierrezia sarothrae is omnipresent and is associated with Croton sp., Dalea formosa, Krameria sp., and Zinnia acerosa. Most prevalent grasses are: Tridens pulchellus, Aristida breviseta, and Bouteloua curtipendula. The draw and its asscoiated swale-like depressions host a sparse overstory of Prosopis juliflora and Yucca glauca which is associated with Opuntia imbricata, Opuntia englemannii, Echinocactus texensis, Lepidium sp., Nama sp., Circium sp., Mentzelia sp., Croton sp., Perezia nana, Calylophus sp., Hilaria mutica, Sporobolus sp., Bouteloua sp., Muhlenbergia porteri, and Setaria macrostachya.

Cultural Resources

No archaeological sites or isolated manifestations were recorded during this reconnaissance. Although not encountered during this reconnaissance, typical material cultural remains consist of chert and quartzite lithic scatters associated with burned- and fire-cracked caliche cobbles and gravels. Lithic resources are derived from Typic Gypsirothid soils which underlie the now-largely eroded limestone formation still capping Diamond Mound and areal eminences. Remains of this type represent the end product of quarrying activities and subsequent tool fabrication. Detritus consists of primary and secondary decortication flakes and spalls. Owing to the nature of the local landform, resources have been rolled owing to flash flooding.

Recommendations

NMAS recommends clearance for Mesa Petroleum's proposed Fuller Federal Well No. 1, Unit H, and its access road, and suggests that work-related activities proceed in accordance with existing plans.