

Form 3160-3
(July 1992)

OPER. OGRID NO. 13421
PROPERTY NO. 15552
POOL CODE 37584

41 11-14-96

UNIT EFF DATE 12-24-96 on
DEPARTMENT
BUREAU OF LAND MANAGEMENT API NO 30-125-33737

FORM APPROVED

OMB NO. 1004-0136
Expires February 28, 1995

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

| | | | |
|---|-----------------------|---|---------------|
| 1a. TYPE OF WORK Drill <input checked="" type="checkbox"/> Deepen <input type="checkbox"/> | | 5. LEASE DESIGNATION AND SERIAL NO NM-04452 | |
| b. TYPE OF WELL Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone <input type="checkbox"/> | | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A | |
| 2. NAME OF OPERATOR Mallon Oil Company | | 7. UNIT AGREEMENT NAME N/A | |
| 3. ADDRESS AND TELEPHONE NO. P.O. Box 3256 Carlsbad, NM 88220 (505) 885-4596 | | 8. FARM OR LEASE NAME, WELL NO. Mallon 27 Federal | |
| 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 660' FSL and 1980' FEL (SW SE) Unit O | | 9. API WELL NO. 4 | |
| At proposed prod. zone 660' FSL and 1980' FEL (SW SE) Unit O | | 10. FIELD AND POOL, OR WILDCAT NE Lea Delaware | |
| 14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE 36 miles east of Hobbs, New Mexico | | 11. SEC., T. R., M., OR BLK. AND SURVEY OR AREA Sec. 27, T19S-R34E | |
| 15. DISTANCE FROM PROPOSED * LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. 660' (Also to nearest drtg. unit line, if any) | | 12. COUNTY OR PARISH Lea County | |
| 16. NO. OF ACRES IN LEASE 440 | | 13. STATE NM | |
| 17. NO. OF ACRES ASSIGNED TO THIS WELL 40 | | 18. DISTANCE FROM PROPOSED LOCATION * TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 1320' | |
| 19. PROPOSED DEPTH 8300' | | 20. ROTARY OR CABLE TOOLS Rotary | |
| 21. ELEVATIONS (SHOW WHETHER DF, RT, GR, Etc.) 3718.5 GR | | 22. APPROX. DATE WORK WILL START 12-20-96 | |
| 23. PROPOSED CASING AND CEMENT PROGRAM | | | |
| SIZE OF HOLE | GRADE, SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH |
| 20" | 16" | 42# | 40' |
| 14-3/4" | 9-5/8" | 36# | 1500' |
| 8-3/4" | 5-1/2" | 15.5# & 17# | TD |
| QUANTITY OF CEMENT | | | |
| 700 sx lite or 4000 sx Class C | | | |
| Stage 1: 800 sx Class C | | | |
| Stage 2: 580 sx Lite | | | |
| 100 sx Class C | | | |

Mallon Oil Company proposes to drill to a depth sufficient to test the Delaware formation for oil. If productive, 5-1/2 casing will be cemented. If non-productive, the well will be plugged and abandoned in a manner consistent with Federal regulations. Specific programs as per on-shore Oil and Gas Order No. 1 are outlined in the following attachments:

Drilling Program

Surface Use and Operating Plan

Exhibit 1: Blow Out Preventor Plan
Exhibit A: Location and Elevation Plat
Exhibit B: Existing Roads
Exhibit C: New Access Roads

Exhibit D: One-Mile Radius Map
Exhibit E: Well-Site Layout
Exhibit F: Production Facilities

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, 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: Duane C. Winkler TITLE: Production Superintendent DATE: 11/13/96

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY: ORIG. SGD. TONY L. PERCUSO TITLE: MINERALS

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

DISTRICT II
P.O. Drawer 2D, Artesia, NM 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
P.O. Box 2088, Santa Fe, NM 87504-2088

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

| | | |
|-----------------------------------|--|-------------------------------------|
| API Number 30-025-33737 | Pool Code 37584 | Pool Name NE Lea Delaware |
| Property Code 15552 | Property Name MALLON 27 FEDERAL | Well Number 4 |
| OGRID No. 13925 | Operator Name MALLON OIL COMPANY | Elevation 3718 |


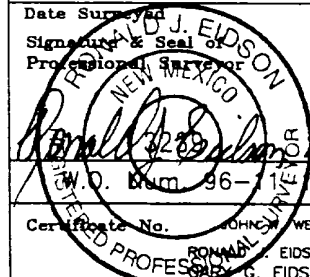
Surface Location

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| 0 | 27 | 19 S | 34 E | | 660 | SOUTH | 1980 | EAST | LEA |

Bottom Hole Location If Different From Surface

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|------------------------------|-----------------|--------------------|-----------|---------|---------------|------------------|---------------|----------------|--------|
| | | | | | | | | | |
| Dedicated Acres 40 | Joint or Infill | Consolidation Code | Order No. | | | | | | |

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

| | |
|--|--|
| | <p>OPERATOR CERTIFICATION</p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p> Signature</p> <p>Duane C. Winkler Printed Name</p> <p>Production Superintendent Title</p> <p>11/13/96 Date</p> |
| | <p>SURVEYOR CERTIFICATION</p> <p>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 belief.</p> <p>NOVEMBER 8, 1996</p> <p>Date Surveyed</p> <p> Signature & Seal of Professional Surveyor</p> <p>W.D. Num 96-114 464</p> <p>Certified No. JOHN WEST, 676 RONALD J. EIDSON, 3239 GARY C. EIDSON, 12641</p> |

DRILLING PROGRAM

Attached to Form 3160-3
Mallon Oil Company
Mallon 27 Federal No. 4
660' FSL, 1980' FEL, Sec. 27, T19S-R34E
Lea County, New Mexico

Lease Number: NM-04452

1. Geologic name of surface formation is: Quaternary Alluvium
2. Estimated tops of important geologic markers:

| | |
|-----------------------------|-------|
| Quaternary Alluvium Surface | |
| Rustler | 1590' |
| Top of Salt | 1720' |
| Base of Salt | 3326' |
| Yates | 3513' |
| Seven Rivers | 3821' |
| Queen | 4516' |
| Delaware | 5800' |
| Total Depth | 8300' |

3. The estimated depths of anticipated fresh water, oil or gas:

| | | |
|---------------------|-------|-------------|
| Quaternary Alluvium | 300' | Fresh water |
| Yates | 3513' | Oil |
| Queen | 4516' | Oil |
| Delaware | 5800' | Oil |

No other formations are expected to give up oil, gas or fresh water in measurable quantities. The surface fresh water sands will be protected by setting 9 5/8" csg at 1500' and circulating cement back to surface. Potash will be protected by setting 5 1/2" csg at total depth and circulating cement back to 1300' from surface.

4. Proposed casing program:

| <u>Hole Size</u> | <u>Interval</u> | <u>Csg OD</u> | <u>Csg weight grade, Jt., Type Cond</u> | |
|------------------|-----------------|---------------|---|----------|
| 20" | 0-40' | 16" | Conductor, 0.25" wall thickness | |
| 14-3/4" | 0-1500' | 9 5/8" | 36# | K-55 STC |
| 8 3/4" | 0-5300 | 5 1/2" | 15.5# | K-55 LTC |
| | 5300-TD | 5 1/2" | 17.# | K-55 LTC |

Cement Program:

20" Conductor csg: Cemented with ready-mix to surface

9 5/8" Surface csg: Cemented to surface with 700 sks Pacesetter Lite
6.00% Gel (Bentonite)+0.25 lb/sk Cello-Seal 105.%
fresh water

5 1/2" Production csg: Stage #1 - Cement with 800 sacks Class "C" + 5 lb/sk
CSE + 0.5% CF-14 + 5 lb/sk salt + 5 lb/sk Gilsonite +
0.25 lb/sk Cello-Seal + 59.390% fresh water. This
cement slurry is designed to bring TOC to 5000'.

Stage #2 - Cement with 580 sacks Pacesetter Lite,
6.0% Gel (Bentonite) + 5.0% salt + 0.25 lb/sk Cello-
Seal + 105.0% fresh water followed with 100 sacks
Class "C" cement + 5.0 lb/sk CSE + 5 lb/sk salt + 0.25
lb/sk + Cello-Seal + 5.0 lb/sk Gilsonite + 0.5 % CF-14
+ 105.0% fresh water. This cement slurry is designed
to bring TOC to 1300'.

5. Minimum specifications for pressure control:

The blowout preventer equipment (BOP) shown in Exhibit #1 will consist of a double ram-type (3000 psi WP) preventer. The unit will be hydraulically operated and the ram-type preventer will be equipped with blind rams on top and drill pipe rams on bottom. The BOP will be nipped up on the 9-5/8" surface csg and used continuously until TD is reached. BOP and accessory equipment will be tested to 1000 psi before drilling out of surface casing. Pipe rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. A 2" kill line and 2" choke line will be included in the drilling spool located below the ram-type BOP. Other accessories to the BOP equipment will include a kelly cock and floor safety valve and choke lines and choke manifold with 3000 psi WP rating.

6. Types and characteristics of the Proposed Mud System:

The well will be drilled to TD with a combination of brine, cut brine, and polymer/KCL mud system. The applicable depths and properties of this system are as follows:

| Depth | Type | Weight (ppg) | Viscosity (sec) | Waterloss (cc) |
|---------|--------------------|-----------------|--------------------|-------------------|
| 0-40 | Fresh Water (spud) | 8.5 | 40-45 | N.C. |
| 0-1500 | F.W. (Gel/Lime) | 8.5-9.0 | 32-36 | N.C. |
| 1500-TD | Brine Water | 10.0 | 32-34 | 10-12 cc |

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the well site at all times.

7. Auxiliary Well Control and Monitoring Equipment:

(A) A Kelly cock will be kept in the drill string at all times.

(B) A full opening drill pipe stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.

(C) The drilling fluids systems will be visually monitored at all times.

8. Testing, Logging and Coring Program:

| | |
|-------------------|---|
| Drill Stem Tests: | None anticipated |
| Logging: | TD to surface casing, GR., CNL-FDC, DLL, MSFL |
| Coring: | None planned |

9. Abnormal Conditions, Pressures, Temperatures, & Potential Hazards:

No abnormal pressures or temperatures are anticipated. The proposed mud program will be modified to control excess pressure if abnormal pressures are encountered. The estimated bottom hole temperature (BHT) at TD is 150° F and estimated maximum bottom-hole pressure (BHP) is 3200 psig. No hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. No major loss circulation zones have been reported in offsetting wells.

10. Anticipated starting date: December 20 1996.

Anticipated completion of Drilling operations: Expected duration of 3 weeks.

Multi-Point Surface Use and Operation Plan

Attached to Form 3160-3

Mallon Oil Company

Mallon 27 Federal No. 4

660' FSL, 1980' FEL, Sec. 27, T19S R34E

Lea County, New Mexico

Lease Number: NM-04452

1. Existing Roads:

- A. The well site and elevation plat for the proposed well is shown in Exhibit "A". It was staked by John West Engineering, Hobbs, NM
- B. All roads to the location are shown in Exhibit "B". The existing roads are illustrated in pink and are adequate for travel during drilling and production operations. Upgrading of the road prior to drilling will be done where necessary as determined during the on site inspection.
- C. Directions to location: Go west 36. miles from Hobbs, New Mexico on Hwy. 62/180. Turn north on lease road and travel 0.1 mile, turn east and travel 0.5 miles. turn north on new lease road to location.
- D. Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as any operations continue on this lease.

2. Proposed Access Road:

Exhibit "C" shows the new access road to be constructed and is illustrated in yellow. The road will be constructed as follows:

- A. The maximum width of the running surface will be 15'. The road will be crowned and ditched and constructed of 6" of rolled and compacted caliche. Ditches will be at 3:1 slope and 4 feet wide. Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and to be consistent with local drainage patterns.
- B. The average grade will be less than 1%.
- C. No turnouts are planned.

- D. No culverts, cattle guard, gates, low-water crossings, or fence cuts are necessary.
 - E. Surfacing material will consist of native caliche. Caliche will be obtained from the nearest BLM-approved caliche pit. Any additional materials that are required will be purchased from the dirt contractor.
 - F. The proposed access road as shown in Exhibit "C" has been center line flagged by John West Engineering, Hobbs, New Mexico.
3. Location of existing wells:
- A. Existing wells within a one mile radius are shown on Exhibit "D".
4. Location of existing and/or proposed facilities:
- A. If the well proved to be commercial, the necessary production facilities and tank battery will be installed on the drilling pad.
5. Location and type of water supply:
- A. It is planned to drill the proposed well with the fresh water that will be obtained from private or commercial sources and will be transported over the existing access roads. No water well will be drilled on the location.
6. Source of construction materials:
- A. Caliche for surfacing the proposed access road and well site pad will be obtained from a BLM-approved caliche pit.

7. Methods of handling waste disposal:
- A. Drill cuttings not retained for evaluation purposes will be disposed into the reserve pit.
 - B. Drilling fluids will be contained in steel metal tanks. The reserve pit will contain any excess drilling fluid or flow from the well during drilling, cementing, and completion operations. The reserve pit will be an earthen pit, approximately 200' x 150' x 6' deep and fenced on three sides prior to drilling. It will be fenced on the fourth side immediately following rig removal. The reserve pit will be plastic-lined (5-7 mil thickness) to minimize lose of drilling fluids and saturation of the ground with brine water.
 - C. Water produced from the well during completion may be disposed into the reserve pit or a steel tank (depending on the rates). After the well is permanently placed on production, produced water will be collected in tanks (fiberglass or steel) until hauled by transport to an approved disposal system; produced oil will be collected in steel tanks until sold.
 - D. A portable chemical toilet will be provided on the location for human waste during the drilling and completion operations.
 - E. Garbage and trash produced during drilling or completion operations will be contained in portable trash basket and hauled to approved disposal facilities. All water and fluids will be disposed of into the reserve pit. Salts and other chemicals produced during drilling or testing will be disposed into the reserve pit. No toxic waste or hazardous chemicals will be produced by this operation.

- F. After the rig is moved out and the well is either completed or abandoned, all waste materials will be cleaned up within 30 days. No adverse materials will be left on the location. The reserve pit will be completely fenced and flagged and kept closed until it has dried. When the reserve pit is dry enough to breakout and fill and, as weather permits, the un-used portion of the well site will be leveled and re-seeded as per BLM specifications. Only that part of the pad required for production facilities will be kept in use. In the event of a dry hole, only a dry-hole marker will remain.
8. Ancillary Facilities:
- A. None required.
9. Well Site Layout:
- A. Exhibit "E" shows the relative location and dimensions of the well pad, reserve pits, and location of major rig components are shown. Top soil, if available, will be stockpiled per BLM specifications as determined at the on site inspection. Because the pad is almost level no major cuts will be required.
 - B. Exhibit "E" shows the planned orientation for the rig and associated drilling equipment, reserve pit, pipe racks, turn-around and parking areas, and access road. No permanent living facilities are planned but a temporary foreman trailer will be on location during the drilling operations.
 - C. The reserve pit will be lined with a high-quality plastic sheeting (5-7 mil thickness).

10. Plans for restoration of the surface:

- A. Upon completion of the proposed operations, if the well is to be abandoned, the caliche will be removed from the location, road and returned to the pit from which it was taken. The pit area, after allowing to dry, will be broken out and leveled. The original top soil will be returned to the entire location which will be leveled and contoured to as nearly the original topography as possible.

All trash, garbage will be hauled away in order to leave the location in an aesthetically pleasing condition.

- B. The disturbed area will be re-vegetated as recommended by the BLM.
- C. Three sides of the reserve pit will be fenced prior to and during drilling operations. At the time that the rig is removed the reserve pit will be fenced on the rig (fourth) side and flagged to prevent livestock or wildlife from being entrapped. The fencing and flagging will remain in place until the pit area is cleaned up and leveled. No oil will be left on the surface of the fluid in the pit. The entire reserve pit will be flagged until the fluid has completely evaporated.
- D. Upon completion of the proposed operations, if the well is completed, the reserve pit will be treated as outlined above within the same prescribed time. The caliche from any area of the original drill site not needed for production operations or facilities will be removed and used for construction of thicker pads or firewalls for the tank battery installation. Any additional caliche required for facilities will be obtained from a BLM-approved caliche pit. Top soil removed from the drill site will be used to re-contour the pit area and any unused portions of the drill pad to the original natural level and re-seeded as per BLM specifications.

11. Surface Ownership:

The well site and lease is located entirely on Federal Surface.

12. Other Information:

- A. The top soil is sandy. The vegetation is native yucca, and prickly pear.
- B. There is no permanent or live water in the immediate area.
- C. Residences and Other Structures: No residences in the immediate area. Oil production facilities on offsetting location.
- D. Land Use: Cattle grazing
- E. Surface Ownership: The proposed well site and access road is on Federal surface and minerals.
- F. There is no evidence of any archaeological, historical or cultural sites in the area. An archaeological survey has been conducted by Desert West Archaeological Services, Carlsbad, New Mexico. The reports have been submitted to the appropriate government agencies.

13. Operations Representative:

- A. The field representative responsible for ensuring compliance with the approved surface use and operations plan is:

Duane C. Winkler
Mallon Oil Company
PO Box 3256
Carlsbad, NM 88220
Office Phone: (505) 885-4596
Home Phone: (505) 885-3148

Certification

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed by Mallon Oil Company and its contractors and subcontractors in conformity with this plan and the terms and conditions which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Date: 11-13-96

Signed: 

Duane C Winkler
Production Superintendent

MINIMUM BLOWOUT PREVENTER REQUIREMENTS

3,000 psi Working Pressure

3 MWP

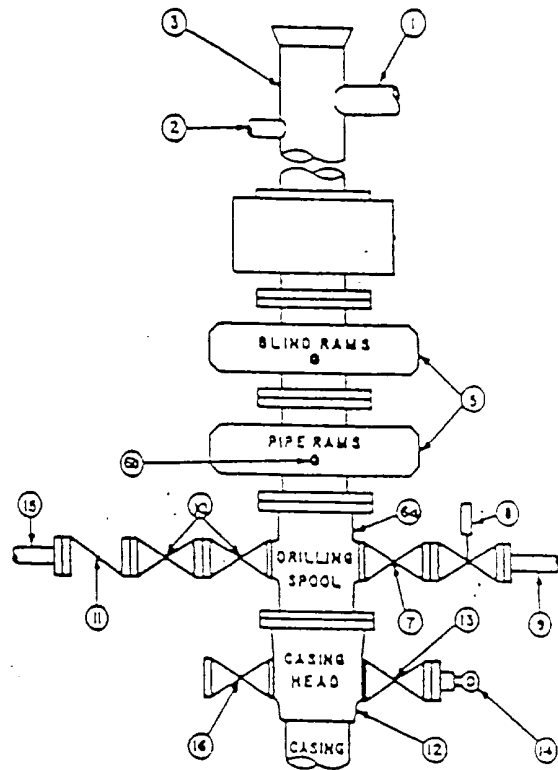
STACK REQUIREMENTS

| No. | Item | Min. I.D. | Min. Nominal |
|-----|---|-----------|--------------|
| 1 | Flowline | | |
| 2 | Fill up line | | 2" |
| 3 | Drilling nipple | | |
| 5 | Two single or one dual hydraulically operated rams | | |
| 6a | Drilling spool with 2" min. kill line and 3" min choke line outlets | | |
| 6b | 2" min. kill line and 3" min. choke line outlets in ram. (Alternate to 6a above.) | | |
| 7 | Valve Gate <input type="checkbox"/> Plug <input type="checkbox"/> | 3-1/8" | |
| 8 | Gate valve—power operated | 3-1/8" | |
| 9 | Line to choke manifold | | 3" |
| 10 | Valves Gate <input type="checkbox"/> Plug <input type="checkbox"/> | 2-1/16" | |
| 11 | Check valve | 2-1/16" | |
| 12 | Casing head | | |
| 13 | Valve Gate <input type="checkbox"/> Plug <input type="checkbox"/> | 1-13/16" | |
| 14 | Pressure gauge with needle valve | | |
| 15 | Kill line to rig mud pump manifold | | 2" |

OPTIONAL

| | | | |
|----|---------------|----------|--|
| 16 | Flanged valve | 1-13/16" | |
|----|---------------|----------|--|

CONFIGURATION A



CONTRACTOR'S OPTION TO FURNISH:

1. All equipment and connections above bradenhead or casinghead. Working pressure of preventers to be 3,000 psi, minimum.
2. Automatic accumulator (80 gallon, minimum) capable of closing BOP in 30 seconds or less and, holding them closed against full rated working pressure.
3. BOP controls, to be located near drillers position.
4. Kelly equipped with Kelly cock.
5. Inside blowout preventer or its equivalent on derrick floor at all times with proper threads to fit pipe being used.
6. Kelly saver-sub equipped with rubber casing protector at all times.
7. Plug type blowout preventer tester.
8. Extra set pipe rams to fit drill pipe in use on location at all times.
9. Type RX ring gaskets in place of Type R.

MEC TO FURNISH:

1. Bradenhead or casinghead and side valves.

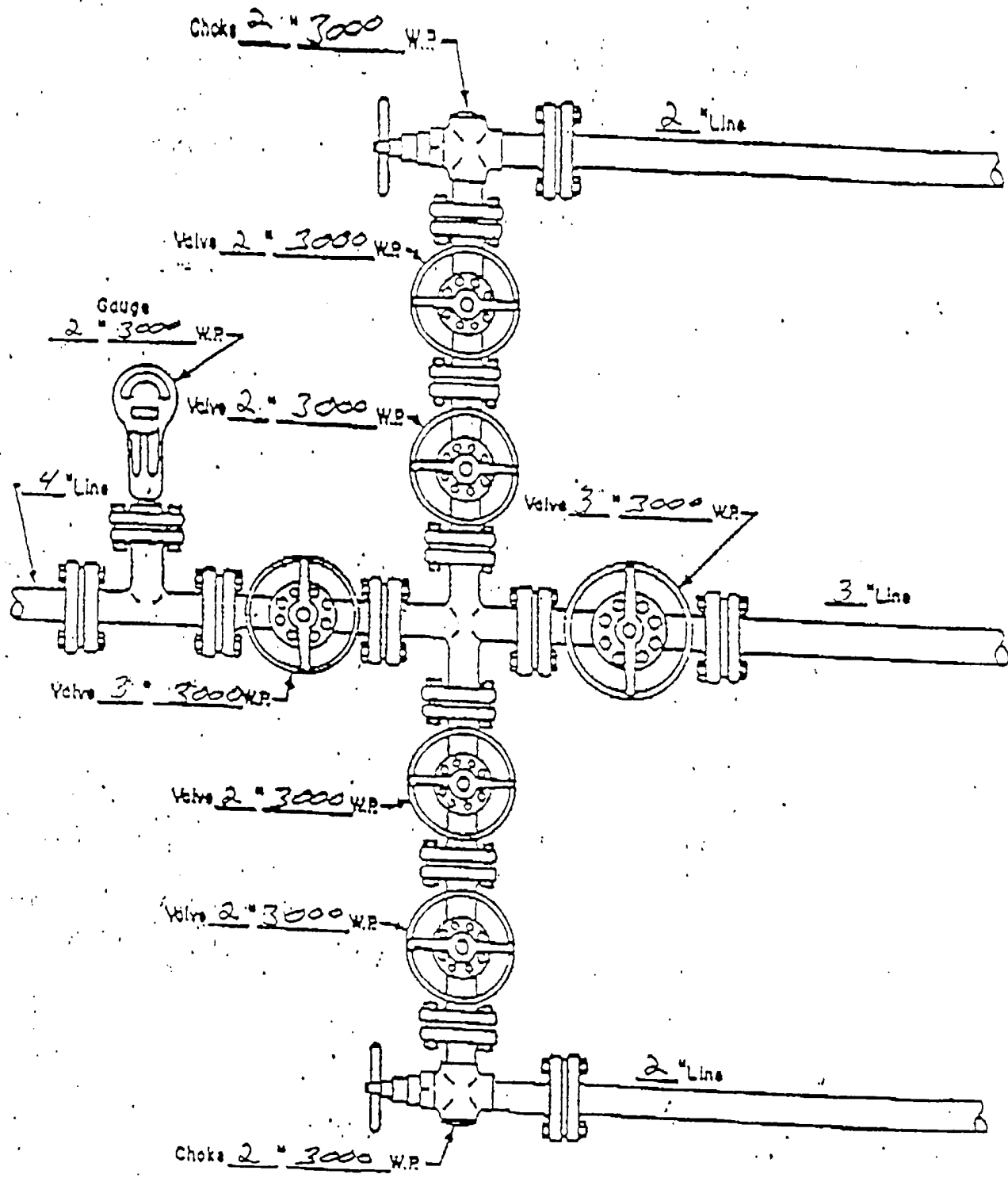
GENERAL NOTES:

1. Deviations from this drawing may be made only with the express permission of MEC's Drilling Manager.
2. All connections, valves, fittings, piping, etc., subject to well or pump pressure must be flanged (suitable clamp connections acceptable) and have minimum working pressure equal to rated working pressure of preventers up through chokes. Valves must be full opening and suitable for high pressure mud service.
3. Controls to be of standard design and each marked, showing opening and closing position.
4. Chokes will be positioned so as not to hamper or delay changing of choke beans. Replaceable parts for adjustable chokes, other bean sizes, retainers, and choke wrenches to be conveniently located for immediate use.
5. All valves to be equipped with handwheels or handles ready for immediate use.

7. Handwheels and extensions to be connected and ready for use.
8. Valves adjacent to drilling spool to be kept open. Use outside valves except for emergency.
9. All seamless steel control piping (3000 psi working pressure) to have flexible joints to avoid stress. Hoses will be permitted.
10. Casinghead connections shall not be used except in case of emergency.
11. Do not use kill line for routine fill-up operations.

Exhibit 1

C STAR DRILLING
Choke Manifold



MANIFOLD
3000 W.P.

- ☒ Manual
- ☐ Hydraulic

Attachment to Exhibit #1
NOTES REGARDING THE BLOWOUT PREVENTERS

1. Drilling nipple to be so constructed that it can be removed without use of a welder through rotary table opening, with minimum I.D. equal to preventer bore.
2. Wear ring to be properly installed in head.
3. Blow out preventer and all fittings must be in good condition, 3000 psi W.P. minimum.
4. All fittings to be flanged.
5. Safety valve must be available on rig floor at all times with proper connections, valve to be full bore 3000 psi W.P. minimum.
6. All choke and fill lines to be securely anchored, especially ends of choke lines.
7. Equipment through which bit must pass shall be at least as large as the diameter of the casing being drilled through.
8. Kelly cock on kelly.
9. Extension wrenches and hand wheels to be properly installed.
10. Blow out preventer control to be located as close to driller's position as feasible.
11. Blow out preventer closing equipment to include minimum 40 gallon accumulator, two independent sources of pump power on each closing unit installation, and meet all API specifications.

GAS FIELD

3737

21

Drill Hole

3755

JEOP

22

23

3750

3708

Oil Well

3719

Oil Well

TRAIL

PIPELINE

Mallon 27 Federal No. 2
660' FSL & 990' FEL Unit P

Mallon 27 Federal No. 4
660' FSL & 1980' FEL Unit O

3731

27

3750

Gravel Pit

3754

PEARL

Drill Hole

Gravel Pit

Oil Well

3741

Gravel Pit

Drill Hole

3700

3700

TRAIL

JEOP

3717

62
180

Drill Hole

PEARL

3700

3699

PIPELINE

PIPELINE

Drill Hole

3663

3658

Oil Well

Drill Hole

Drill Hole

Drill Hole

Drill Hole

40

TRAIL

JEOP

3650

3630

Roberts Well

3630

Drill Hole

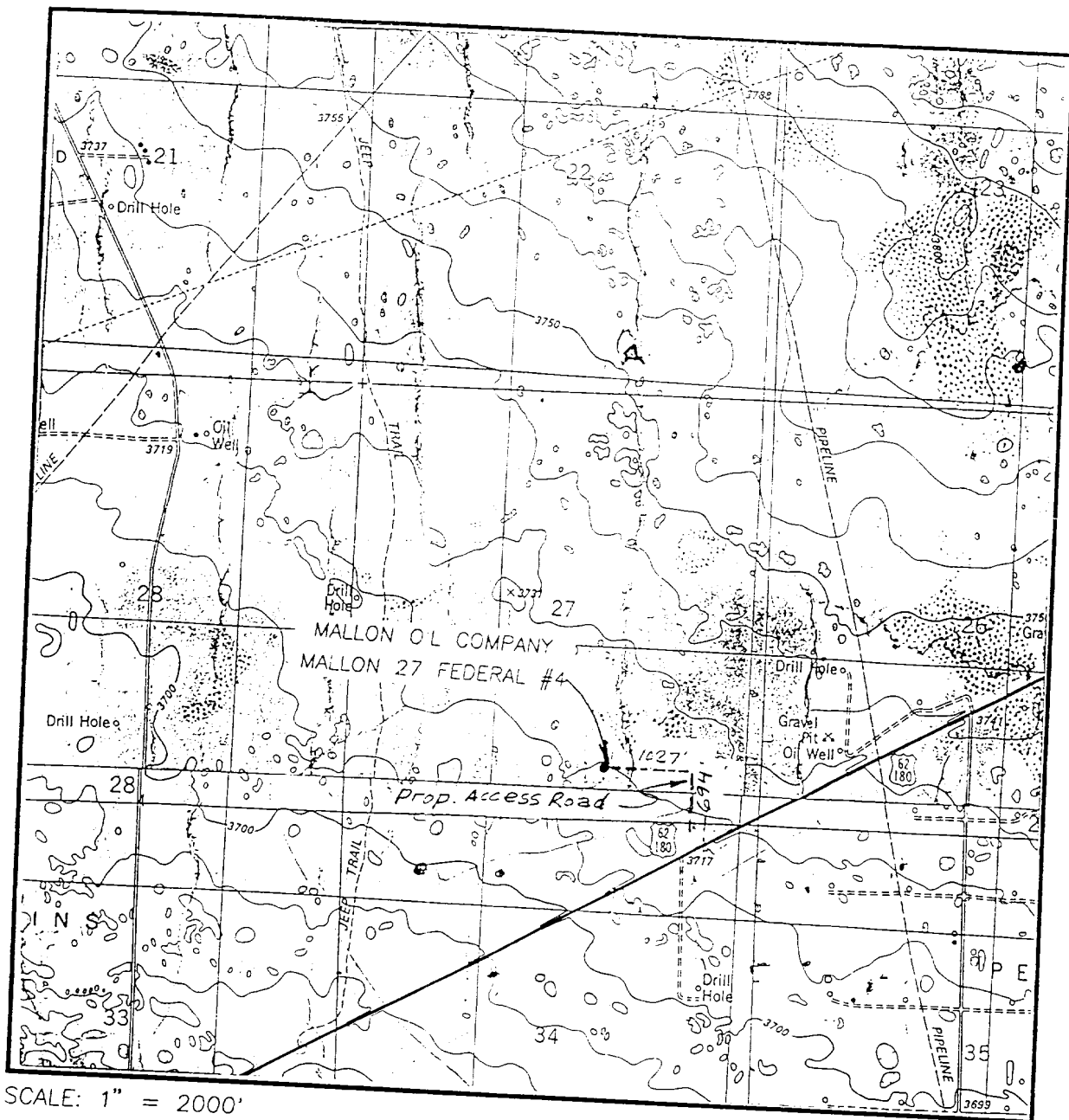
Drill Hole

Drill Hole

Existing Roads
Proposed Roads

Exhibit B

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL - 10'

SEC. 27 TWP. 19-S RGE. 34-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 660' FSL & 1980' FEL

ELEVATION 3718'

OPERATOR MALLON OIL COMPANY

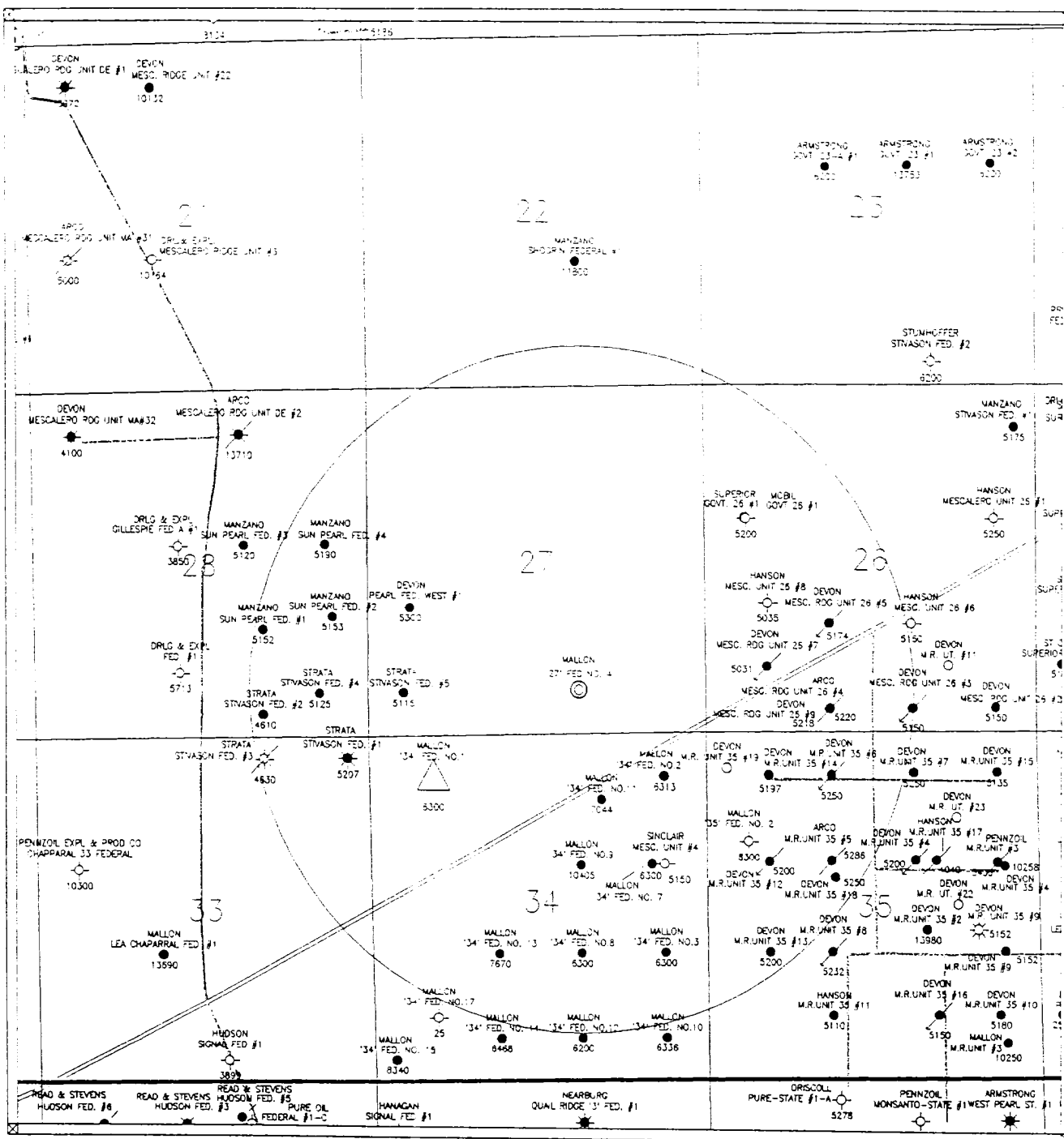
LEASE MALLON 27 FEDERAL

U.S.G.S. TOPOGRAPHIC MAP

LEA, & IRONHOUSE WELL, N.M.

JOHN WEST ENGINEERING
HOBBS, NEW MEXICO

(505) 393-3117



Scale 1:28000.

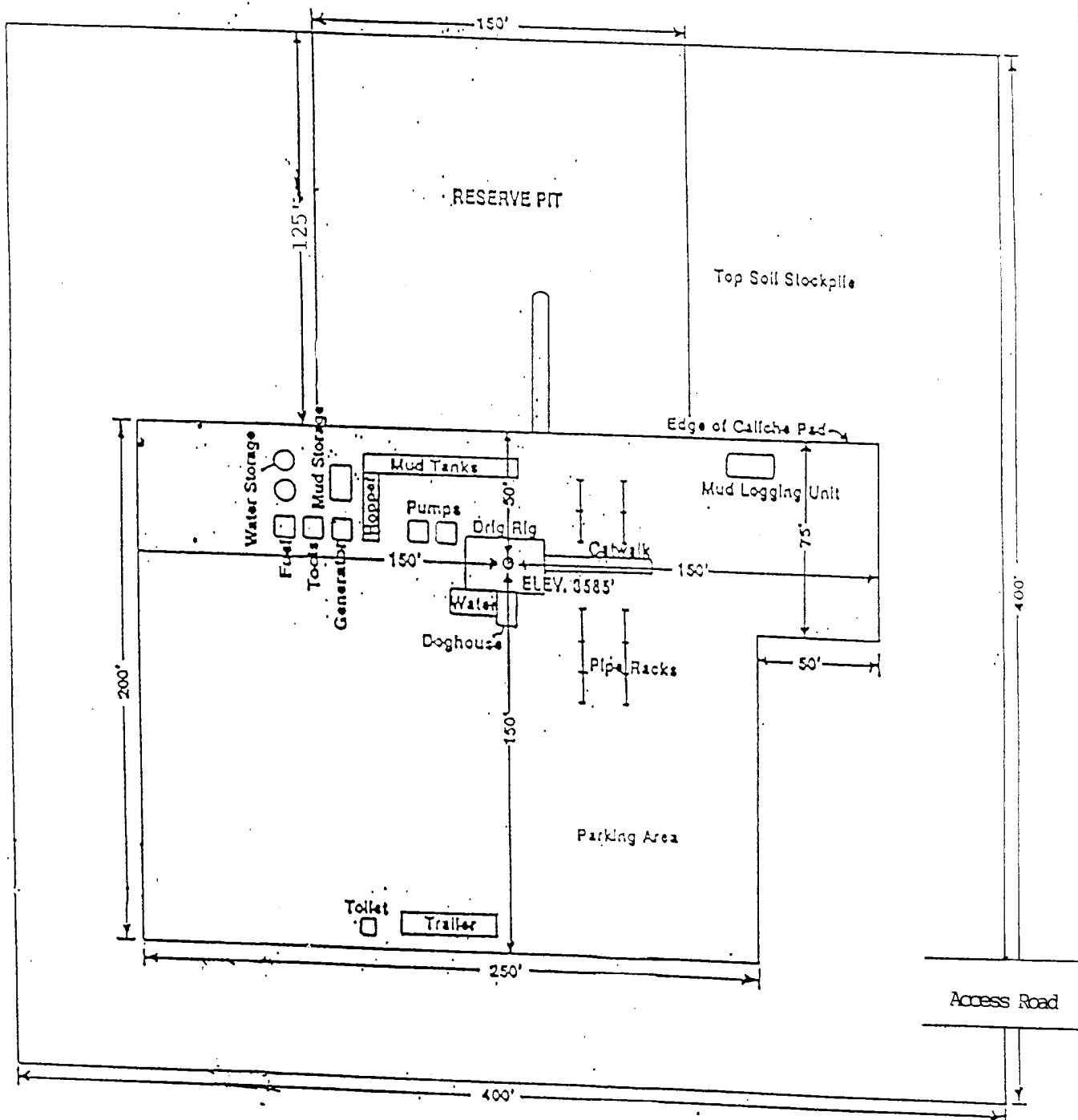
0.1 0.2 0.3 0.4 0.5 miles

MALLON OIL COMPANY

Mallon 27 Federal No. 4
One Mile Radius Map
Lea County, New Mexico

560° 'sl, 1980° 'fel

11/12/96



Mallon 27 Federal No. 4
Lea County, New Mexico

Exhibit E

MALLON OIL COMPANY

ENGINEERING CHART

SHEET NO. _____

FILE _____

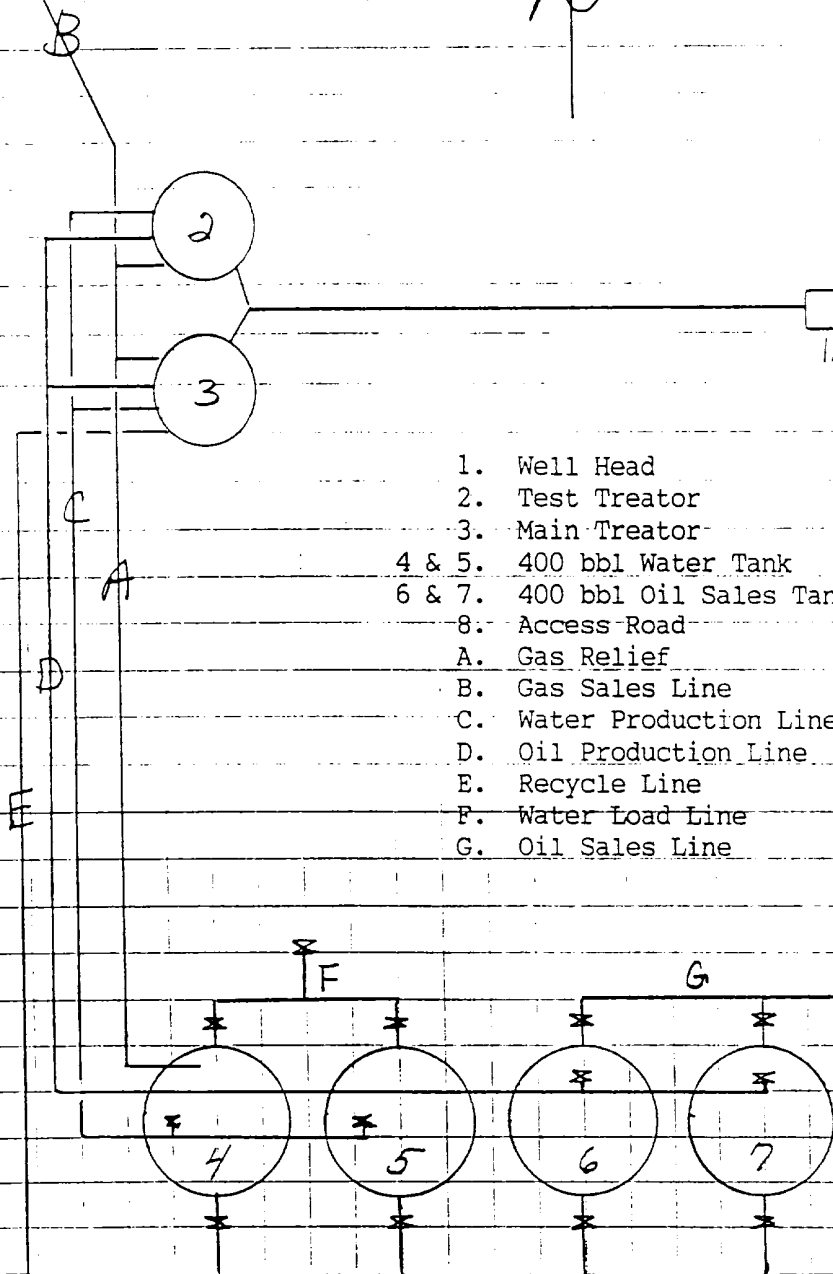
APPN _____

DATE _____

BY _____

SUBJECT Production Facility

Scale 5' =



1. Well Head
2. Test Treator
3. Main Treator
- 4 & 5. 400 bbl Water Tank
- 6 & 7. 400 bbl Oil Sales Tank
8. Access Road
- A. Gas Relief
- B. Gas Sales Line
- C. Water Production Line
- D. Oil Production Line
- E. Recycle Line
- F. Water Load Line
- G. Oil Sales Line