

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

5. LEASE DESIGNATION AND SERIAL NO.

NM 16138

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Pitchfork 34 Federal Com.

9. WELL NO.

2

10. FIELD AND/POOL, OR WILDCAT

Pitchfork Ranch Morrow

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA

Sec. 34, T24S, R34E

12. COUNTY OR PARISH 13. STATE

Lea

NM

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

Enron Oil & Gas Company

3. ADDRESS OF OPERATOR

P. O. Box 2267, Midland, Texas 79702

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*

At surface

660' FSL & 1980' FEL

At proposed prod. zone

660' FSL & 1980' FEL

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*

24 miles west from Jal

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT.

660' 660'

16. NO. OF ACRES IN LEASE

640

17. NO. OF ACRES ASSIGNED TO THIS WELL

320

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.

2952'

19. PROPOSED DEPTH

15,800'

20. ROTARY OR CABLE TOOLS

Rotary

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

3377.7' GR

22. APPROX. DATE WORK WILL START\*

5/19/89

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#             | 650'          | 575 sacks Circulated  |
| 12-1/4"      | 9-5/8"         | 36#             | 5200'         | 3000 sacks Circulated |
| 8-1/2"       | 7"             | 26#             | 13250'        | 1500 sacks            |
| 6-1/8"       | 5-1/2" Liner   | 20#             | 14100'        | 150 sacks             |
| 4-3/4"       | 3-1/2" Liner   | 12.95#          | 15800'        | 100 sacks             |

BOP - Install at 5200 feet with 3000# cap. and 3000# annular preventor. At 13,250 feet increase to 10,000# cap. with 5000# annular preventor. Will use standard surface controlled BOP installation.

Acreeage is 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

*Betty Gindon*  
Betty Gindon

TITLE

Regulatory Analyst

DATE

4/18/89

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

5/19/89

CONDITIONS OF APPROVAL, IF ANY:

\*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.

20-025-30628

RECEIVED

RECEIVED

MAY 18 1989

DCD  
HOSES OFFICE

Submit to Appropriate District Office  
 State Lease - 4 copies  
 Fee Lease - 3 copies

State of New Mexico  
 Energy, Minerals and Natural Resources Department

Form C-102  
 Revised 1-1-89

**OIL CONSERVATION DIVISION**

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

**DISTRICT I**  
 P.O. Box 1980, Hobbs, NM 88240

**DISTRICT II**  
 P.O. Drawer DD, Artesia, NM 88210

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

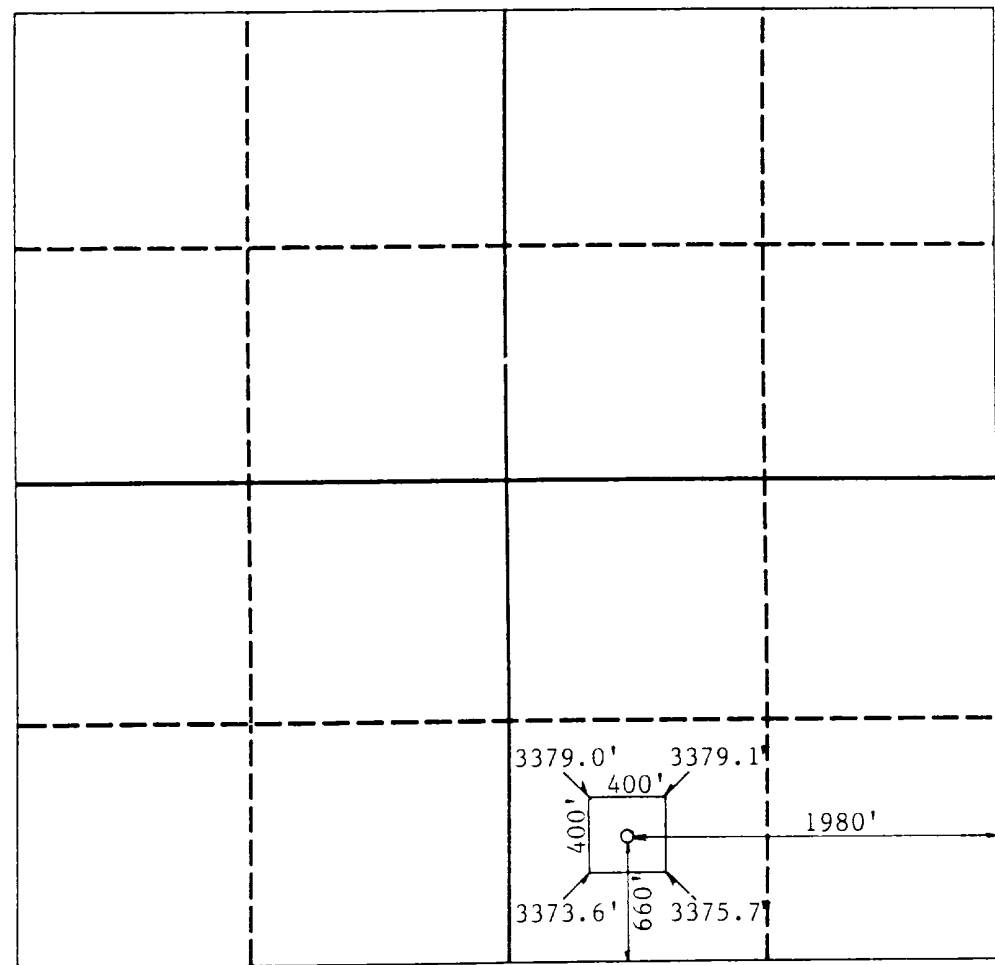
**WELL LOCATION AND ACREAGE DEDICATION PLAT**  
 All Distances must be from the outer boundaries of the section

|                                     |               |                      |                                    |               |               |
|-------------------------------------|---------------|----------------------|------------------------------------|---------------|---------------|
| Operator<br>ENRON OIL & GAS COMPANY |               |                      | Lease<br>PITCHFORK 34 FEDERAL COM. |               | Well No.<br>2 |
| Unit Letter<br>0                    | Section<br>34 | Township<br>24 SOUTH | Range<br>34 EAST                   | County<br>LEA |               |

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

|                               |                               |                         |                                 |
|-------------------------------|-------------------------------|-------------------------|---------------------------------|
| Ground level Elev.<br>3377.7' | Producing Formation<br>Morrow | Pool<br>Pitchfork Ranch | Dedicated Acreage:<br>320 Acres |
|-------------------------------|-------------------------------|-------------------------|---------------------------------|

- Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?
  - Yes  No If answer is "yes" type of consolidation communitization
 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 interest, has been approved by the Division.

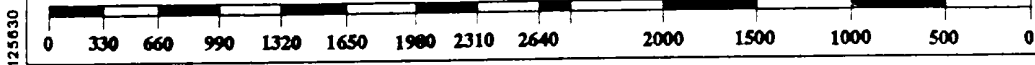


**OPERATOR CERTIFICATION**  
 I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature: *Betty Gildon*  
 Printed Name: Betty Gildon  
 Position: Regulatory Analyst  
 Company: Enron Oil & Gas Company  
 Date: 4/13/89

**SURVEYOR CERTIFICATION**  
 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: APRIL 13 1989  
 Signature & Seal: *Ronald E. Gibson*  
 Professional Surveyor  
 No. 3239  
 Certificate No. 676  
 RONALD E. GIBSON, 3239



125630

Pitchfork 34 Federal Com. #2  
Sec. 34, T24S, R34E  
Lea County, NM

1. In the event drilling operations are not successful, it is the preference of the surface owner that the lease roads be retained for use by the surface owner.
2. In the event drilling operations are not successful, it is the preference of the surface owner that the lease roads be removed.

Other Rehabilitation Requirements: (If any)

Date: 3/13/89

Robert Madua  
Surface Owner

APPLICATION FOR PERMIT TO DRILL  
Pitchfork 34 Federal Com. #2

1. The geologic surface formation is Quaternary.

2. The estimated tops of important geologic markers are:

|                            |               |                        |                |
|----------------------------|---------------|------------------------|----------------|
| 1. <u>Rutsler</u>          | <u>1125'</u>  | 6. <u>Strawn</u>       | <u>13700'</u>  |
| 2. <u>Delaware Lime</u>    | <u>5420'</u>  | 7. <u>Atoka Reef</u>   | <u>13850'</u>  |
| 3. <u>Delaware Sand</u>    | <u>5448'</u>  | 8. <u>Atoka Sand</u>   | <u>13995'</u>  |
| 4. <u>Bone Spring Lime</u> | <u>9260'</u>  | 9. <u>Sinatra Sand</u> | <u>14750'±</u> |
| 5. <u>Wolfcamp</u>         | <u>12340'</u> | 10. _____              | _____          |

3. Depths at which oil, water, or gas bearing formations are expected to be encountered.

|                |                     |
|----------------|---------------------|
| Wolfcamp Limes | 12340 to 13700 feet |
| Strawn Lime    | 13700 to 13850 feet |
| Atoka          | 13850 to 14750 feet |
| Morrow "D" Sd  | 14750 to 15800 feet |

4. Brief description of testing, logging, and coring programs.

Drill stem test as necessary  
Gamma Ray: Surface to TD  
Sonic and/or Neutron Density: Top Delaware Sand to TD  
Mud logger: Top Delaware Sand to TD  
No coring anticipated.

5. Any anticipated abnormal pressures or temperatures expected? Any potential hazards - H<sub>2</sub>S?

Possible abnormal pressures from Wolfcamp through the Atoka.

No H<sub>2</sub>S zones expected.

6. (A) Pressure control equipment to be used.

1-900 Series rotating blowout preventer & stripper  
1-1500 series Hydrill annular blowout preventer  
1-10,000# WP Cameron Iron Works double type "U" blowout preventer  
with pipe rams & blind rams  
1-10,000# CIW single type "U" blowout preventer with pipe rams

BOP's can be activated from a remote control closing unit. Drillstring safety valve will be installed at 13-3/8" casing point.

(B) Pressure ratings (or API series).

900 Series = 3000# WP  
1500 Series - 5000# WP  
10,000 Series - 10,000# WP

(C) Testing procedures and frequency.

BOP's will be tested at installation point as indicated on Application for Permit to Drill.

(D) Schematic Diagram.

Attached. Exhibit "C"

7. Mud Program

Type and Characteristics

0 - 650 - Native  
650 - 5200' - 10.0 ppg brinewater  
5200 - 13250' - 9.2 ppg brinewater  
13250 - 15800' - Drill out with brine and possibly switch to oil-base mud, if needed.

Quantities and types of weighting material to be maintained.

1000 sacks Barite on location.

ENRON OIL & GAS COMPANY

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

Pitchfork 34 Federal Com., Well No. 2  
Sec. 34, T-24-S, R-34-E  
Lea County, New Mexico  
NM 16138

This plan is submitted with the Application for Permit to Drill the above-described well. The purpose of the plan is to describe the location of the proposed well, the proposed construction activities and operations, the magnitude of necessary surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operation so that a complete appraisal can be made of the environmental effects associated with the operation.

1. EXISTING ROADS:

Exhibit "A" depicts the location of the proposed well as staked.

2. PLANNED ACCESS ROADS:

- A. Length and width: Initial new road required will be 20 feet wide and 600 feet in length (on Federal lands) and 20 feet wide and 800 feet in length (on State trust lands). The center line of the proposed new road from the beginning to the well has been staked and flagged with stakes being visible from any one to the next.
- B. Surfacing Material: Six inches of caliche, water compacted, and graded.
- C. Maximum grade: 3 percent.
- D. Turnouts: None required.
- E. Drainage Design: The new road will have a drop of 6 inches from the center line on each side.
- F. Culverts: None required.
- G. Cuts and Fills: None required.
- H. A cattleguard will be installed at the fence line as shown on exhibit B.

3. LOCATION OF EXISTING WELLS:

The closest existing wells are Enron's Page 3 Com. #2 which is approximately 1800 feet to the southwest, and Enron's Pitchfork 34 Federal Com. #1 located 2952 feet to the northwest. (See attached Exhibit "B").

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

There are no existing production facilities.

If production is encountered, a temporary facility will be established on the drill pad, and if warranted, a production facility would be built at a later date in the immediate area of the drill pad location. If the well is productive, the flowline would also be located on the drill pad site and no additional disturbance will occur.

5. LOCATION AND TYPE OF WATER SUPPLY:

Water for drilling will be purchased from commercial sources and transported to the well site over the existing and proposed roads as shown on Exhibits "A" & "B".

6. SOURCE OF CONSTRUCTION MATERIALS:

Caliche for surfacing the road and the well pad will be obtained from a commercial pit belonging to Mr. Rubert Madera, and located in Section 26, T24S, R34E. Caliche will be transported by truck to the well site.

7. METHODS OF HANDLING WASTE DISPOSAL:

- A. Drill cuttings will be disposed of in the drilling pits.
- B. Drilling fluids will be allowed to evaporate in the drilling pits until pits are dry.
- C. Water produced during tests will be disposed of in the drilling pits. Oil produced during tests will be in test tanks until sold.
- D. Current laws and regulations pertaining to the disposal of human waste will be complied with.
- E. 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. Location of trash pits is shown on Exhibit "D".
- F. All trash and debris will be buried or removed from the wellsite within 30 days after finishing drilling and/or completion of operations.



8. ANCILLARY FACILITIES:

None required.

9. WELLSITE LAYOUT:

- A. Exhibit "D" shows the relative location and dimensions of the wellpad, mud pits, reserve pit, trash pit, and location of major rig components.
- B. Only minor levelling of the wellsite will be required. No significant cuts and fills will be necessary.
- C. The reserve pit will be plastic lined.
- D. The pad and pit area has been staked and flagged.

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 locations cleaned of all trash and junk to leave the wellsite in an aesthetically pleasing condition as possible.
- B. Any unguarded pits containing fluid will be fenced until they are filled.
- C. After abandonment of the well, surface restoration will be in accordance with the agreement with the surface owner. Pits will be filled and location will be cleaned. The pit area and well pad will be ripped to promote revegetation. Access roads will be removed as per agreement with the surface owner.

11. OTHER INFORMATION:

- A. Topography - Land surface is undulatory and dune, sloping gently toward the Southwest. Slope is  $0.65^\circ$
- B. Soil - Soil conditions are variable. Generally soil deposits are made up of a coarse sandy clay underlain by caliche loams.
- C. Flora and Fauna - The vegetation cover is moderate and is primarily a mixed grassland-scrub consisting of mesquite, four wing saltbush, and other perennial native grasses. Wildlife in the area is that typical of semi-arid desert land and includes coyotes, rabbits, rodents, reptiles and some birds.
- D. Ponds and streams - There are no rivers, streams, lakes or ponds in the immediate area.
- E. Residences and other structures. - None. There are no water wells within the immediate vicinity.

F. Archaeological, Historical and Cultural Sites.

One Isolated Manifestation consisting of scattered fire-cracked caliche as per NMAS-1989-09-A.

G. Land Use - Grazing and hunting in season.

H. Surface Ownership - Federally owned.

12. OPERATORS REPRESENTATIVE:

The field representative responsible for assuring compliance with the approved surface use and operations plan is as follows:

Mr. G. M. Spears  
1500 Sandalwood  
Odessa, Texas 79760

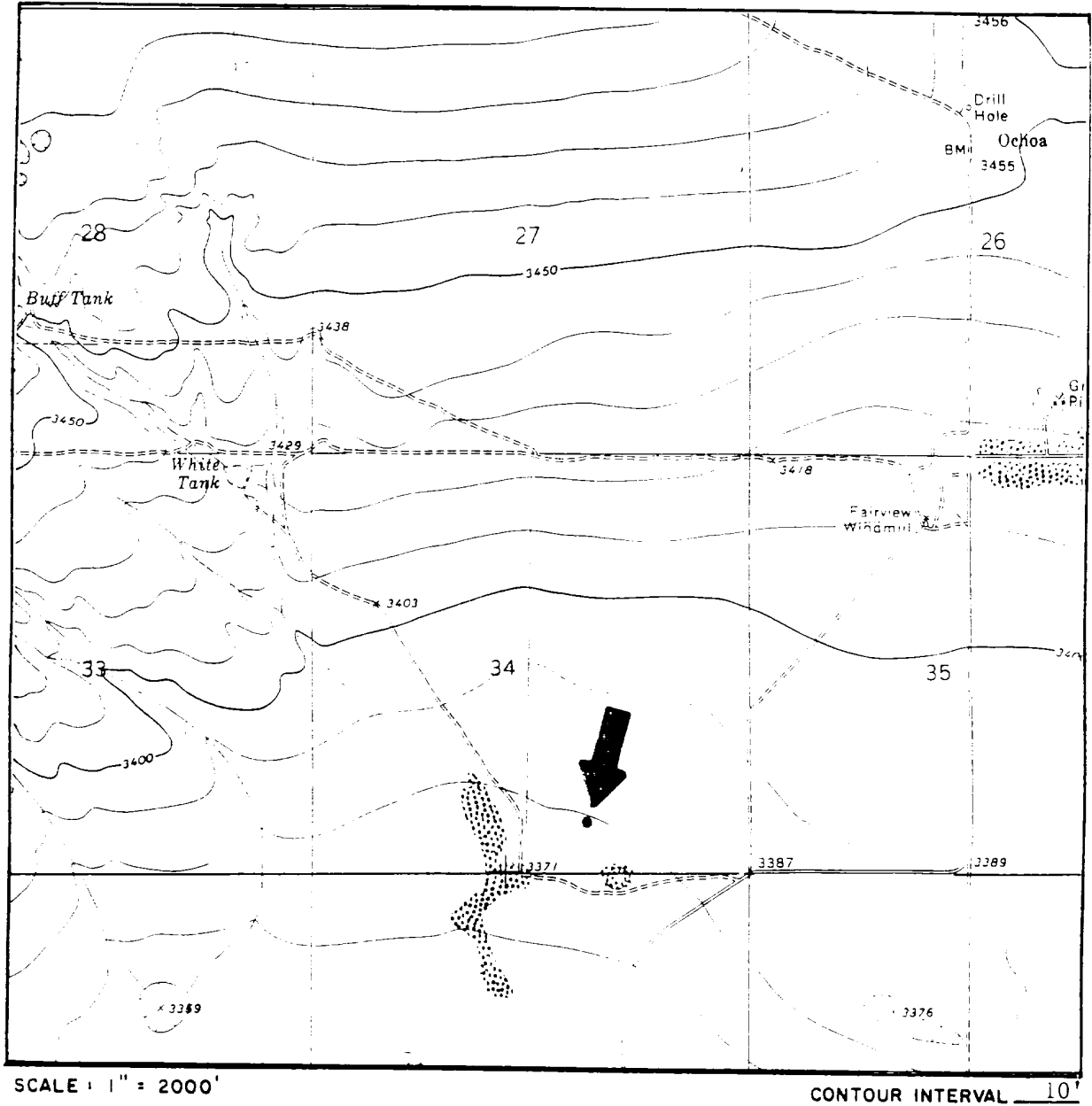
Phones: Business: (915) 686-3720  
Home: (915) 367-6763

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 Enron Oil & Gas Company and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

  
\_\_\_\_\_  
Ray L. Ingle  
Operations Manager

# LOCATION VERIFICATION MAP



SEC. 34 TWP. 24-South RNG. 34-East  
SURVEY N.M.P.M.  
COUNTY Lea STATE New Mexico  
DESCRIPTION 660' FSL & 1980' FEL  
ELEVATION 3377.7'  
OPERATOR Enron Oil & Gas Co.  
LEASE Pitchfork 34 Federal Com. #2



EXHIBIT "A"

**JOHN WEST & ASSOCIATES**  
Midland, Texas  
(915) 697-3171

SECTION 34, TOWNSHIP 24 SOUTH, RANGE 34 EAST, N.M.P.M.  
LEA COUNTY, NEW MEXICO

28 | 27  
33 | 34

27 | 26  
34 | 35

FEDERAL LAND  
LEASED TO  
DIAMOND & HALF INC.

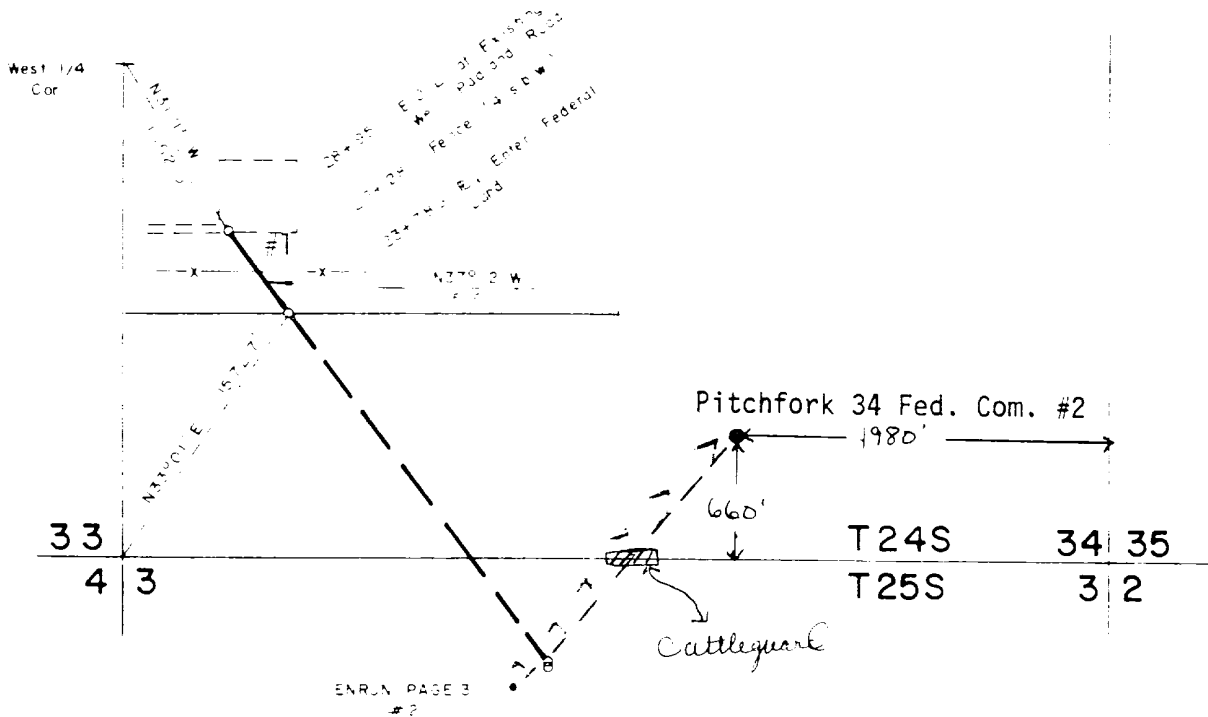


EXHIBIT "B"

HEREBY CERTIFY THAT THIS PLAT  
WAS MADE FROM NOTES TAKEN IN THE FIELD  
IN A BONA FIDE SURVEY MADE UNDER MY  
SUPERVISION, AND THAT THE SAME IS TRUE  
AND CORRECT TO THE BEST OF MY KNOWL-  
EDGE AND BELIEF

*John W. West*

JOHN W. WEST, N.M. P.E. & L.S. No. 676  
TEXAS R.P.S. No. 1138  
RONALD J. EIDSON, N.M. L.S. No. 3239  
TEXAS R.P.S. No. 1883

|   |                         |
|---|-------------------------|
| ENRON   |                         |
| Proposed road crossing Federal Land in Section 34, Township 24 South, Range 34 East, N.M.P.M., Lea County, New Mexico |                         |
| JOHN W. WEST ENGINEERING COMPANY<br>CONSULTING ENGINEERS HOBBS, NEW MEXICO  |                         |
| Scale: 1"=1000'   | Drawn By: C. Bass       |
| Date: 05/02/87  | Ck. Sheet 1 of 1 Sheets |

|       |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 44580 | 6-728 | 063798 | 063903 | 063933 | 063937 | 063938 | 063939 | 063940 | 063941 | 063942 | 063943 | 063944 | 063945 | 063946 | 063947 | 063948 | 063949 | 063950 | 063951 | 063952 | 063953 | 063954 | 063955 | 063956 | 063957 | 063958 | 063959 | 063960 | 063961 | 063962 | 063963 | 063964 | 063965 | 063966 | 063967 | 063968 | 063969 | 063970 | 063971 | 063972 | 063973 | 063974 | 063975 | 063976 | 063977 | 063978 | 063979 | 063980 | 063981 | 063982 | 063983 | 063984 | 063985 | 063986 | 063987 | 063988 | 063989 | 063990 | 063991 | 063992 | 063993 | 063994 | 063995 | 063996 | 063997 | 063998 | 063999 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| 9     | 10    | 11     | 12     | 13     | 14     | 15     | 16     | 17     | 18     | 19     | 20     | 21     | 22     | 23     | 24     | 25     | 26     | 27     | 28     | 29     | 30     | 31     | 32     | 33     | 34     | 35     | 36     | 37     | 38     | 39     | 40     | 41     | 42     | 43     | 44     | 45     | 46     | 47     | 48     | 49     | 50     | 51     | 52     | 53     | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     | 67     | 68     | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

FIELD: \_\_\_\_\_  
 LEASE: Pitchfork "34" Federal Com #2

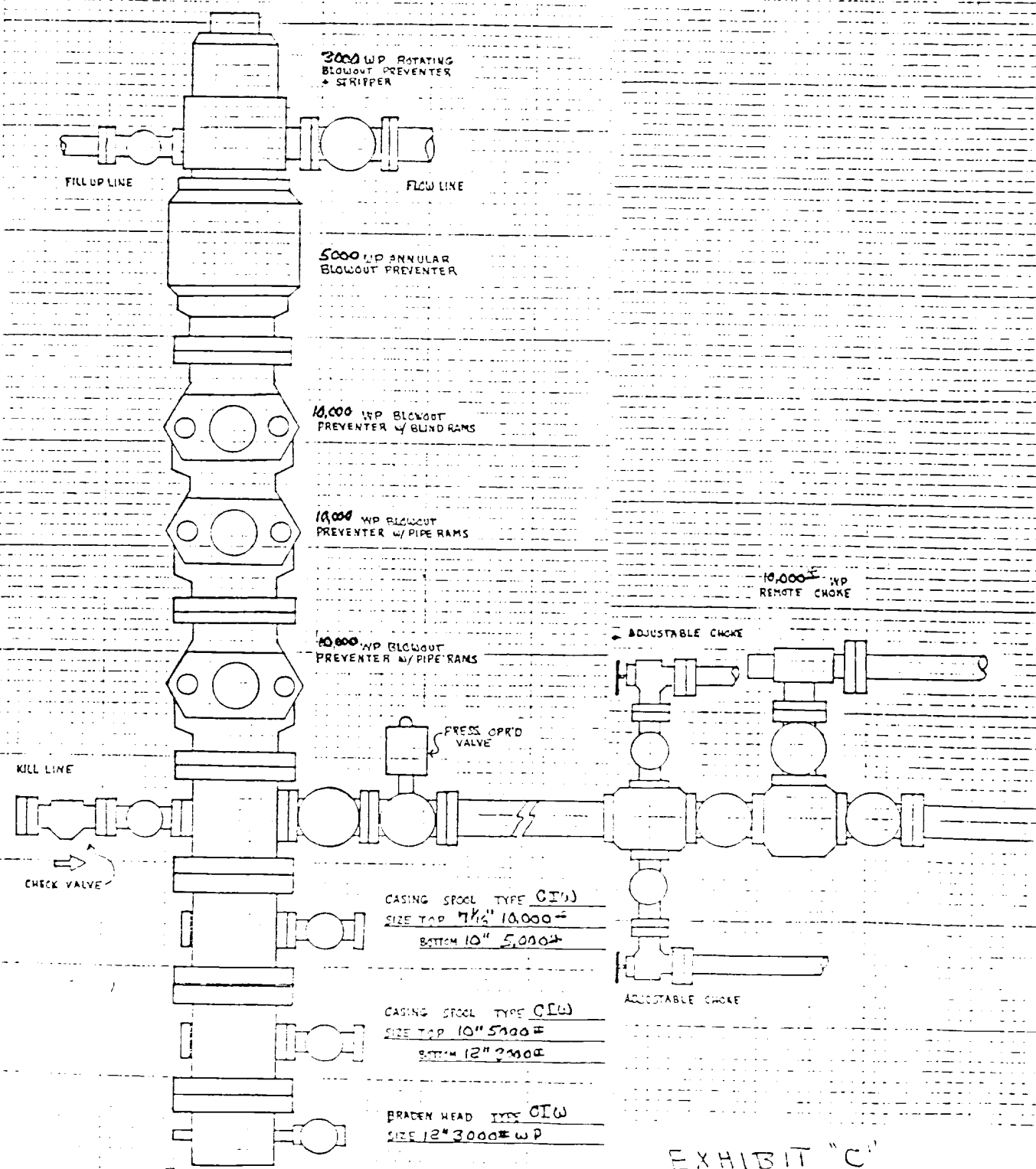
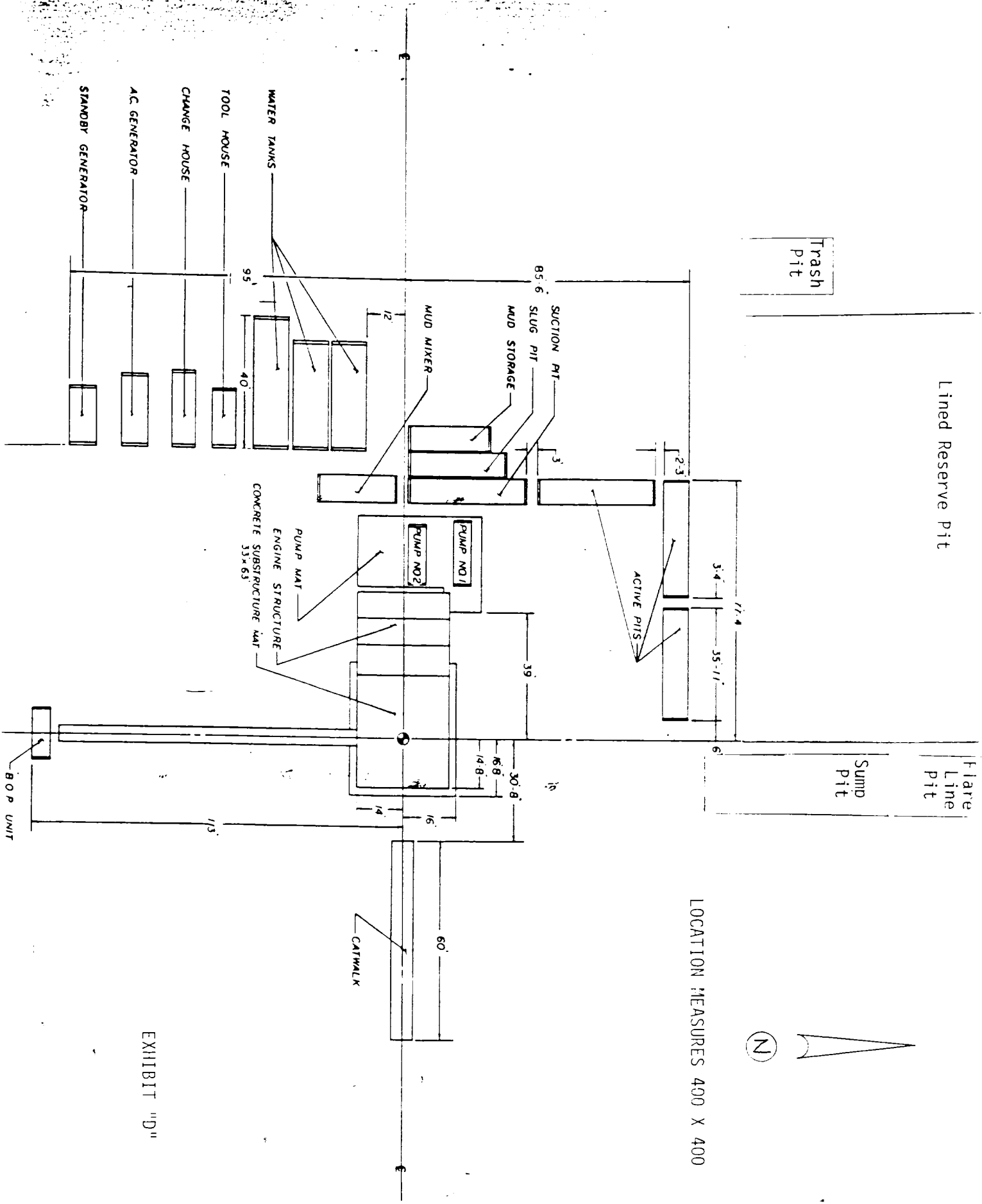


EXHIBIT "C"



LOCATION MEASURES 400 X 400

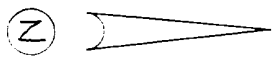


EXHIBIT "D"