



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
ROSWELL DISTRICT OFFICE
P.O. BOX 1397
ROSWELL, NEW MEXICO 88201

RECEIVED

APR 07 '88

O. C. D.
ARTESIA, OFFICE

NM-29233
3162.41 (065)

Pogo Producing Company
P. O. Box 10340
Midland, TX 79702

APR 06 1988

Dear Sir:

Your application for Permit to Drill the Neff 13 No. 1 well in the NW1/4 sec. 13, T. 22 S., R. 31 E., Eddy County, New Mexico, lease NM-29233, to a depth of 15,200 feet to test the Morrow formation in the oil-potash area, is hereby approved as amended by stipulations attached to the application.

One copy of the application is returned herewith. Please notify the Bureau of Land Management office checked on the attached special stipulation, in sufficient time for a representative to witness all cementing operations.

Approval of the application 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.

Sincerely,

Orig. Sgd. David L. Mari



Francis R. Cherry, Jr.
District Manager

1 Enclosure:

cc:

✓ NMOC - Artesia - 2
NM (067) - 2
NM (065) - 1

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.

NM - 29233

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Neff 13

9. WELL NO.

1

10. FIELD AND POOL, OR WILDCAT

Wildcat (Morrow)

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

Sec. 13, T-22-S, R-31-E

12. COUNTY OR PARISH

Eddy

13. STATE

New Mexico

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

Pogo Producing Company

3. ADDRESS OF OPERATOR

P.O. Box 10340 Midland, Texas 79702

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

At surface

1980' FSL & 1980' FEL

At proposed prod. zone

1980' FSL & 1980' FEL

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

36 miles WNW of Jal, New Mexico

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST

PROPERTY OR LEASE LINE, FT.

(Also to nearest drlg. unit line, if any)

1980'

16. NO. OF ACRES IN LEASE

1120

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.

19. PROPOSED DEPTH

15,200'

20. ROTARY OR CABLE TOOLS

Rotary

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

3593.6' GR

22. APPROX. DATE WORK WILL START*

April 15, 1988

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8"	48	800	625 SXS CIRCULATE
12 1/4"	10 3/4"	40.40 - 45.50	4530	1150 SXS CIRCULATE
9 1/2"	7 5/8"	26.40 - 29.70	11,800	1500 SXS
6 1/2"	5" liner	18	15,200	300 SXS

Proposal is to drill a well through the Morrow formation. Adequate logs will be run to evaluate all zones below the Delaware formation.

Cement will be circulated to the surface on the 13 3/8" surface casing and the 10 3/4" intermediate casing.

BOP Program: 800' to 11,800' - 3000# WP
11,800' to 15,200' - 10,000# WP

Natural gas on the lease is 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

TITLE

Division Operations Manager

DATE 2/26/88

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

**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

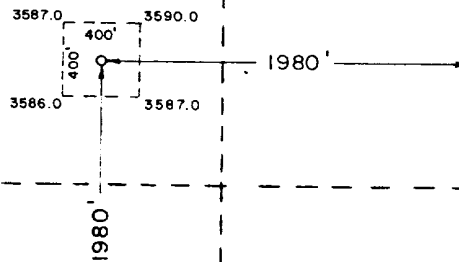
Operator Pogo Producing Company			Lease Neff 13		Well No. 1
Unit Letter J	Section 13	Township 22 South	Range 31 East	County Eddy	
Actual Footage Location of Well: 1980 feet from the south line and 1980 feet from the east line					
Ground Level Elev. 3593.6	Producing Formation Morrow	Pool Wildcat Morrow		Dedicated Acreage: 320 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

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

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



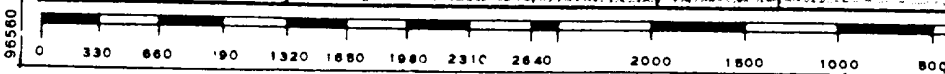
CERTIFICATION

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

B. J. Williams
 Name **B. J. Williams**
 Position **Division Operations Manager**
 Company **Pogo Producing Company**
 Date **February 26, 1988**

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 **February 22, 1988**
 Registered Professional Engineer and/or Land Surveyor
John W. West
 Certificate No. **JOHN W. WEST, 676**
RONALD J. EIDSON, 3239



APPLICATION FOR DRILLING

POGO PRODUCING COMPANY

NEFF 13 NO. 1

EDDY COUNTY, NEW MEXICO

In conjunction with permitting the captioned well for drilling in Section 13 T-22-S, R-31-E, Eddy County, New Mexico, Pogo Producing Company submits the following in accordance with U.S.G.S. (NTL-6) letter dated July 1, 1976:

1. The surface formation is Quarternary sand and gravel.
2. Estimated tops of geologic markers as follows:

Rustler Anhydrite and Dolomite -----	775'
Salado Salt -----	2239'
Castile Anhydrite -----	3855'
Delaware Limestone -----	4510'
Bell Canyon Sandstone -----	4585'
Cherry Canyon Sandstone -----	5405'
Brushy Canyon Sandstone -----	7110'
Bone Spring Limestone, Sandstone and Shale ---	8390'
2nd Bone Spring Sandstone -----	10145'
3rd Bone Spring Sandstone -----	11285'
Wolfcamp Shale and Limestone -----	11645'
Strawn Limestone -----	13090'
Atoka Clastics -----	13285'
Middle Atoka Limestone -----	13620'
Morrow Limestone -----	13840'
Morrow Clastics -----	13950'
Total Depth -----	15200'

3. The depths at which oil, gas, or water are expected are 4585', 5405', 7110', 11,900', 13,285', 13,620', 13,840' & 13,950'.

4. Casing program and cement:

13 3/8"	48# H-40 ST&C @ 800' w/375 sxs C1 C + 4% Gel + 2% CaCl ₂ + 1/4# Flocele per sx followed w/250 sxs C1 C + 2% CaCl ₂ . Circulate cement.
10 3/4"	40.50# K-55, 40.50# & 45.50# S-80 ST&C @ 4530' w/900 sxs Lt + 15# salt + 1/4# Flocele per sx followed w/250 sxs C1 C + 3# salt per sx. Circulate cement.
7 5/8"	26.40# K-55, N-80 & S-95 & 29.70# S-95 LT&C @ 11,800' w/DV tool @ 7900'. 1st stage - 800 sxs C1 H 50-50 POZ "A" w/2% Gel, 6# salt + 0.3% Halad-22A. 2nd stage - 700 sxs C1 C 50-50 POZ "A" + 2% Gel + 6# salt + 0.2% Halad-4. TOC is estimated @ 4300' if necessary to cover up Delaware zones.
5"	18# S-95 LT&C @ 15,200' w/300 sxs C1 H w/additives.

5. Circulating Medium:

An earthen pit will be used to hold drilling fluids and cuttings. The drilling mud program is as follows:

Spud mud to 800'
Brine water to 4530'
Cut Brine to 11,800'
KCL Polymer to 15,200'

6. If warranted, drill stem tests will be carried out in the Bell Canyon, Cherry Canyon, Bone Springs, Wolfcamp, Atoka and Morrow.
7. Ten foot samples of cuttings will be caught from the base of the surface pipe (800') to total depth.
8. Adequate electrical and resistivity logs will be run from total depth to the base of the intermediate casing at 4530'. The gamma ray will be run to the surface.
9. Lost circulation zones are possible from the surface to 11,645'. High pressure is expected in the Atoka formation.

APPLICATION FOR DRILLING
POGO PRODUCING COMPANY
NEFF 13 NO. 1
EDDY COUNTY, NEW MEXICO

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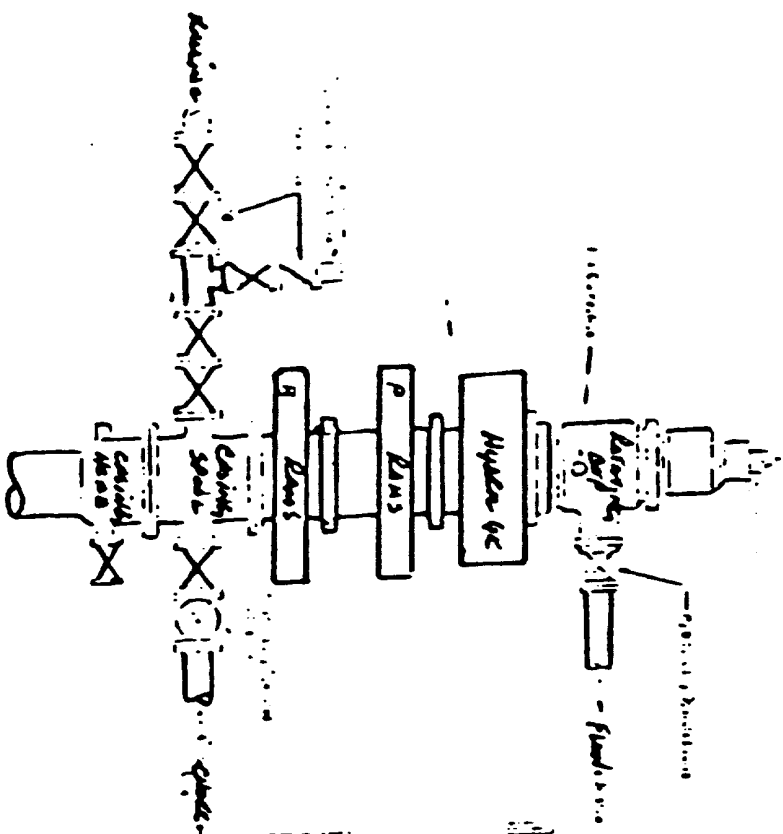
10. Blow Out Preventors:

Surface to 800' - None
800' to 11,800 - 3000# WP
11,800' to 15,200' - 10,000# WP
A typical BOP sketch is attached

11. The anticipated starting date is April 15, 1988 with completion expected by August 1, 1988.

TYPICAL BOP SKETCH

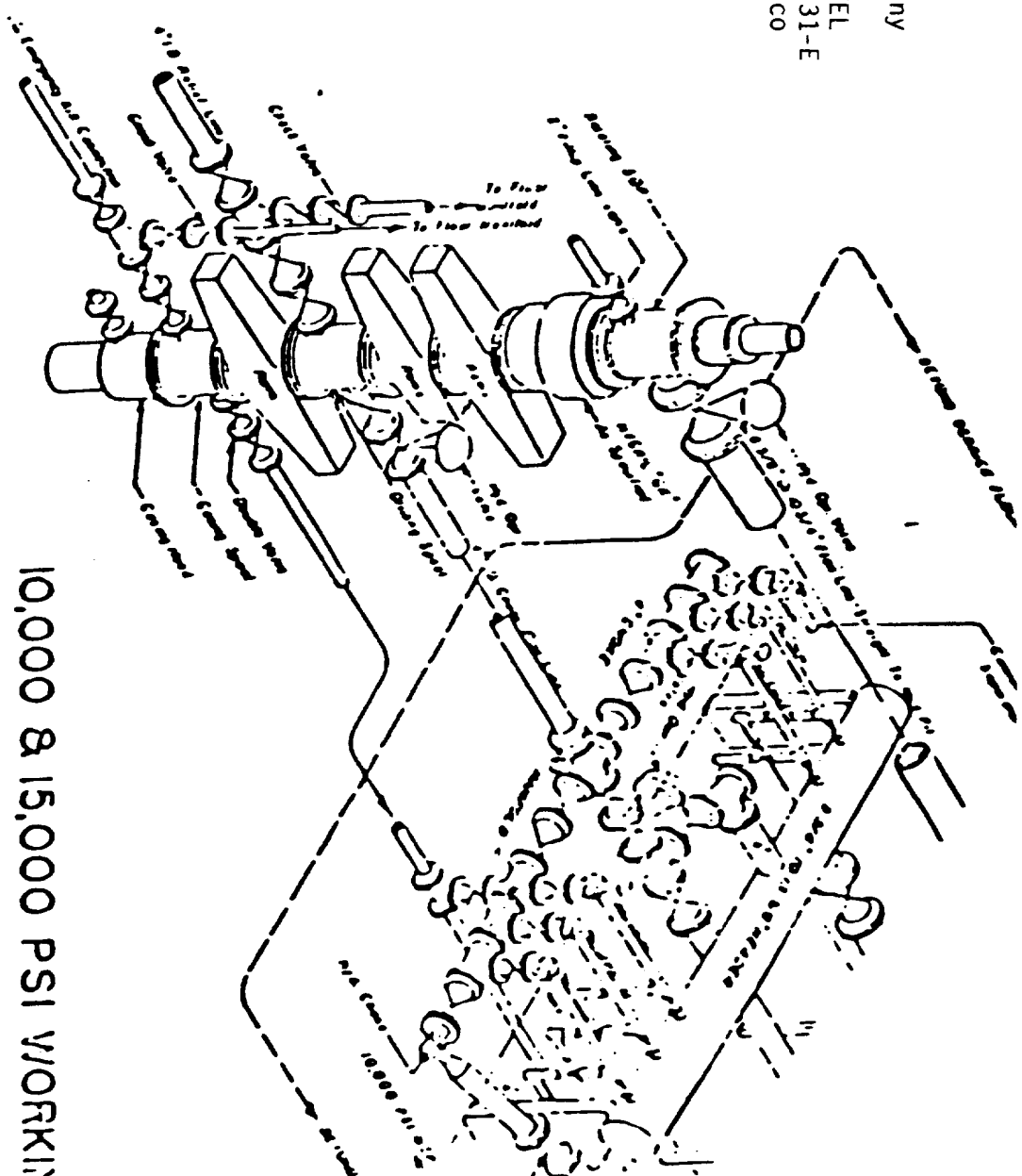
Pogo Producing Company
Neff 13 No. 1
1980' FSL & 1980' FEL
Section 13, T-22-S, R-31-E
Eddy County, New Mexico



5000 PSI WORKING PRESSURE
BLOWOUT PREVENTER HOOK UP

5000# STACK

13 5/8" 10,000# HYDRIL BOP
PIPE & BLIND RAMS (2)
13 5/8" 5,000# HYDRIL ANNULAR



10,000 & 15,000 PSI WORKING
PRESSURE BLOWOUT PREVENTER
& CHOKE MANIFOLD HOOK-UP

10,000# STACK

13 5/8" 10,000# HYDRIL BOP
3 RAMS
3 1/2" PIPE RAMS
4 1/2" PIPE RAMS
BLIND RAMS
13 5/8" 10,000# HYDRIL ANNULAR

MULTIPOINT SURFACE USE AND OPERATION PLAN

POGO PRODUCING COMPANY

NEFF 13, No. 1

1980' FSL & 1980' FEL SEC. 13, T-22-S, R-31-E

EDDY COUNTY, NEW MEXICO

This plan is submitted with the Application For Permit To Drill the captioned 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 drilling operations.

1. EXISTING ROADS:

Existing roads in the vicinity of the planned well are shown on Exhibit A, attached. The well is located 36 miles Northwest of Jal, New Mexico. No additional improvement or maintenance of existing roads will be required.

2. PLANNED ACCESS ROADS:

Approximately 850' of new road 12' wide will be required. See Exhibit A.

3. LOCATION OF EXISTING WELLS:

Shown below are the dispositions of wells in a 2 mile radius of the proposed well. See Exhibit B.

Sec. 1, T-22-S, R-31-E Eddy County	-	Pogo, SCL #1, TD 4562, D/A 4/7/81
Sec. 12, T-22-S, R-31-E Eddy County	-	Pogo, SCL #2, TD 14928, Atoka discovery
Sec. 23, T-22-S, R-31-E Eddy County	-	Texas Crude Oil Co., #1-23 Wright Federal TD 4766 D/A 4/25/62
Sec. 24, T-22-S, R-31-E Eddy County	-	Getty Oil Co., #1 Getty Federal "24" TD 14935 Atoka discovery
Sec. 24, T-22-S, R-31-E Eddy County	-	Cleary Petroleum (R.J. Zonne, et al), Federal #1A T/A
Sec. 25, T-22-S, R-31-E Eddy County	-	Pogo, Neff Federal #1 TD 15026 Morrow Discovery comp 4/19/86
Sec. 25, T-22-S, R-31-E Eddy County	-	Cleary Pit (R.J. Zonne, et al) Federal #1-B T/A
Sec. 18, T-22-S, R-32-E Lea County	-	J.H. Trigg #1-18 Federal Jennings TD4896 D/A 5/7/61
Sec. 17, T-22-S, R-32-E Lea County	-	Cleary Petroleum, #1-17 Federal TD 14800 Morrow Comp 7/11/75
Sec. 19, T-22-S, R-32-E Lea County	-	Ralph Lowe-Bass Federal #1 TD 4802 D/A 6/9/64

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

There are no existing facilities on the lease at present. If production is established, producing facilities and tank battery will be constructed on the drilling pad and no additional surface disturbance will be required.

5. LOCATION AND TYPE OF WATER SUPPLY:

Brine and fresh water used in the drilling of the well will be purchased and trucked to the well site over existing roads as shown on Exhibit A.

6. SOURCE OF CONSTRUCTION MATERIALS:

Caliche will be added to the roadway and drilling pad and will be obtained from a Federal pit located in the NW/4 of the SW/4 Sec. 12, T-22-S, R-31-E. The pit is 1 1/2 miles NW of the proposed drilling location. See Exhibit A.

POGO PRODUCING COMPANY
NEFF 13 NO. 1
1980' FSL & 1980' FEL
SEC. 13, T-22-S, R-31-E
EDDY COUNTY, NEW MEXICO

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7. METHOD OF HANDLING WASTE DISPOSAL:

- A. Drilling cuttings will be disposed of in the drilling pits.
- B. Drilling fluids will be allowed to evaporate in the drilling pits. Oil produced during tests will be stored in steel test tanks until sold. Water produced during tests will be disposed of in the drilling pits.
- C. Sewage will be collected in a pit at least 6' deep below an outside latrine. Suitable chemicals will be added to aid decomposition of the waste material and then back filled following completion of the well. A portable toilet will be utilized with waste picked up by a vacuum truck and removed from the area.
- D. 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 pit is shown on Exhibit C.
- E. All trash and debris will be buried or removed from the well site within 90 days after cessation of drilling or completion operations.

8. ANCILLARY FACILITIES:

None required.

9. WELL SITE LAYOUT:

- A. Exhibit C shows the relative location and dimensions of the well pad, mud pits, reserve pits, trash pit and major components.
- B. The proposed well site is situated on flat land and will require only minimal levelling.
- C. The reserve pit will be lined.
- D. The pad and access road have been staked and flagged.

10. PLANS FOR RESTORATION OF THE SURFACE:

- A. After completion of drilling and/or completion operations, all equipment and other materials not needed will be removed. Pits will be filled after sufficient drying time and the location cleaned of all trash and junk to leave the site in aesthetically pleasing condition.
- B. All unguarded pits containing fluids will be fenced until filled.
- C. After abandonment of the well, surface restoration will be in accordance with the agreement BLM regulations. Rehabilitation will be accomplished within 90 days after abandonment.

11. OTHER INFORMATION:

- A. Pogo Producing Company's proposed location will be situated on an aeolian mantled landform lying southwest of The Divide. Overlooking Nash Draw, the coeval surface is characterized by generally minor dune development with micro-relief ranging between 0.25 and 0.40 m in height. An isolated dune field, spatially oriented on an east-west axis, cuts across the central portion of the location. Elevation is 3594 ft. Slope is 0.60°. Aspect is multiple. Water is locally scarce owing to the permeable conditions of associated soils. Nearest water occurs in the form of seeps within the Nash Draw catchment lying seven miles to the west. Areal soil individuals are universally dominated by the sand separate, being made up of sandy loams and loamy sands. Soils uniformly fall within the Typic Torripsamment subgroup/Kermite-Berino series. Cherty gravels, along with some calcareous inclusions, occur in associated soils. Depositionally, surficial deposits are subject to aeolian processes. The scrub, floral community is dominated by plains yucca, shinnery oak, sand sage, groundsel, poverty three awn, sandbur, sand mulch, New Mexico feathergrass and mesa dropseed.

POGO PRODUCING COMPANY
NEFF 13 NO. 1
1980' FSL & 1980' FEL
SEC. 13, T-22-S, R-31-E
EDDY COUNTY, NEW MEXICO

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- B. Ponds and Streams - None.
- C. Occupied Dwellings - None.
- D. Cultural Resources - No cultural properties were recorded during the course of the archaeological survey conducted February 25, 1988 by Dr. J. Loring Haskell.
- E. Land Use - Grazing and hunting in season.
- F. Surface Ownership - The surface in Section 13 is Federal land and the current grazing lessee is:

Mr. Kenneth Smith
P.O. Box 764
Carlsbad, New Mexico 88220

12. OPERATOR'S REPRESENTATIVES:

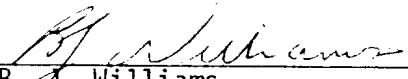
W. E. Barnes
2654 East 11th
Odessa, Texas 79761
Home Phone (915) 333-5110
Office Phone (915) 682-6822

B. J. Williams
5104 Teakwood Trace
Midland, Texas 79707
Home Phone (915) 694-2215
Office Phone (915) 682-6822

13. 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 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 Pogo Producing Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

February 26, 1988
Date



B. J. Williams
Division Operations Manager
Pogo Producing Company

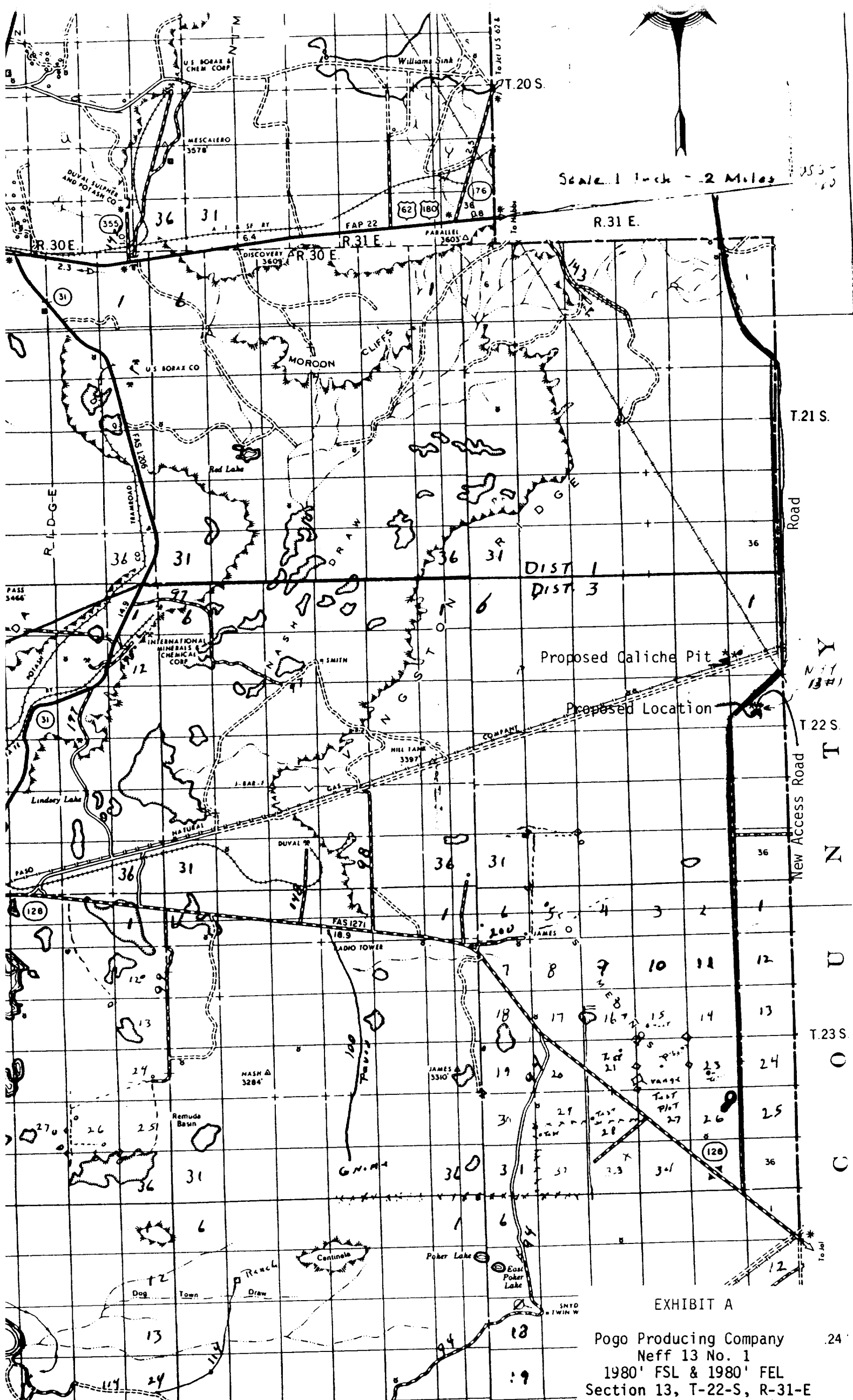


EXHIBIT A

Pogo Producing Company
Neff 13 No. 1
1980' FSL & 1980' FEL
Section 13, T-22-S, R-31-E

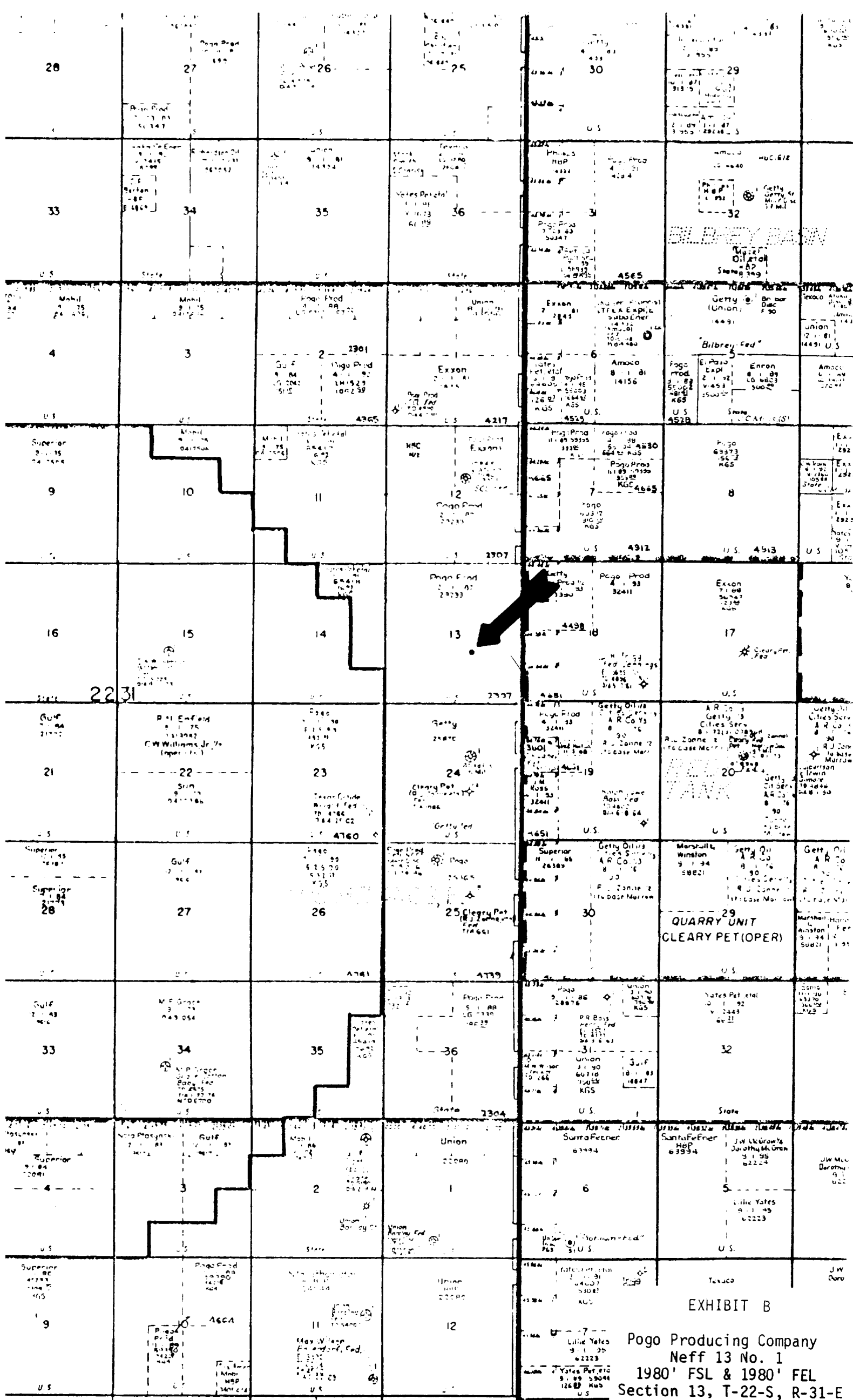


EXHIBIT B

Pogo Producing Company
Neff 13 No. 1
1980' FSL & 1980' FEL
Section 13, T-22-S, R-31-E

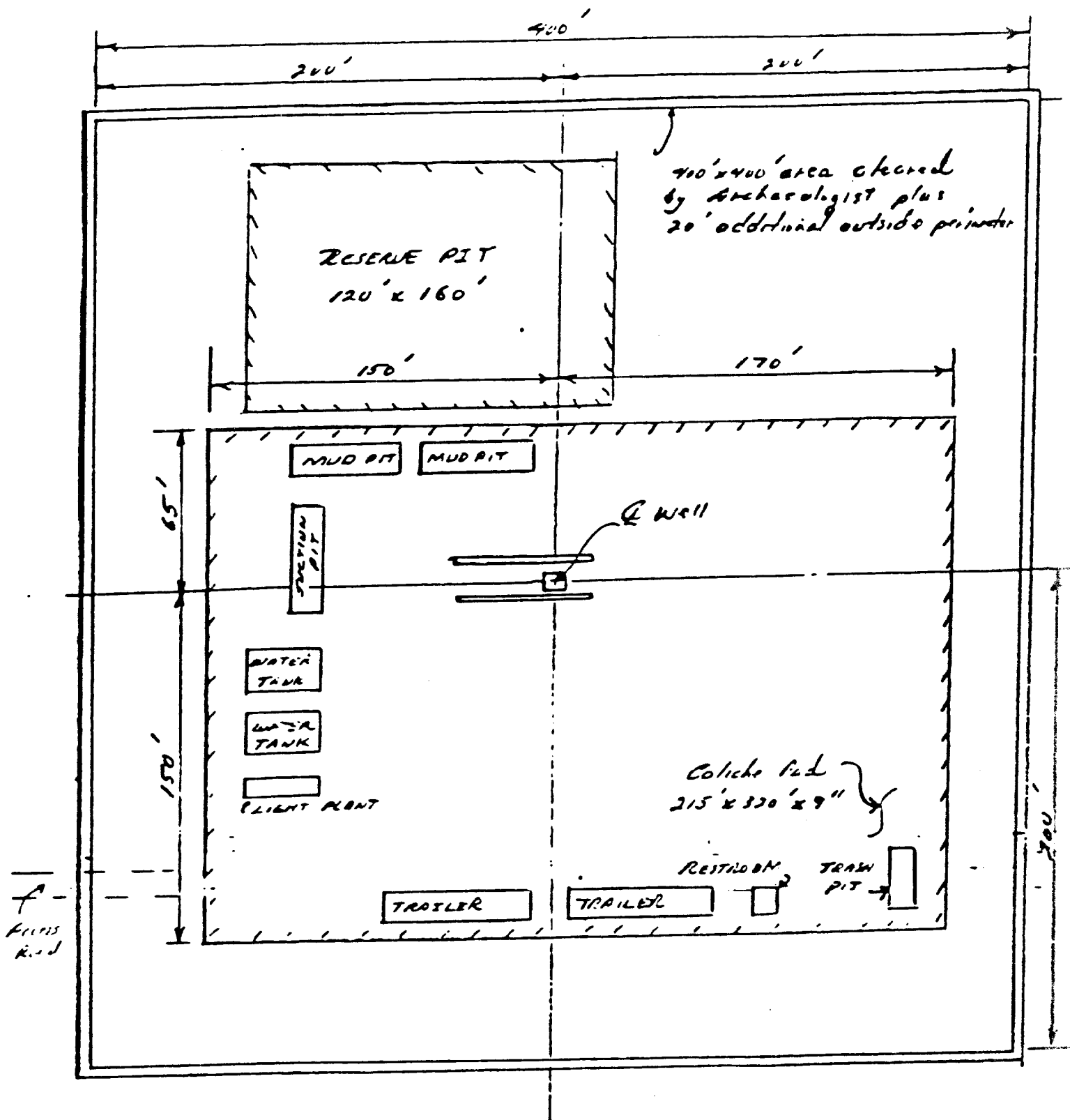


EXHIBIT C

Pogo Producing Company
Neff 13 No. 1
1980' FSL & 1980' FEL
Section 13, T-22-S, R-31-E