

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

5. LEASE IDENTIFICATION AND SERIAL NO.
NM-40655

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. HORIZON LEASE NAME WELL NO.
Amax "24" Federal

9. ANCHOR #
13

10. FIELD AND POOL, OR WELDCAT
INGLEC WELLS (Delaware)

11. SEC., T., R., N., OR BLE. AND SURVEY OR AREA
Sec. 24, T-23S, R-31E

12. COUNTY OR PARISH | 13. STATE
Eddy Co. | N.M.

22. APPROX. DATE WORK WILL START*
Upon Approval

1A. TYPE OF WORK
DRILL DEEPEN

B. TYPE OF WELL
OIL WELL GAS WELL OTHER SINGLE ZONE MULTIPLE ZONE

2. NAME OF OPERATOR
Pogo Producing Company

3. ADDRESS AND TELEPHONE NO.
P.O. Box 10340, Midland, Texas 79702

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)
At surface: 990' FSL & 330' FWL of Section 24
At proposed prod. base: Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
27 miles east of Loving, New Mexico

18. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 330'

16. NO. OF ACRES IN LEASE: 320

17. NO. OF ACRES ASSIGNED TO THIS WELL: 40

19. PROPOSED DEPTH: 6700'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether BP, RT, GR, etc.)
3494' Ground Level

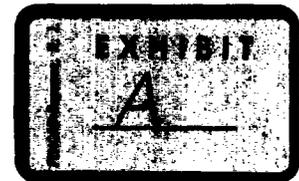
23. APPROX. DATE WORK WILL START*
Upon Approval

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	8-5/8"	24# J55	800'	500 sx (circ)
7-7/8"	5-1/2"	15.5# J55	4600' 6700'	1450 sx (circ)

The operator proposes to drill to a depth sufficient to test the Delaware for oil. Specific programs are outlined in the following attachments:

- DRILLING PROGRAM
- SURFACE USE AND OPERATING PLAN
- EXHIBIT A - ROAD MAP
- EXHIBIT B - EXISTING WELL MAP
- EXHIBIT C - LOCATION AND ACREAGE DEDICATION PLAT
- EXHIBIT C-1 - TOPO MAP
- EXHIBIT D - DRILLING AND RIG LAYOUT
- EXHIBIT E - 3M BOP EQUIPMENT



IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new production 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.

34. SIGNED James M. C. Potts TITLE Agent DATE 5/08/96
(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 these rights in the subject lease which would entitle the applicant to construct operations thereon.
CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY _____ TITLE _____ DATE _____

*See Instructions On Reverse Side

DRILLING PROGRAM

Attached to Form 3160-3

Pogo Producing Company

Amax "24" Federal Well No. 13
 990' FSL & 330' FWL
 Unit Letter M, NE/SW
 Section 24, T23S, R31E
 Eddy County, New Mexico

1. Geologic Name of Surface Formation: Permian
2. Estimated Tops of Important Geologic Markers and
3. Estimated Depths of Fresh Water, Oil, and Gas:

<u>Formation</u>	<u>Depth</u>	<u>Fluid Content</u>
Permian	Surface	Fresh water at +250'
Rustler Anhydrite	800'	-----
Lamar Lime	4440'	-----
Bell Canyon	4480'	-----
Cherry Canyon	5300'	-----
Brushy Canyon	6650'	Oil
Total Depth	6700'	

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 8-5/8" casing at 800' into the Rustler anhydrite and circulating cement to surface. 5-1/2" production casing will be set at TD, and cement will be tied back at least 200' into the 8-5/8" intermediate casing, thus ensuring that all zones are adequately isolated.

The pore pressure gradient is normal (+8.4 ppg) down through the Brushy Canyon. No abnormal pressures are anticipated.

4. Casing and Cementing Program

<u>Hole Size</u>	<u>Casing</u>		<u>Casing OD</u>	<u>Weight, Grade, Coupling, Cond.</u>
	<u>From</u>	<u>To</u>		
*20"	0'	40'	16"	65# H40 used conductor
12 1/4"	0'	800'	8-5/8"	24# J55 LTC new
7-7/8"	0	TD	5-1/2"	15.5# J55 & N-80 LTC new

*Setting conductor pipe will be at drilling contractor's option.

All used casing will be drifted and hydrostatically tested to at least 90% of new pipe rating.

Minimum Design Factors: Collapse 1.125, Burst 1.1, Tension 1.7

16" conductor casing set at 40'

Cement to surface with ready-mix. No centralizers.

8-5/8" surface casing set at 800'

The surface casing will be set into the Rustler anhydrite to protect all fresh water formations.

Centralize the bottom 3 joints and every 4th joint to surface.

Cement to surface with 300 sx of Class C with 4% gel, 2% CaCl₂ (13.5 ppg, 1.74 ft³/sx) followed by 200 sx Class C with 2% CaCl₂ (14.8 ppg, 1.32 ft³/sx).

5-1/2" production casing set at TD'

Centralize every joint from TD to bottom of the intermediate casing.

Cement to tie back into 8-5/8" intermediate casing at least 200'.

If a 2-stage cement job is required a DV tool will be set at +4500'.

Stage 1: 350 sx 50/50 Pozmix Class H with 2% gel, 5% salt, 1/4# FC (14.2 ppg, 1.34 ft³/sx).

Stage 2: 1000 sx 50/50 Pozmix Class H with 2% gel, 5% salt, 1/4# FC (14.2 ppg, 1.34 ft³/sx) followed by 100 sx Class H (15.6 ppg, 1.19 ft³/sx).

5. Minimum Specifications for Pressure Control:

7-7/8" hole

The following BOP equipment will be nipped up on the 8-5/8" casing and used continuously until TD is reached for the 7-7/8" hole.

The blowout preventer equipment (BOP) shown in Exhibit E will consist of a 3000 psi WP double ram type preventer and a 3M annular (bag type) preventer with rotating head. Both BOP's will be hydraulically operated. H₂S trim will not be required.

Before drilling out from under the 8-5/8" intermediate casing, all BOP's and accessory equipment will be tested to 1000 psi with the rig pump. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

BLM method to calculate minimum BOP requirements:

$(.052)(8.4 \text{ ppg})(6700') - (0.22 \text{ psi/ft})(6700') = 1452 \text{ psi}$

Minimum BOP requirements: 2M BOP stack and manifold system.

6. Proposed Mud System:

The well will be drilled to TD with a combination of fresh water and 10% brine. The applicable depths and properties of this system are as follows:

Depth	Type	Weight (ppg)	Viscosity (sec)	Water Loss (cc)
0-800'	Fresh water	8.4	28	NC
800-6700'	Brine	10.0	29	NC

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

7. Auxiliary Well Control and Monitoring Equipment:

- a) A kelly cock will be kept in the string at all times.
- b) A full opening drill pipe stabbing valve (TIW/inside BOP) with proper drill pipe connections will be on the rig floor at all times.
- c) An electronic pit volume totalizer system will NOT be used. The drilling fluids system will be visually monitored at all times.
- d) A mudlogging unit will be continuously monitoring drilling penetration rate and hydrocarbon shows from 4400' to TD if deemed necessary.

8. Logging, Testing, and Coring Program:

- a) Drillstem tests will be run on the basis of drilling shows.
- b) The electric logging program will consist of:
 - 1) 7-7/8" hole - Gamma ray, dual induction log, compensated neutron and litho-density logs.
- c) No conventional cores are planned. Selected intervals may be sidewall cored based upon shows and openhole logs.
- d) Further testing procedures will be determined after the 5-1/2" production casing has been cemented at TD.

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

No abnormal pressures, temperatures, or other potential hazard are anticipated.

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 lost circulation zones have been reported in offsetting wells.

The maximum anticipated bottom hole pressure is approximately 3918 psi. (6700' x .433 psi/ft = 2901 psi.)

The maximum anticipated bottom hole temperature is 105 deg F.

10. Anticipated Starting Date and Duration of Operations:

Road and location work will not begin until approval has been received from the BLM. The anticipated spud date is June 15, 1996. Once commenced, the drilling operation should be complete in 15 days. If the well is productive, an additional 30 days will be required for completion, testing, and installation of permanent facilities.

5

SURFACE USE AND OPERATING PLAN

Attached to Form 3160-3

Pogo Producing Company

Amox "24" Federal Well No. 13
990' FSL & 330' FWL
Unit Letter M, NE/SW
Section 24, T23S, R31E
Eddy County, New Mexico

Located: 21 miles east of Loving, New Mexico.

Federal Lease Number: NM-40655

Lease Issued: July 1, 1980

Acres in Lease: 320

Record Lessee: Pogo Producing Company

Surface Ownership: U.S.A.

Grazing Permittee: J.C. Mills
P.O. Box 190
Abernathy, Texas 79311

Pool: INGLE WELLS (Oklahoma)

Pool Rules: The 40 acre oil well spacing rules apply to this location, being 330' to the nearest side boundary or 1/4-1/4 section line, nor closer than 330' to the nearest well capable of producing from the same formation.

Exhibits:

- A. Road Map
- B. Existing Wells Map
- C. Well Location and Acreage Dedication Plat
- C-1. Topo Map
- D. Drilling Rig Layout Diagram
- E. BOP Equipment

AMAX "24" FEDERAL WELL No. 13
SURFACE USE AND OPERATING PLAN
PAGE 2 OF 6

1. Existing Roads:

- a) The well site and elevation plat for the proposed well is shown in Exhibit C. It was staked by John West Engineering, Hobbs, N.M.
- b) All roads to the location are shown on Exhibit B. The existing roads are illustrated in black 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 onsite inspection.
- c) Directions to Location: Exhibit "A" is a portion of a road map showing the location of the proposed well as staked. Point "A" on the plat is on State highway 128 at Milepost 17.6, approximately 36 miles west of Jal, New Mexico, where Eddy County road 798 goes north. To get to the proposed location from this point, go north 2.2 miles on 798 to where caliche road goes east. Turn east and go approximately 500' to where new access road will begin. Turn north and go 306' to proposed 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 B shows the new access road to be constructed and is illustrated in black. The proposed access road as shown in Exhibit B has been centerline flagged by John West Engineering, Hobbs, N.M. The road will be constructed as follows:

- a) Length and Width: 306' of new access road will be constructed. The maximum width of the running surface will be 15'. See Exhibit B.
- b) Surfacing Material: Caliche material will be used to surface the proposed road. It will be watered, compacted, and graded. Caliche will be obtained from either the reserve pit or a borrow pit on the proposed location as described in Item 6 of the Surface Use and Operating Plan.
- c) Maximum Grade: An approximate grade of less than two percent will be encountered from the existing road to the proposed well pad.
- d) Turnouts: No turnouts are planned.
- e) Drainage Design: The new road will be crowned at the center to direct drainage to ditches on both sides of the roadway with turnout ditches to be constructed as required. Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and to be consistent with local drainage patterns. BLM may specify any additions or changes during the onsite inspections.

- f) Culverts: None required.
- g) Cuts and Fills: None necessary
- h) Gates and Cattle Guards: None will be required, as no fence cuts will be necessary.

3. Location of Existing Wells:

Exhibit No. B shows all existing wells within a one-mile radius of this well.

4. Location of Existing and/or Proposed Facilities:

- a) Production from this well will be delivered to the lease tank battery located, as shown on Exhibit "B", on the well pad at well # 8. The flow line will be 3" SDR-7 polyethylene pipe laid on the ground northerly to the battery as stated above. Anticipated flowline pressure is about 60 psi.
- b) An electric power line will be constructed as shown on Exhibit B.

5. Location and Type of Water Supply:

The well will be drilled with a combination of brine and fresh water mud system as outlined in the drilling program.

The water necessary for drilling operations will be purchased and trucked to the wellsite, or will be moved to the wellsite by way of a temporary pipeline laid on the ground alongside existing and proposed roads.

6. Source of Construction Materials:

Caliche needed for the road and well pad will be taken from the proposed reserve pit. An alternate plan will be to obtain caliche from a borrow pit located within the 400' x 400' archaeologically cleared tract at the proposed well site. If sufficient quality or quantity of caliche is not available, it will be transported to the proposed road and well site from an existing BLM approved caliche pit. The BLM will be notified and consulted if caliche must be obtained off location.

7. Method of Handling Waste Disposal:

- a) Drill cuttings will be disposed into the reserve pit.
- b) Drilling fluids will be contained in the reserve pit. The reserve pit will be an earthen pit, approximately 150' x 150' x 6' deep and fenced on three sides prior to drilling. The fourth side will be fenced immediately following rig removal. The reserve pit will be lined with plastic (5-7 mil thickness) to minimize loss of drilling fluids.
- c) Water produced from the well during completion may be disposed into the reserve pit or a steel tank (depending upon rates).
- d) Drilling fluids will be allowed to evaporate in the drilling pits until the pits are dry.
- e) Oil produced during testing will be stored in steel test tanks until sold.
- f) Trash, waste paper, garbage, and junk will be placed in a trash bin located on the drill site pad. It will be transported to an approved landfill for disposal within 30 days after completion of drilling and/or completion of operations. All waste material will be contained to prevent scattering by the wind.
- g) A portable chemical toilet will be provided on the location for human waste during the drilling and completion operations.

8. Ancillary Facilities:

No other facilities will be built as a result of the operations on this well.

9. Well Site Layout:

- a) Exhibit D shows the relative location and dimensions of the well pad, mud pits, reserve pit, location of the major rig components, and location of parking areas.
- b) Cut and fill requirements will be minor, but clearing and leveling of the well site will be necessary. Top soil, if available, will be stockpiled per BLM specifications as determined at the on-site inspection.
- c) The reserve pit will be lined with a high quality plastic sheeting (5-7 mil thickness).
- d) The pad and pit area are staked and flagged.

10. Plans for Reclamation of the Surface:

- a) After completion of drilling and/or completion of operations, all equipment and other material not needed for operations will be removed. The pit area will be allowed to dry before reclamation. If the borrow pit is constructed, the cuttings in the reserve pit will be deep buried in the borrow pit, and the reserve pit and borrow pit will be broken out, filled, and leveled. The location will be cleaned of all trash and junk to leave the well site in an as aesthetically pleasing condition as possible.
- b) Three sides of the reserve pit will be fenced prior to and during drilling operations. The borrow pit will be fenced on all four sides after the location is built. At the time the rig is removed, the reserve pit will be fenced on the fourth side to prevent livestock or wildlife from being entrapped in the pits. The fencing will remain in place until the pits are cleaned up and leveled.
- c) After abandonment, all equipment, trash, and junk will be removed and the well site will be cleaned.
- d) Topsoil removed from the drill site will be used to recontour the pit area to the original natural level. The disturbed area will be revegetated by reseeding during the proper growing season with a seed mixture of native grasses as recommended by the BLM.

11. Other Information:

- a) Topography: The land surface in the area is undulating with small sand dunes. In the immediate area of the well site, the land slope is to the northwest.
- b) Soil: Top soil at the well site is loamy sand.
- c) Flora and Fauna: The vegetation cover is moderate. It includes range grasses, weeds, scrub oak bushes, and mesquite bushes. Wildlife in the area is that typical of a semi-arid desert land and includes coyotes, rabbits, rodents, reptiles, hawks, dove, quail, and other small birds.
- d) Ponds and Streams: There are no rivers, streams, ponds or lakes in the immediate area of this location.
- e) Residences and Other Structures: There are no occupied dwellings or other structures within 1 mile of the well site.
- f) Archaeological, Historical, or other Cultural Sites: None are known of in the area. An Archaeological survey has been conducted.

g) Land Use: Grazing, oil and gas production, and wildlife habitat.

h) Surface Ownership: U.S.A.

12. Operator's Representative:

Richard L. Wright
Division Operations Supervisor
Pogo Producing Company
P.O. Box 10340
Midland, Texas 79702
(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 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 sub-contractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U. S. C. 1001 for the filing of false statement.

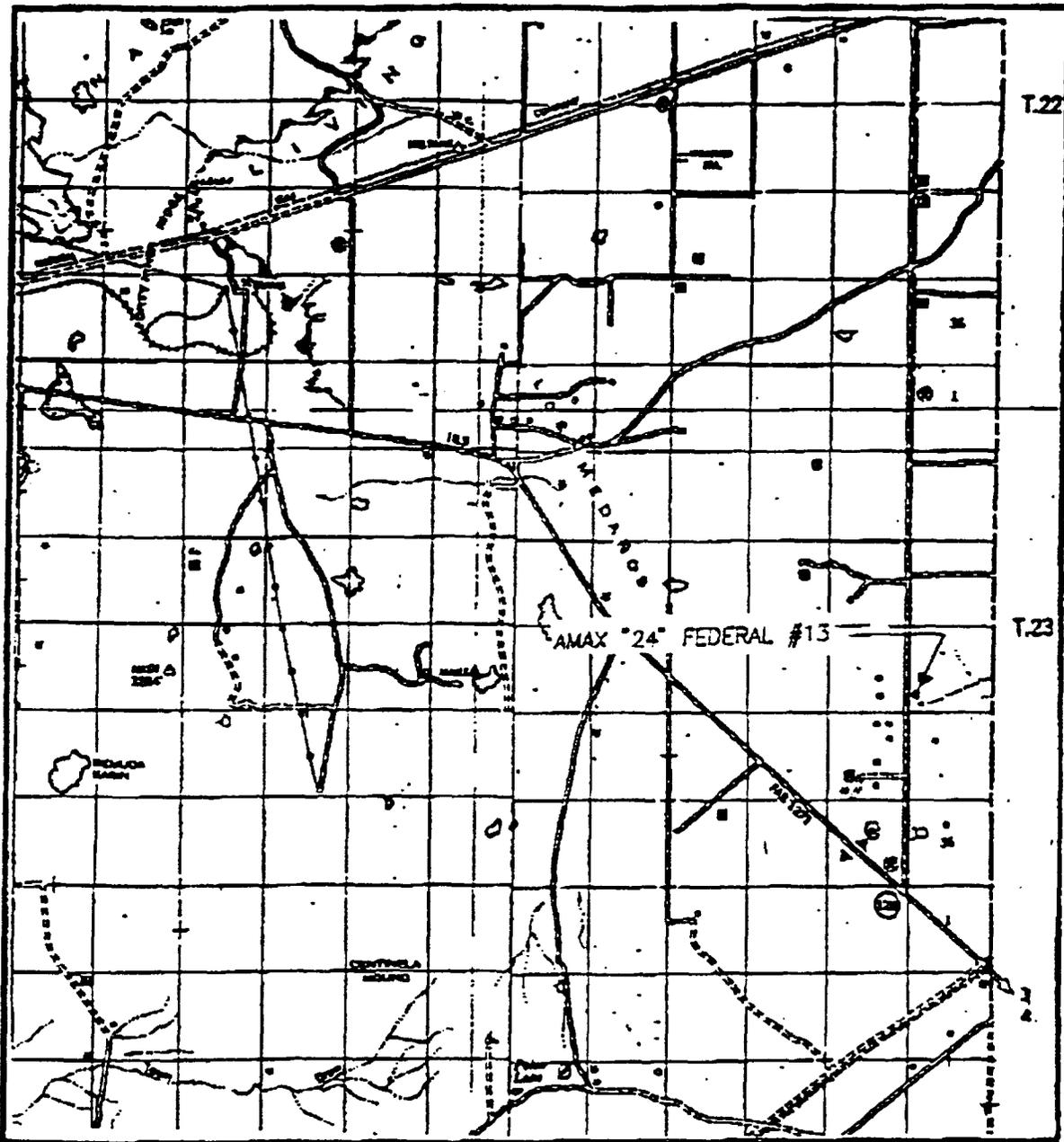
Date

5-8-96

James M.C. Ritchie, Jr.
Agent

Enclosures

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 24 TWP. 23-S RGE. 31-E
SURVEY N.M.P.M.
COUNTY EDDY
DESCRIPTION 990' FSL & 330' FWL
ELEVATION 3494
OPERATOR POGO PRODUCING COMPANY
LEASE AMAX "24" FEDERAL

EXHIBIT "A"

**JOHN WEST ENGINEERING
HOBBS, NEW MEXICO
(505) 393-3117**

T. 23 S., R. 31 E.

T. 23 S., R. 32 E.

EDDY CO. 798

EDDY COUNTY
LEA COUNTY



14

13

18

LEASE BOUNDARY

PIPELINE

PIPELINE

23

24

19

EXISTING TANK BATT.

NEW ROAD

Proposed Flowline

26

25

30

LEGEND:

- Oil Well
- ⊕ Gas Well
- Proposed Well
- Eddy County 798 (Blacktop)
- Existing Caliche Road
- Proposed New Road

EXHIBIT "B"

POGO PRODUCING COMPANY
 AMAX 24 FEDERAL WELL NO. 13
 990' FSL & 330' FWL SEC. 24, T. 23 S., R. 31 E.
 EDDY COUNTY, N.M. SCALE: 1" = 2000'

DISTRICT I
P.O. Box 1888, Santa Fe, NM 87501-1888

DISTRICT II
P.O. Drawer 88, Artesia, NM 88211-0088

DISTRICT III
1808 Elva Street S.E., Aztec, NM 87410

DISTRICT IV
P.O. Box 2888, Santa Fe, N.M. 87504-2888

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised February 18, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number		Pool Code 33745	Pool Name Triple Wells (Delaware)
Property Code 9313	Property Name AMAX "24" FEDERAL		Well Number 13
OCRD No. 017891	Operator Name POGO PRODUCING COMPANY		Elevation 3494

Surface Location

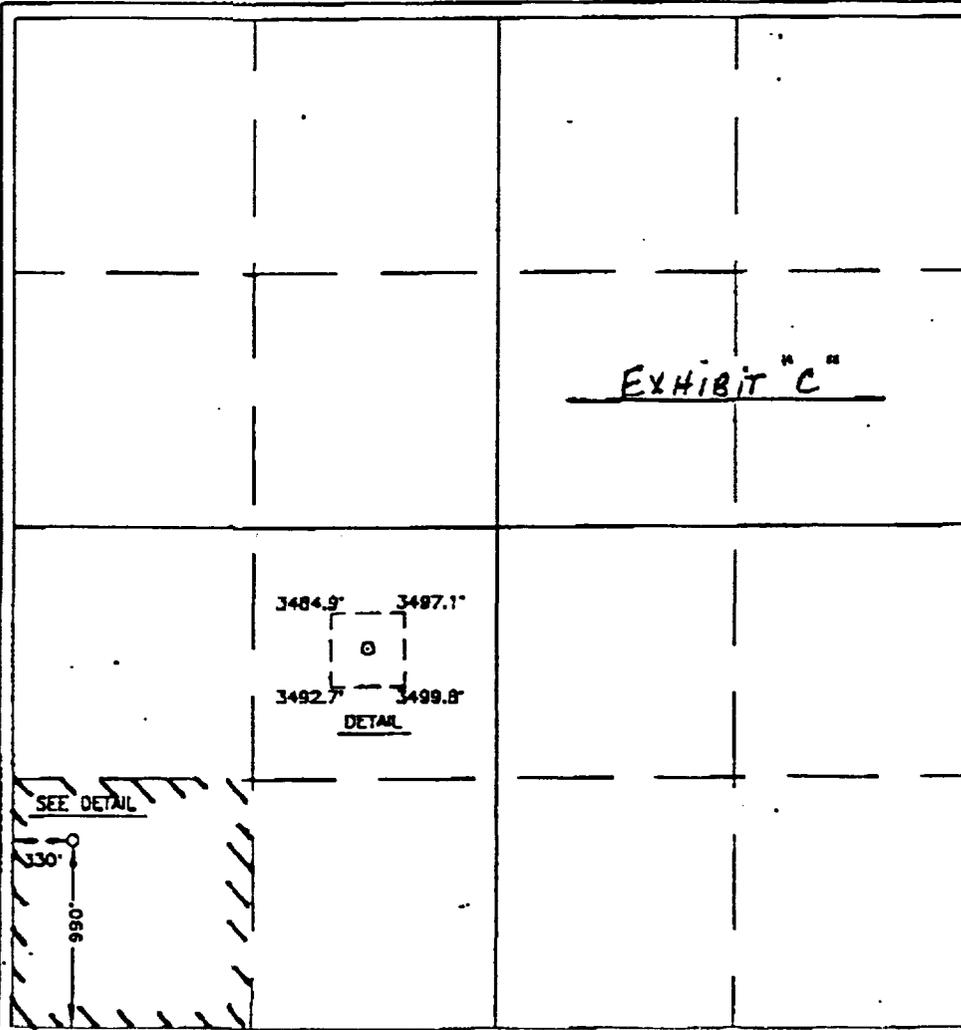
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	24	23 S	31 E		990	SOUTH	330	WEST	EDDY

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	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



OPERATOR CERTIFICATION

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

James M.C. Ritchie, Jr.
Signature
James M.C. Ritchie, Jr.
Printed Name
Agent
Title
Date
May 8, 1996

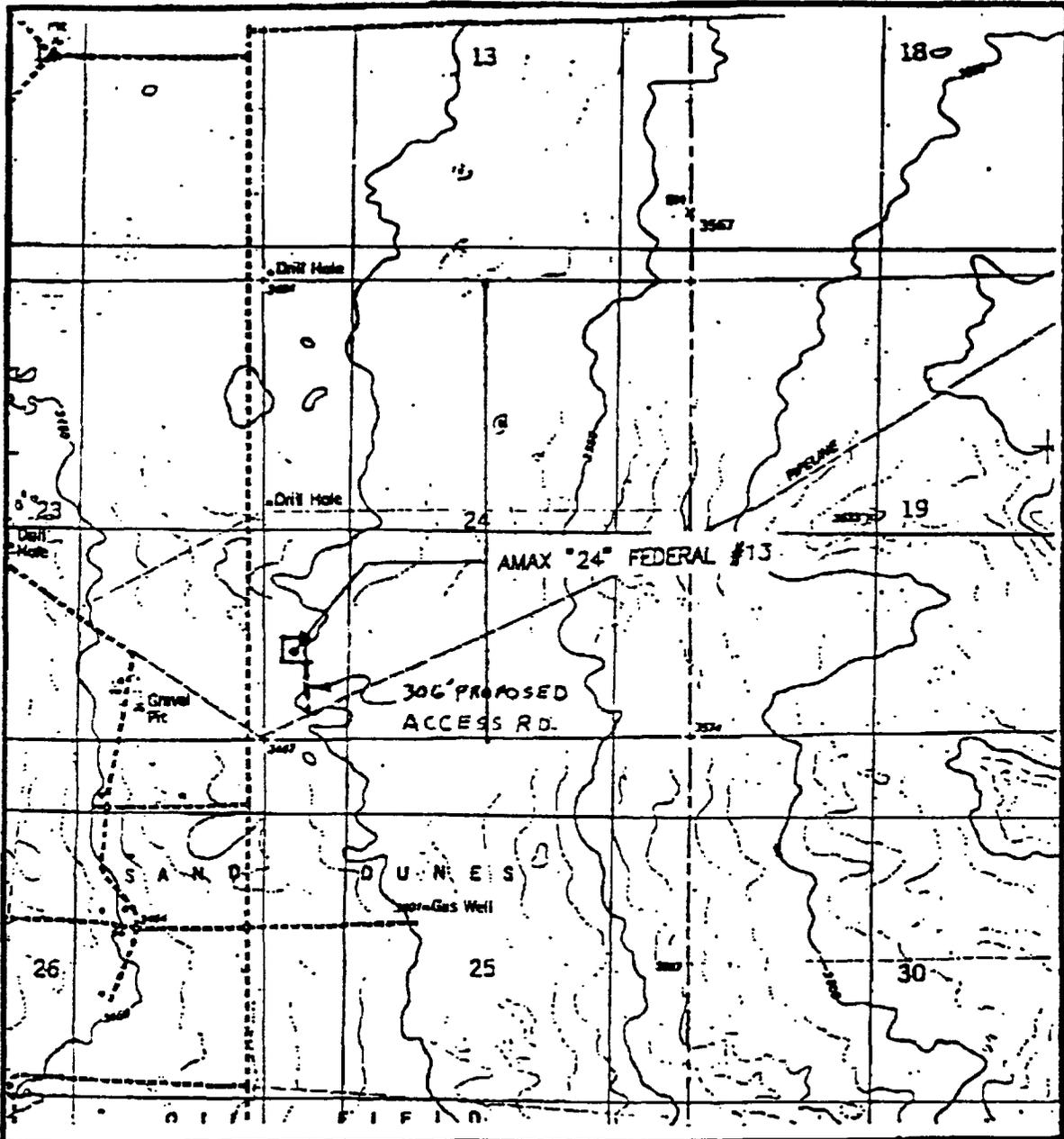
SURVEYOR CERTIFICATION

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 belief.

APRIL 22, 1996

Date Surveyed
Signature
Professional Seal
Professional No. 42596
NEW MEXICO
ROBERT J. EDSON
96-11-0496
CORRECTIONAL DEPARTMENT
676
3239
12641

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
BOOTLEG RIDGE - 10'

SEC. 24 TWP. 23-S RGE. 31-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 990' FSL & 330' FWL

ELEVATION 3494

OPERATOR POGO PRODUCING COMPANY

LEASE AMAX "24" FEDERAL

U.S.G.S. TOPOGRAPHIC MAP

BOOTLEG RIDGE, N.M.

EXHIBIT "C-1"

JOHN WEST ENGINEERING

HOBBS, NEW MEXICO

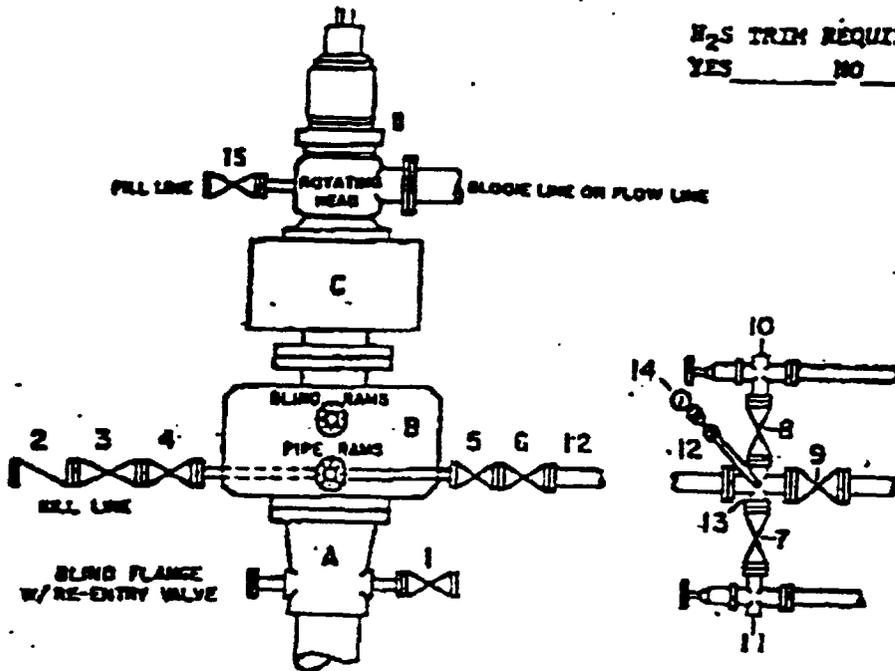
(505) 393-3117

DRILLING RIG LAYOUT
SCALE: None

ILLEGIBLE

DRILLING CONTROL CONDITION III-B 3000 PSI WP

H₂S TRIM REQUIRED
YES _____ NO _____



DRILLING CONTROL

MATERIAL LIST - CONDITION III - B

- A Wellhead
- B 3000# W.P. Dual ram type preventer, hydraulic operated with 1" steel, 3000# W.P. control lines (where sub-structure height is adequate, 2 - 3000# W.P. single ram preventers may be utilized with 3000# W.P. drilling spool with 3" minimum flanged outlet for kill line and 3" minimum flanged outlet for choke line. The drilling spool is to be installed below the single ram type preventers).
- C 3000# W.P. Annular Preventer with 1" steel, 3000# W.P. control lines.
- D Rotating Head with fill wp outlet and extended choke line.
- 1,2,4, 7,8, 3" minimum 3000# W.P. flanged full opening steel gate valve, or Halliburton Lo Turn Plug valve.
- 3 3" minimum 3000# W.P. back pressure valve.
- 5,6,9 3" minimum 3000# W.P. flanged full opening steel gate valve, or Halliburton Lo Turn Plug valve.
- 12 2" minimum Schedule 80, Grade B, seamless line pipe.
- 13 2" minimum x 3" minimum 3000# W.P. flanged cross.
- 10,11 3" minimum 3000# W.P. adjustable choke bodies.
- 14 Cameron Mud Cops or equivalent (location optional in Choke line).
- 15 3" minimum 3000# W.P. flanged or threaded full opening steel gate valve, or Halliburton Lo Turn Plug valve.

SCALE:	DATE	REV. NO.	DRG. NO.
DRAWN BY			
CHECKED BY			

EXHIBIT E