

UNIT OPER. OGRID NO. 17841
PROPERTY NO. 9325
POOL CODE 51689
EFF. DATE 6/12/96
API NO. 30-D25-32796

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 LICATE*
 DS ON

FORM APPROVED
 OMB NO. 1004-0136
 Expires: February 28, 1995

**DEPARTMENT
 BUREAU OF
 APPLICATION FOR P**

1a. TYPE OF WORK

DRILL ☒ *Re-File* **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 2310' FNL & 2310' FWL of Section 27

At proposed prod. zone
 Same

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

30 air miles west southeast of Eunice, N.M.

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

330'

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

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

1320'

16. NO. OF ACRES IN LEASE

320

19. PROPOSED DEPTH

9000'

17. NO. OF ACRES ASSIGNED TO THIS WELL

40

20. ROTARY OR CABLE TOOLS

Rotary

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

3630' Ground Level

22. APPROX. DATE WORK WILL START*

Upon Approval

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
14 3/4"	10 3/4" 31.75# J55, N80	31.75# J55, N80	800'	650 sx (circ)
9 7/8"	7 5/8" 24.4# J55, N80	24.4# J55, N80	4650' 4600'	1300 sx (circ)
6 3/4"	4 1/2" 11.6# J55, N80	11.6# J55, N80	9300' 9000'	1100 sx (4100')

The operator proposes to drill to a depth sufficient to test the Delaware and Bone Springs 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 D - TOPO MAP

EXHIBIT E - DRILLING AND RIG LAYOUT

EXHIBIT F - 3M BOP EQUIPMENT

See also subject to
 General Requirements and
 Special Regulations
 Attached

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

James H. C. Ritzel

TITLE

Agent

DATE

4/26/96

(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

/s/ TIMOTHY J. BURKE

TITLE

Area Manager

DATE

JUN 12 1996

*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.

FORWARDED TO THE
U.S. AIR FORCE
WASHINGTON, D.C.
FROM NEW MEXICO 1954

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

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

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

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised February 10, 1994
Instruction on back
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 30-025-32796	Pool Code 51689	Pool Name UNDES. WEST RED TANK DELAWARE
Property Code 9325	Property Name FEDERAL 27	Well Number 4
OGRID No. 17891	Operator Name POGO PRODUCING COMPANY	Elevation 3630'

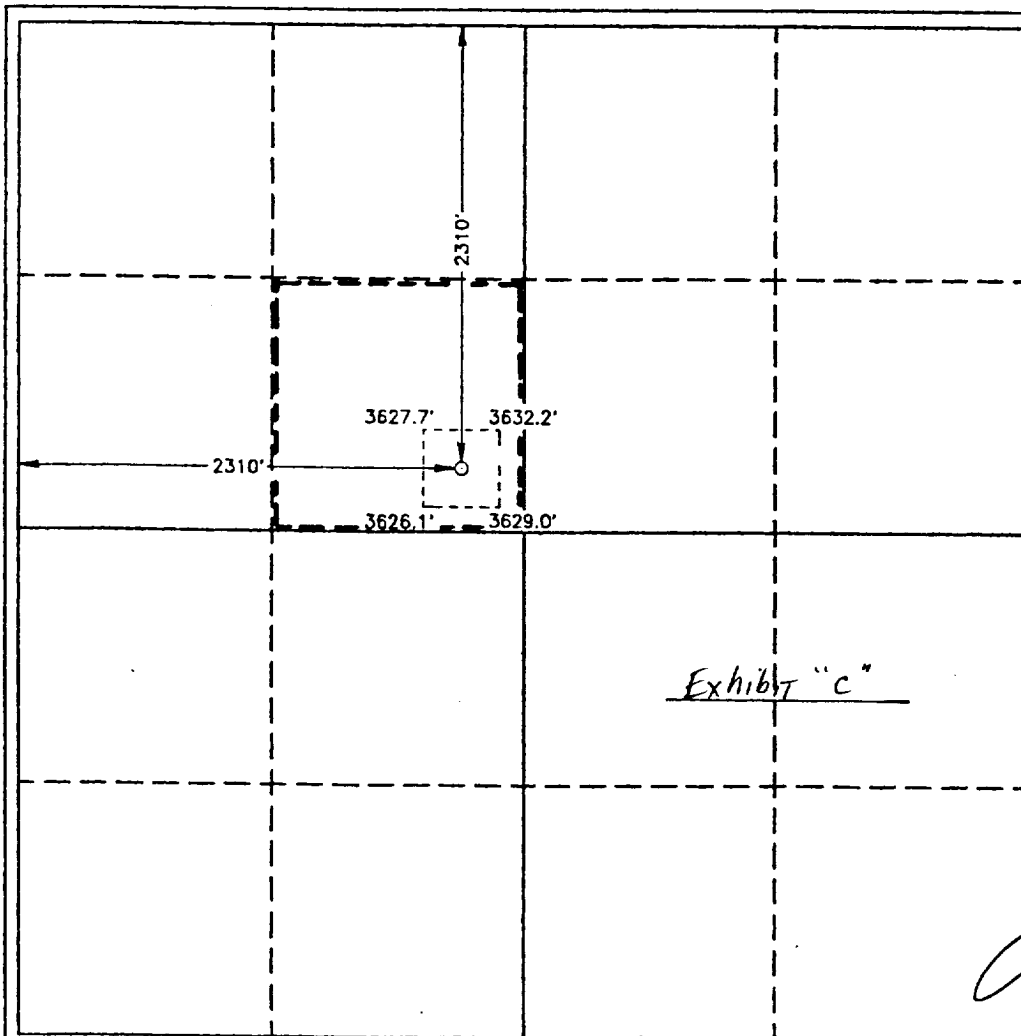
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	27	22 S	32 E		2310	NORTH	2310	WEST	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 N	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 the the information
contained herein is true and complete to the
best of my knowledge and belief.

Richard L. Wright
Signature

Richard L. Wright
Printed Name

Division Operations Mgr.
Title

November 30, 1994
Date

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 same is true and
correct.

PROFESSIONAL SURVEYOR
NOVEMBER 21, 1994
NEW MEXICO
W.O. WEST, 1807

Certificate No. JOHN W. WEST, 676
RONALD J. EIDSON, 3239

DRILLING PROGRAM

Attached to Form 3160-3

Pogo Producing Company

Federal "27" Well No. 4
2310' FNL & 2310' FWL
Unit Letter F, SE/NW
Section 27, T22S, R32E
Lea 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>
Anhydrite	800'	-----
Lamar Lime	4700'	-----
Cherry Canyon	6100'	Oil
Brushy Canyon	7800'	Oil
Bone Springs	8800'	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 10 3/4" casing at 800' into the Rustler anhydrite and circulating cement to surface. Potash will be protected by setting 7-5/8" intermediate casing at 4600' and circulating cement to surface. 4-1/2" 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 Bone Springs. 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>		
14-3/4"	0'	800'	10-3/4"	32.75# J-55 STC
9-7/8"	0'	4,600'	7-5/8"	26.40# J-55,N-80 LTC
6-3/4"	0	9,000'	4-1/2"	11.60# J-55,N-80 LTC

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

10-3/4" 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 650 sx of Class C with 4% gel, 2% CaCl₂.

7-5/8" intermediate casing set at 4600'

The intermediate casing will be set within 100' of the top of the Delaware to isolate all salt stringers.

Centralize the bottom 3 joints.

Cement to surface with 1300 sx of 35/65 Pozmix Class H with 6% gel, 5% salt.

4-1/2" 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'.

A 2-stage cement job will be required with a DV tool at +5000'.

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

5. Minimum Specifications for Pressure Control:

9-7/8" hole

The following BOP equipment will be nipped up on the 10-3/4" casing and used continuously until TD is reached for the 9-7/8" 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 10-3/4" 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:
 $(.052)(10 \text{ ppg})(4600') - (0.22 \text{ psi/ft})(4600') = 1380 \text{ psi}$
Minimum BOP requirements: 2M BOP stack and manifold system

6-3/4" hole

The following BOP equipment will be nipped up on the 7-5/8" casing and used continuously until TD is reached for the 6-3/4" 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. At the drilling contractor's option, 5M BOP's may be substituted. H2S trim will not be required.

Before drilling out from under the 7-5/8" 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:
 $(.052)(8.4 \text{ ppg})(9000') - (0.22 \text{ psi/ft})(9000') = 2700 \text{ psi}$
Minimum BOP requirements: 3M 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:

<u>Depth</u>	<u>Type</u>	<u>Weight (ppg)</u>	<u>Viscosity (sec)</u>	<u>Water Loss (cc)</u>
0-800'	Fresh water	8.4	28	NC
800-4600'	Brine	10.0	29	NC
4600-TD	Fresh Water	8.4	30-34	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 4600' to TD.

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) 6-3/4" 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 4-1/2" 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 3464 psi. (9000' x .433 psi/ft = 3897 psi.)

The maximum anticipated bottom hole temperature is 132 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.

PUGO PRODUCING COMPANY
FEDERAL 27 WELL NO.4

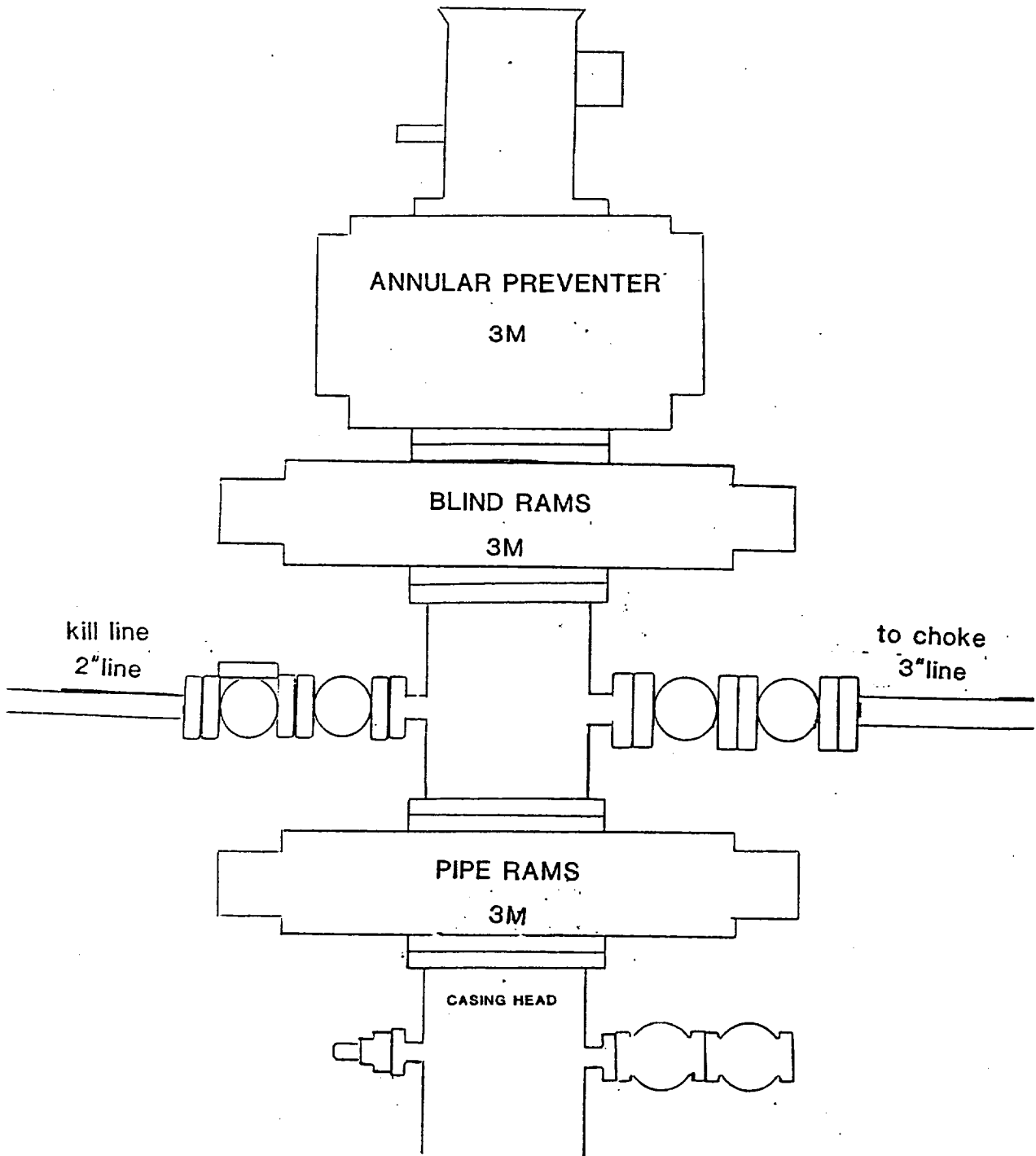


Exhibit "E"