N.M. OIL CONS. COMMISSION
P.O. BOX 30
HOBBS, NEW MEXICO 88240

Form 3160-3
(November 1983)
(formerly 9-331C)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

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

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 660' FNL AND 330' FWL OF SECTION 19
At proposed prod. zone:

5. LEASE DESIGNATION AND SERIAL NO.: NM-90587
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
7. UNIT AGREEMENT NAME:
8. FARM OR LEASE NAME: LIVINGSTON RIDGE 19 FEDERAL
9. WELL NO.: 1
10. FIELD AND POOL, OR WILDCAT: WILDCAT
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: SEC.19, T.22 S., R.32 E.

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 29 MILES WEST OF EUNICE, NEW MEXICO

12. COUNTY OR PARISH: LEA COUNTY
13. STATE: NEW MEXICO

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL
330'	343.55	44.70
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
990'	10,100'	ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 3595' GR Carlsbad Controlled Water Basin
22. APPROX. DATE WORK WILL START*: UPON APPROVAL

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"	54.5#	800'	SUFFICIENT TO CIRCULATE
11"	8-5/8"	32#	4500'	SUFFICIENT TO CIRCULATE
7-7/8"	5-1/2"	17#	10,100'	TO TIE BACK 200' INTO 8-5/8"

AFTER SETTING PRODUCTION CASING, PAY ZONE WILL BE PERFORATED AND STIMULATED AS NECESSARY.

SEE ATTACHED FOR: SUPPLEMENTAL DRILLING DATA
BOP SKETCH
SURFACE USE AND OPERATIONS PLAN
HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

OPER. OGRID NO. 17891
PROPERTY NO. 15766
POOL CODE 96037
EFF. DATE 9-22-94
API NO. 30-025-32677

Approval Subject to General Requirements and Special Stipulations Attached

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 Richard L. Wright — TITLE Division Operations Mgr. — DATE August 15, 1994
Richard L. Wright

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY /s/ Scott Powers — TITLE Acting Area Mgr. — DATE 9-19-94
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.

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

State of New Mexico
Energy, Minerals and Natural Resources Department

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
		WILDCAT

Property Code	Property Name	Well Number
	LIVINGSTON RIDGE 19 FEDERAL	1

OGRID No.	Operator Name	Elevation
17891	POGO PRODUCING CO.	3595'

Surface Location

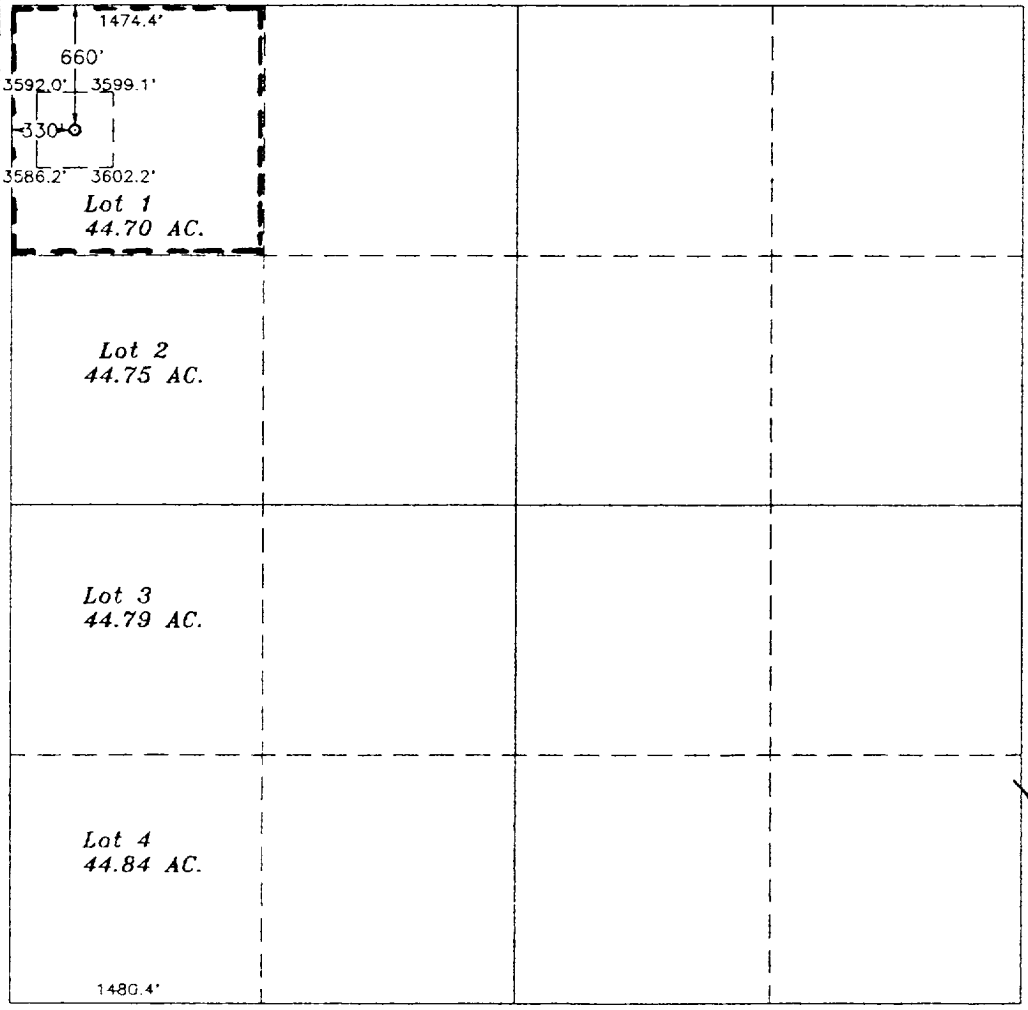
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	19	22 S	32 E		660	NORTH	330	WEST	LEA

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	Joint or Infill	Consolidation Code	Order No.
44.70	N		

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.

Signature

Richard L.Wright
Printed Name

Division Operations Mgr.
Title

August 15, 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 supervison, and that the same is true and correct to the best of my belief.

JULY 22, 1994
Date Surveyed
Signature & Seal of Professional Surveyor

W.O. Num. 94-11-1312

Certificate No. JOHN W. WEST, 676
RONALD J. EIDSON, 3239
GARY L. JONES, 7977

SUPPLEMENTAL DRILLING DATA

POGO PRODUCING COMPANY

LIVINGSTON RIDGE 19 FEDERAL WELL NO. 1

1. SURFACE FORMATION: Quaternary.

2. ESTIMATED TOPS OF GEOLOGIC MARKERS:

Anhydrite	800'
Delaware	4650'
Cherry Canyon	5600'
Brushy Canyon	7300'
Bone Springs	8600'

3. ANTICIPATED POSSIBLE HYDROCARBON BEARING ZONES:

Delaware	Oil
Bone Springs	Oil

4. PROPOSED CASING AND CEMENTING PROGRAM:

CASING SIZE	SETTING DEPTH FROM	TO	WEIGHT	GRADE	JOINT
13-3/8"	0	800'	54.5#	J-55	STC
8-5/8"	0	4300'	32#	J-55	STC
"	4300'	4500'	32#	S-80	STC
5-1/2"	0	1000'	17#	N-80	LTC
"	1000'	7000'	17#	J-55	LTC
"	7000'	10,100'	17#	N-80	LTC

MINIMUM DESIGN FACTORS: COLLAPSE 1.125 BURST 1.1 TENSION 1.7

13-3/8" casing to be cemented with 500 sacks of light cement tailed in with 200 sacks of Class "C" with 2% CaCl. Cement to circulate.

8-5/8" casing to be cemented with 1200 sacks of light cement with 10% salt tailed in with 200 sacks of premium cement with 1% CaCl. Cement to circulate.

5-1/2" production casing is to be cemented with approximately 700 sacks

of light cement followed by 400 sacks of premium cement. Cement to tie back 200' into the 8-5/8" casing.

If, during drilling operations, need for stage cementing of casing is indicated, staging tool(s) will be run and positioned to best suit hole conditions at time casing is run.

Cement volumes may be adjusted and cement may have lost circulation and/or other additives depending on hole conditions at the time casing is run.

5. PRESSURE CONTROL EQUIPMENT:

Blowout prevention equipment, while drilling the 11" hole, will be either a 3000 psi working pressure double ram type preventer or a 3000 psi working pressure annular type preventer.

Blow out prevention equipment, while drilling below the 8-5/8" casing seat, will be a 3000 psi working pressure BOP stack. A BOP sketch is attached.

6. CIRCULATING MEDIUM:

Surface to 800 feet: Fresh water spud mud. Viscosity 30 to 36 as required for hole cleaning.

800 feet to 4500 feet: Brine conditioned as necessary for control of viscosity. Weight 9.8 to 10. pH 9 to 10. Viscosity 32 to 36.

4500 feet to T.D.: Water base drilling fluid conditioned as necessary for control of weight, viscosity, pH and water-loss. ~~Weight 9 to 10.~~ Viscosity 38-45. pH 9 to 10. Filtrate while drilling pay zone 6 to 15.
→ As per telecon w/ R. Wright, 8.5 ppg fresh water mud will be used. SJS

7. AUXILIARY EQUIPMENT:

A mud logging trailer will be in use while drilling below the intermediate casing.

8. TESTING, LOGGING, AND CORING PROGRAM:

Drill stem tests will be made when well data indicate a test is warranted.

It is planned that electric logs will include GR-CNL-Density logs and GR-DLL logs.

No coring is planned.

9. ABNORMAL PRESSURES, TEMPERATURES, OR HYDROGEN SULFIDE GAS:

No abnormal pressures or temperatures are expected.

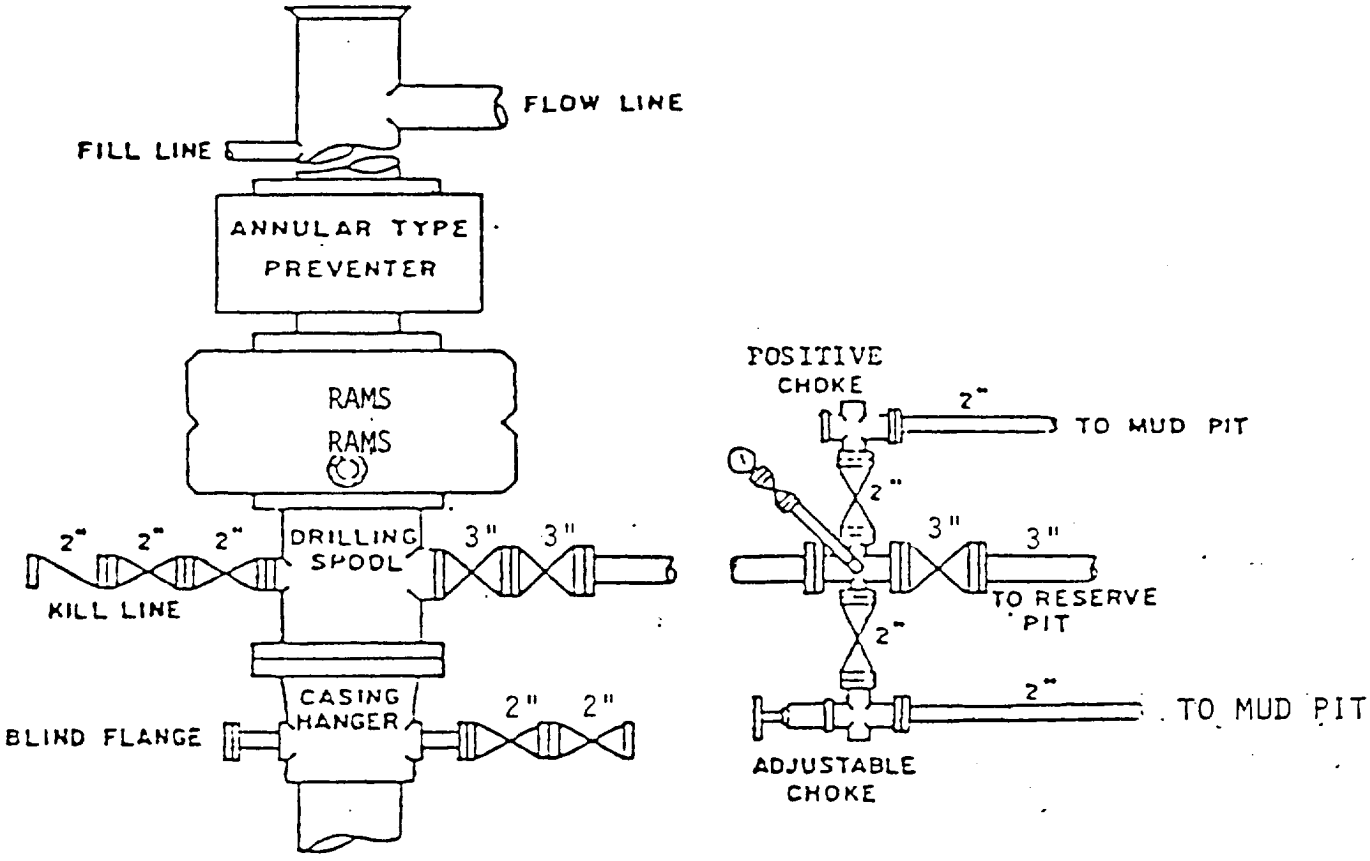
Expected bottom hole pressure is about 4100 psi.

Expected bottom hole temperature is about 135 degrees Fahr.

No hydrogen sulfide gas is expected. The production stream of Pogo Producing Company's wells in this area have been tested specifically for hydrogen sulfide gas and test results were negative. However, since it is possible that low-volume hydrogen sulfide gas may be present in permeable water zones of the Castile formation, drilling operations below the surface casing will be in accordance with the attached "HYDROGEN SULFIDE DRILLING OPERATIONS PLAN" until intermediate casing is set and cemented and this possible source of hydrogen sulfide gas is cased off.

10. ANTICIPATED STARTING DATE:

It is planned that operations will commence upon approval of this application, with drilling and completion operations lasting about 30 days.



BOP STACK

3000 PSI WORKING PRESSURE

BOP ARRANGEMENT