

**N.M. OIL & GAS COMMISSION**  
**P.O. BOX 1900**  
**HOBBS, NEW MEXICO 88240**  
**UNITED STATES**  
**DEPARTMENT OF THE INTERIOR**  
**BUREAU OF LAND MANAGEMENT**

SUBMIT IN TRIPLICATE\*  
(Other instructions on reverse side)

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

**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' FSL AND 660' FEL OF SECTION 8

At proposed prod. zone

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

29 MILES WEST OF EUNICE, NEW MEXICO

15. DISTANCE FROM PROPOSED\*  
LOCATION TO NEAREST  
PROPERTY OR LEASE LINE, FT.  
(Also to nearest drilg. unit line, if any)

660'

16. NO. OF ACRES IN LEASE

440

17. NO. OF ACRES ASSIGNED  
TO THIS WELL

40

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

1320'

19. PROPOSED DEPTH

10,100'

20. ROTARY OR CABLE TOOLS

ROTARY

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

3798' GR

22. APPROX. DATE WORK WILL START\*

UPON APPROVAL

23. PROPOSED CASING AND CEMENTING PROGRAM

Secretary's Potash

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. 15866

POOL CODE 96036

EFF. DATE 10-21-94

API NO. 30-025-32705

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*  
Richard L. Wright

TITLE Division Operations Mgr.

DATE August 15, 1994

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

*/s/ Gilbert J. Lucero*  
Gilbert J. Lucero

TITLE Associate State Director

DATE 10-6-94

CONDITIONS OF APPROVAL, IF ANY:

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED

\*See Instructions On Reverse Side

DISTRICT I  
P.O. Box 1980, Hobbs, NM 86240

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

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 <b>30-025-32205</b>	Pool Code <b>96036</b>	Pool Name <b>WILDCAT Bene Spring</b>
Property Code <b>15866</b>	Property Name <b>LIVINGSTON RIDGE 8 FEDERAL</b>	Well Number <b>1</b>
OGRID No. <b>17891</b>	Operator Name <b>POGO PRODUCING CO.</b>	Elevation <b>3798'</b>

#### Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	8	22 S	32 E		660	SOUTH	660	EAST	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 <b>40</b>	Joint or Infill <b>N</b>	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

	<b>OPERATOR CERTIFICATION</b>  <i>I hereby certify the information contained herein is true and complete to the best of my knowledge and belief.</i>   Signature <b>Richard L. Wright</b> Printed Name <b>Division Operations Mgr.</b> Title <b>August 15, 1994</b> Date
	<b>SURVEYOR CERTIFICATION</b>  <i>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.</i>   Date Surveyed Signature & Seal of Professional Surveyor  W.O. Num: 94-11-1309 Certificate No. <b>JOHN W. WEST, 676</b> <b>RONALD J. EIDSON, 3239</b> <b>GARY L. JONES, 7977</b>

SUPPLEMENTAL DRILLING DATA  
POGO PRODUCING COMPANY  
LIVINGSTON RIDGE 8 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		WEIGHT	GRADE	JOINT
	FROM	TO			
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.  
→ 0.5 ppg per telecon w/ R. Wright, 9/16/94.

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.

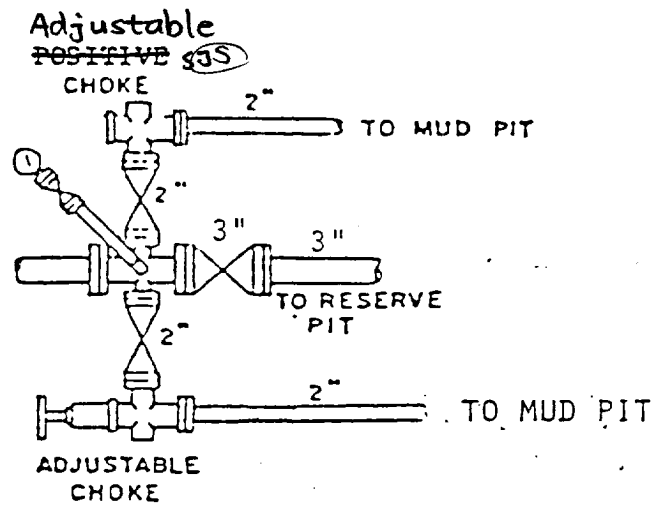
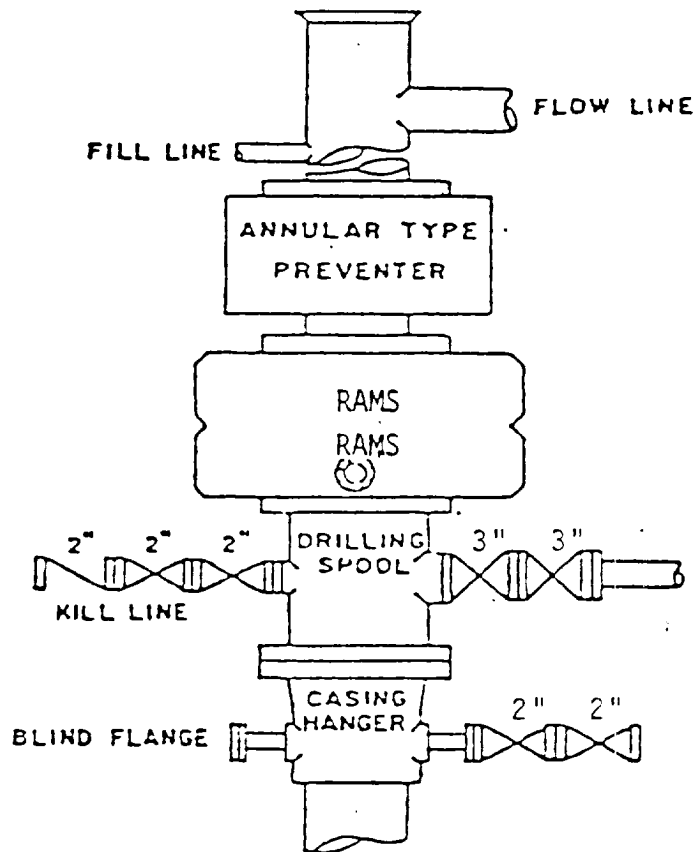
Expected bottom hole pressure is about 4100 psi.

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