

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

N.M. OIL CONS. COMMISSION
P.O. BOX 198
HOBBS, NEW MEXICO 88240

30-025-32148
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 <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. NM-32411
b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME
2. NAME OF OPERATOR Pogo Producing Company		7. UNIT AGREEMENT NAME
3. ADDRESS OF OPERATOR P.O. Box 10340, Midland, Texas 79702		8. FARM OR LEASE NAME East Livingston Ridge Unit
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)* At surface 2130' FNL & 1980' FEL of Section 18, T-22S, R-32E At proposed prod. zone Same		9. WELL NO. 3
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 30 miles east of Carlsbad, New Mexico		10. FIELD AND POOL, OR WILDCAT East Livingston Ridge Delaware
10. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drilg. unit line, if any) 1980'	16. NO. OF ACRES IN LEASE 703.55	11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Section 18, T-22S, R-32E
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 1320	19. PROPOSED DEPTH 8700	12. COUNTY OR PARISH Lea County
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 3711.2' Ground Level		13. STATE N.M.
23. PROPOSED CASING AND CEMENTING PROGRAM		17. NO. OF ACRES ASSIGNED TO THIS WELL 40
22. APPROX. DATE WORK WILL START* Upon approval of Application		20. ROTARY OR CABLE TOOLS Rotary

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2	13 3/8"	54.5#	850	Sufficient to Circulate
12 1/4	8 5/8"	32#	4500	Sufficient to Circulate
7 7/8	5 1/2"	15.5# & 17#	8700	1200 sx

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

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 James M. C. Ritchie, Jr. TITLE Agent DATE July 11, 1993
(This space for Federal or State office use)

PERMIT NO. 61 APPROVAL DATE 7-28-93
APPROVED BY Scott Powers TITLE Acting Area Manager
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 in which the United States has a direct or indirect interest.

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator POGO PRODUCING CO.			Lease EAST LIVINGSTON RIDGE UNIT		Well No. 3
Unit Letter G	Section 18	Township 22 SOUTH	Range 32 EAST	NMPM	County LEA

Actual Footage Location of Well:

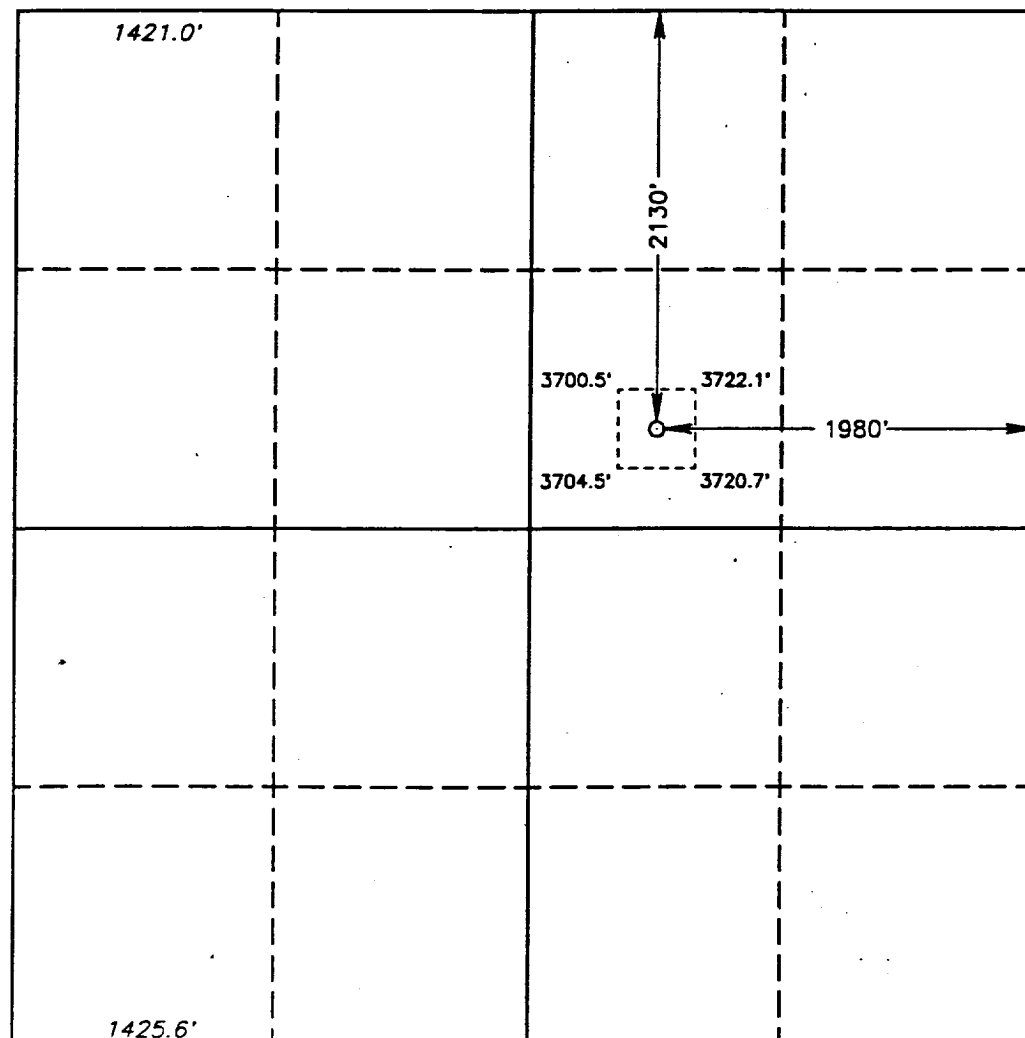
2130 feet from the NORTH line and		1980 feet from the EAST line	
Ground Level Elev. 3711.2'	Producing Formation Delaware	Pool East Livingston Ridge Delaware	Dedicated Acreage: 40 Acres

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 interest 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 of owners and tract descriptions which have actually been consolidated. (Use reverse side of this form necessary.)

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

James M.C. Ritchie, Jr.

Printed Name

Agent

Position

Pogo Producing Company

Company

July 11, 1993

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 the same is true and correct to the best of my knowledge and belief.

Date Surveyed

JUNE 15, 1993

Signature & Seal of
Professional Surveyor

GARY L. JONES
NEW MEXICO
7977
Certificate No. 876
RONALD J. EDSON, 3239
GARY L. JONES, 7977

93-11-0916

RECEIVED
JUL 10 1983

SUPPLEMENTAL DRILLING DATA

POGO PRODUCING COMPANY

E. LIVINGSTON RIDGE UNIT NO. 3

1. SURFACE FORMATION: Quaternary.

2. ESTIMATED TOPS OF GEOLOGIC MARKERS:

Rustler Anhydrite	800'
Delaware Lime	4600'
Cherry Canyon	5600'
Brushy Canyon	7300'

3. ANTICIPATED POSSIBLE HYDROCARBON BEARING ZONE:

Delaware	Oil
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4. PROPOSED CASING AND CEMENTING PROGRAM:

<u>CASING SIZE</u>	<u>SETTING DEPTH</u>		<u>WEIGHT</u>	<u>GRADE</u>	<u>JOINT</u>
	<u>FROM</u>	<u>TO</u>			
13 3/8"	0	850'	54.5#	J-55	STC
8 5/8"	0	1000'	32#	J-55	STC
"	1000'	2200'	24#	J-55	STC
"	2200'	4500'	32#	J-55	STC
5 1/2"	0	1000'	17#	J-55	LTC
"	1000'	6000'	15.5#	J-55	LTC
"	6000'	8700'	17#	N-80	LTC

MINIMUM DESIGN FACTORS: Collapse 1.125 Burst 1.1 Tension 1.7

13 3/8" casing is to be set at approximately 850' in 17-1/2" hole. Casing to be cemented with 500 sacks of Light cement tailed in with 200 sacks of Class "C". Cement to circulate.

8 5/8" casing is to be set at approximately 4500' in 11" hole. Casing is to be cemented with 1200 sacks of Light cement tailed in with 200 sacks of Class "C". Cement to circulate.

5 1/2" casing is to be set at 8700' in 7 7/8" hole. Casing is to be cemented with 600 sacks of Class "H" cement tailed in with 700 sx Class "C". Cement to tie back to 8 5/8" casing.

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.

6. CIRCULATING MEDIUM:

<u>Surface to 850 feet:</u>	Fresh water spud mud. Viscosity 30 to 36 as required for hole cleaning.
<u>850 feet to 4500 feet:</u>	Brine conditioned as necessary for control of viscosity. Weight 9.8 to 10.0. PH 9 to 10. Viscosity 32 to 36.
<u>4500 feet to T.D.:</u>	Water based drilling fluid conditioned as necessary for control of weight, viscosity, ph and water-loss. Weight 9 to 10. Viscosity 38 - 45. ph 9-10. Filtrate while drilling pay zone 6-15.

7. AUXILIARY EQUIPMENT:

A mudlogging trailer will be used while drilling below Intermediate casing.

8. TESTING, LOGGING, AND CORING PROGRAMS:

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:

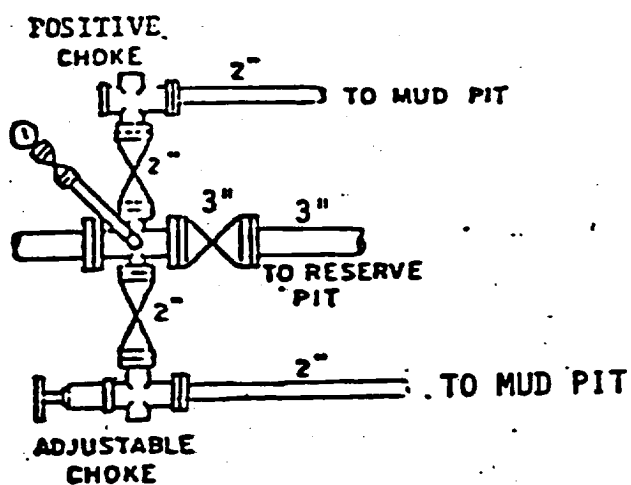
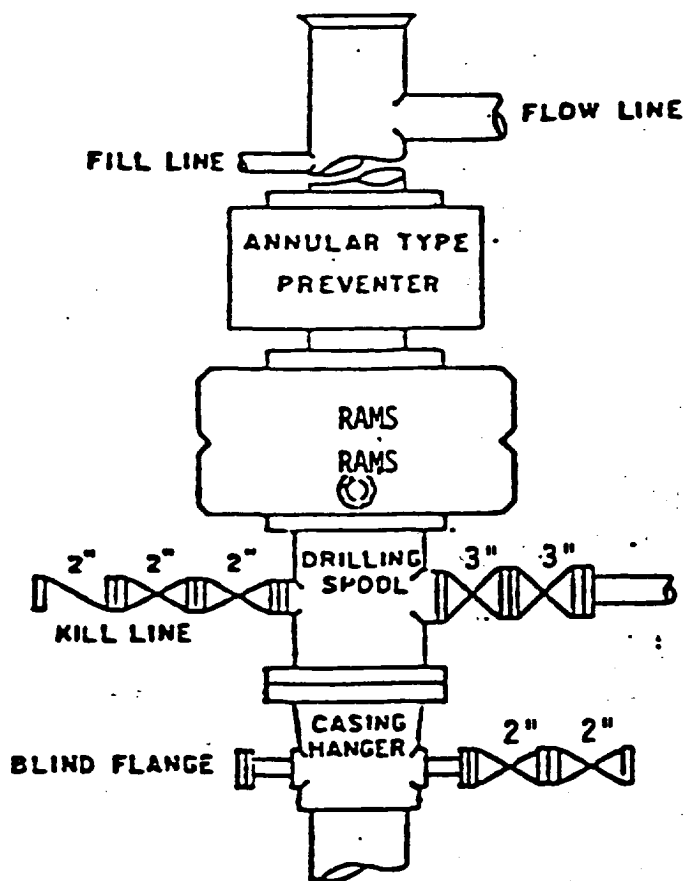
None anticipated.

Expected bottom hole pressure is approximately 3700 psi.

Expected bottom hole temperature is approximately 130 degrees Fahr

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