

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. NM-42814
b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME
2. NAME OF OPERATOR Pogo Producing Company		7. UNIT AGREEMENT NAME
3. ADDRESS AND TELEPHONE NO. P.O.Box 10340, Midland, Texas 79702		8. FARM OR LEASE NAME, WELL NO. Federal 31 #2
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 330' FNL & 1880' FEL of Section 31 At proposed prod. zone Same Unit B		9. API WELL NO. 230-025-33161
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 30 miles east of Carlsbad, N.M.		10. FIELD AND POOL, OR WILDCAT SE Livingston Ridge (Delaware)
10. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any) 330'	16. NO. OF ACRES IN LEASE 320	11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 31, T-21S, 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 18. STATE Lea Co. N.M.
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 3684.0' Ground Level		20. ROTARY OR CABLE TOOLS Rotary
22. 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
17-1/2"	13-3/8"	54.50# J-55	850'	700
12-1/4"	8-5/8"	24,32# J-55	4500'	1400 sx (circ)
7-7/8"	5-1/2"	15.5,17# J-55	N80 8800'	1300 sx (4300')

CARLSBAD CONTROLLED WATER BASIN

R-111-P POTASH

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 - DRILLING RIG LAYOUT DIAGRAM
- EXHIBIT D - TOPO MAP
- EXHIBIT E - 3M BOP EQUIPMENT

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
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 M. C. Rott TITLE Agent DATE 01/15/97
(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 John J. Lucero TITLE Assistant Director DATE 2-23-97

*See Instructions On Reverse Side

Submit to Appropriate
District Office
State Lease - 4 copies
Fee Lease - 3 copies

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised 1-1-89

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

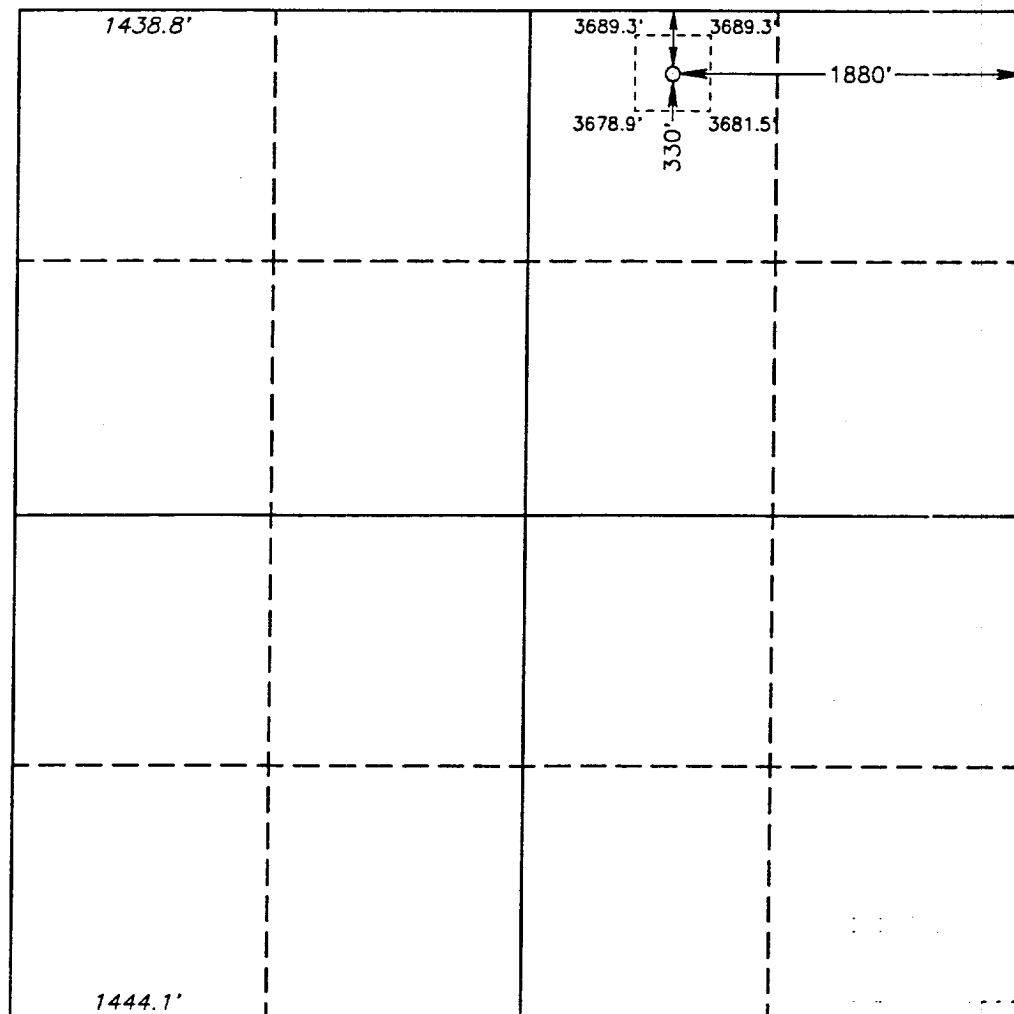
All Distances must be from the outer boundaries of the section

Operator POGO PRODUCING CO.			Lease FEDERAL "31"		Well No. 2
Unit Letter B	Section 31	Township 21 SOUTH	Range 32 EAST	NMPM	County LEA
Actual Footage Location of Well: 330 feet from the NORTH line and 1880 feet from the EAST line					
Ground Level Elev. 3684.0'	Producing Formation Delaware	Pool Undesignated Lost Tank Delaware		Dedicated Acreage: 40 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure 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

June 25, 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 16, 1993

Signature & Seal of
Professional Surveyor

GARY L. JONES
NEW MEXICO
1977
Certificate No. JOHN W. WEST 676
RONALD J. EIDSON 3239
GARY L. JONES 7917
93-11-08-28

SUPPLEMENTAL DRILLING DATA

POGO PRODUCING COMPANY
FEDERAL "31" WELL NO. 2

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

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	4550'	24# & 32#	J-55 & N-80	STC
5 1/2"	0	8650'	15.5# & 17#	J-55 & 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 4550' 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 8650' in 7 7/8" hole. Casing is to be cemented with 900 sacks of Class "H" cement tailed in with 200 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 4550 feet:</u>	Brine conditioned as necessary for control of viscosity. Weight 9.8 to 10.0. PH 9 to 10. Viscosity 32 to 35.
<u>4550 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.

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

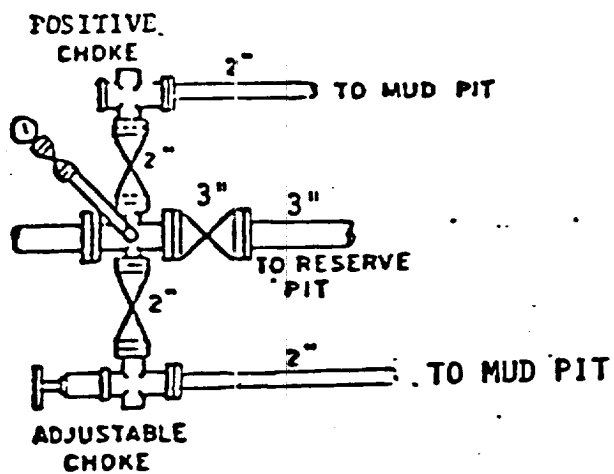
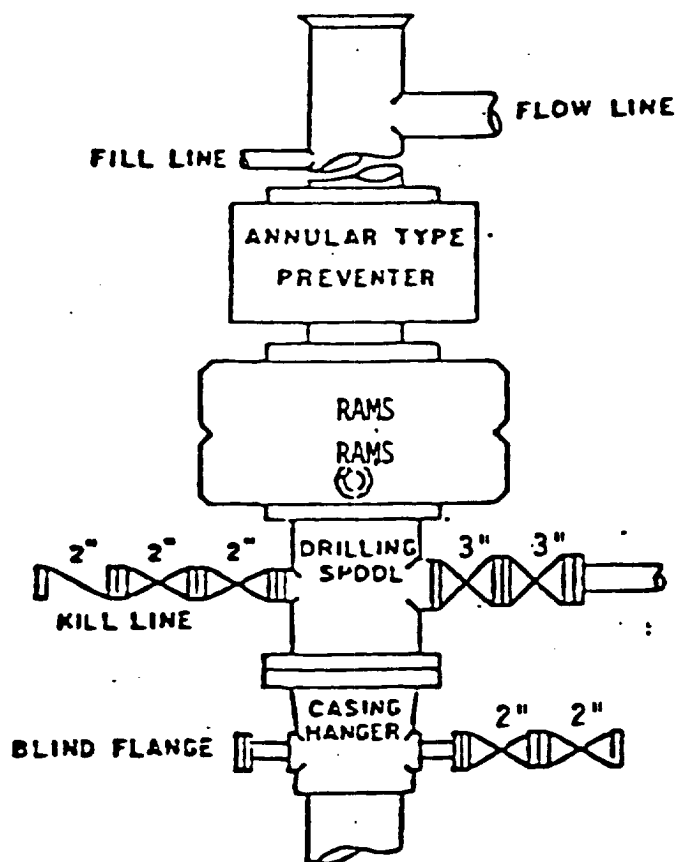
None anticipated.

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 45 days.



BOP STACK

3000 PSI WORKING PRESSURE

BOP ARRANGEMENT