Form 3160-3
(July 1992)

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

N.M. Oil Cons. Division
1625 N. French Dr.
Hobbs, NM 88240

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

# APPLICATION FOR PERMIT TO DRILL OR DEEPEN

5. LEASE DESIGNATION AND SERIAL NO.: NM-32411

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ]

b. TYPE OF WELL: OIL WELL [XX] GAS WELL [ ] OTHER — SINGLE ZONE [XX] MULTIPLE ZONE [ ]

8. FARM OR LEASE NAME, WELL NO.: LIVINGSTON RIDGE "18" FED

2. NAME OF OPERATOR: POGO PRODUCING COMPANY (RICHARD WRIGHT 915-685-8140)

9. API WELL NO.: 30-025-36270

3. ADDRESS AND TELEPHONE NO.: P.O. BOX 10340 MIDLAND, TEXAS 79702-7340 (915-695-8100)

10. FIELD AND POOL, OR WILDCAT: LIVINGSTON RIDGE DELAWARE

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: ~~330'~~ 660' FSL & 1650' FWL SECTION 18 T22S-R32E LEA CO. NM
At proposed prod. zone: SAME
Per correction from Jackie B.K. N

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: SECTION 18 T22S-R32E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: Approximately 20 miles East of Carlsbad New Mexico

12. COUNTY OR PARISH: LEA CO. | 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' | 360 | 40 |
| **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** |
| 3200' | 8700' | ROTARY |

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 3628' GR. Carlsbad Controlled Water Basin

22. APPROX. DATE WORK WILL START*: WHEN APPROVED

23. PROPOSED CASING AND CEMENTING PROGRAM

| SIZE OF HOLE | GRADE, SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH | QUANTITY OF CEMENT |
|---|---|---|---|---|
| 25" | Conductor | NA | 40' | Cement to surface with Redi-mix. |
| 17½" | H-40 13 3/8" | 48 | 800' | 800 Sx. circulate to surface. |
| 11" | J-55 8 5/8" | 32 | 4400' | 1500 Sx. " " " |
| 7 7/8" | J-55 5½" | 15.5 & 17 | 8700' | 1750 Sx. " " " |

1. Drill 25" hole to 40'. Set 40' of 20" conductor and cement to surface with Redi-mix.
2. Drill 17½" hole to 800'. Run and set 800' of 13 3/8" 48# H-40 ST&C casing. Cement with 600 Sx. of 65/35/6 Class "C" POZ/Gel, tail in with 200 Sx. of Class "C" cement + 2% CaCl, + ¼# Flocele/Sx. Circulate cement to surface.
3. Drill 11" hole to 4400'. Run and set 4400' of 8 5/8" 32# J-55 ST&C casing. Cement with 1300 Sx. of 65/35/6 Class "C" POZ-Gel + 5% Salt, tail in with 200 Sx. of Class "C" cement + 2% CaCl, + ¼# Flocele/Sx., circulate cement to surface.
4. Drill 7 7/8" hole to 8700'. Run and set 8700' of 5½" casing as follows: 2700' of 5½" 17# J-55 LT&C, 5000' of 5½" 15.5# J-55 LT&C, 1000' of 5½" 17# J-55 LT&C. Cement in three stages with DV Tools at 5800' & 3700'±. Cement 1st stage with 650 Sx. of Class "H" cement cement 2nd stage with 600 Sx. of Class "C" cement + 8# of Gilsonite/Sx, cement 3rd stage with 400 Sx. of 65/35/6 Class "C" POZ-Gel, tail in with 100 Sx. of Class "C" cement + 1% CaCl, circulate cement to surface.

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.

SIGNED Joe T. Janica TITLE Agent DATE 03/23/03

OPER. OGRID NO. 1789
PROPERTY NO. 13271
POOL CODE 39360
EFF. DATE 5-1-03
API NO. 30-025-36270

APPROVAL DATE

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

RECEIVED
APR 2003
Hobbs
OCD

Applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

APPROVED BY /S/ JOE G. LARA TITLE ACTING FIELD MANAGER DATE APR 28 2003

*See Instructions On Reverse Side

APPROVAL FOR 1 YEAR

18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
811 South First, Artesia, NM 88210

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

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

# OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, New Mexico 87504-2088

Form C-102
Revised March 17, 1999

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 |
|---|---|---|
| 30-025-36270 | 39360 | LIVINGSTON RIDGE-DELAWARE |

| Property Code | Property Name | Well Number |
|---|---|---|
| 13271 | LIVINGSTON RIDGE "18" FEDERAL | 5 |

| OGRID No. | Operator Name | Elevation |
|---|---|---|
| 17891 | POGO PRODUCING COMPANY | 3628' |

### Surface Location

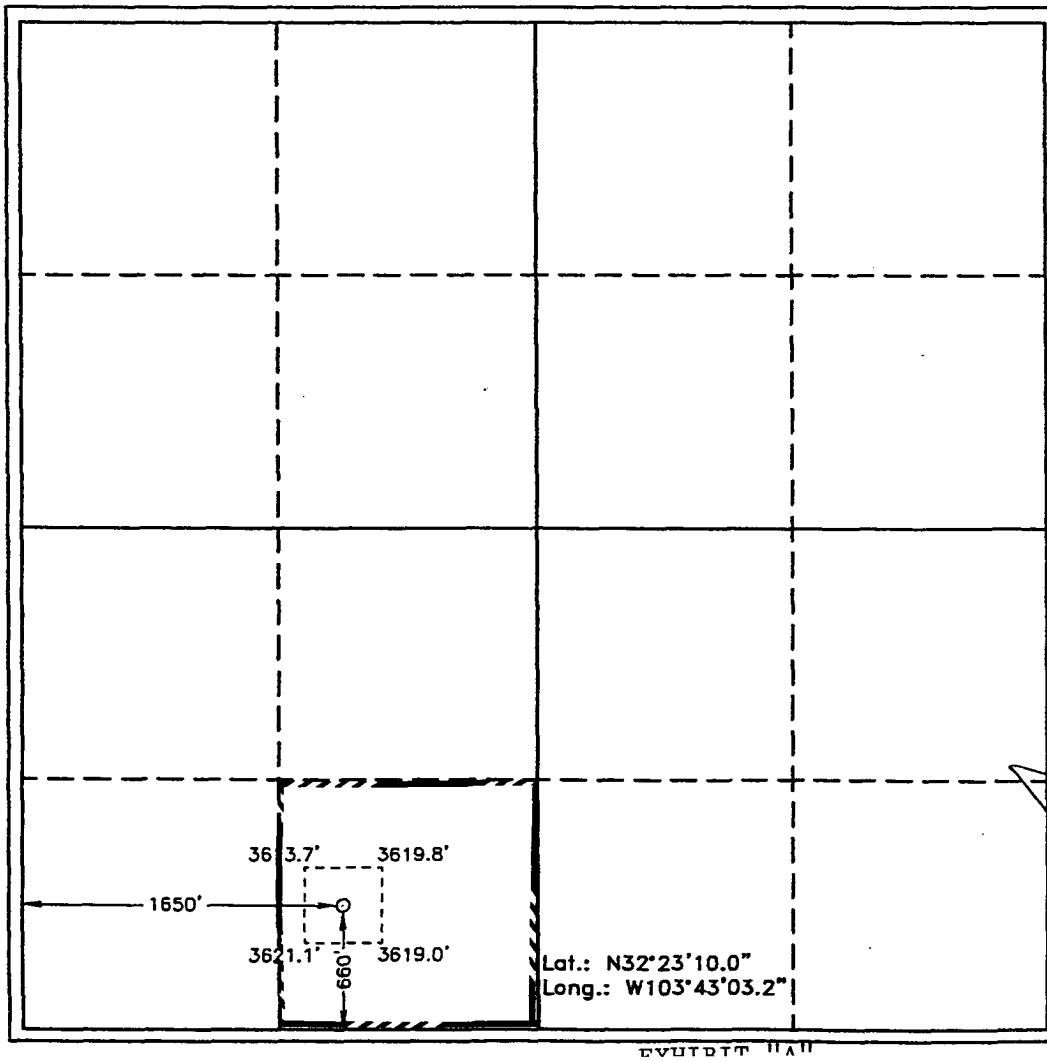
| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| N | 18 | 22 S | 32 E | | 660 | SOUTH | 1650 | WEST | LEA |

### 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. |
|---|---|---|---|
| 40 | | | |

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

Joe T. Janica
Printed Name

Agent
Title

03/27/03
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.*

MARCH 4, 2003
Date Surveyed

Signature & Seal of Professional Surveyor

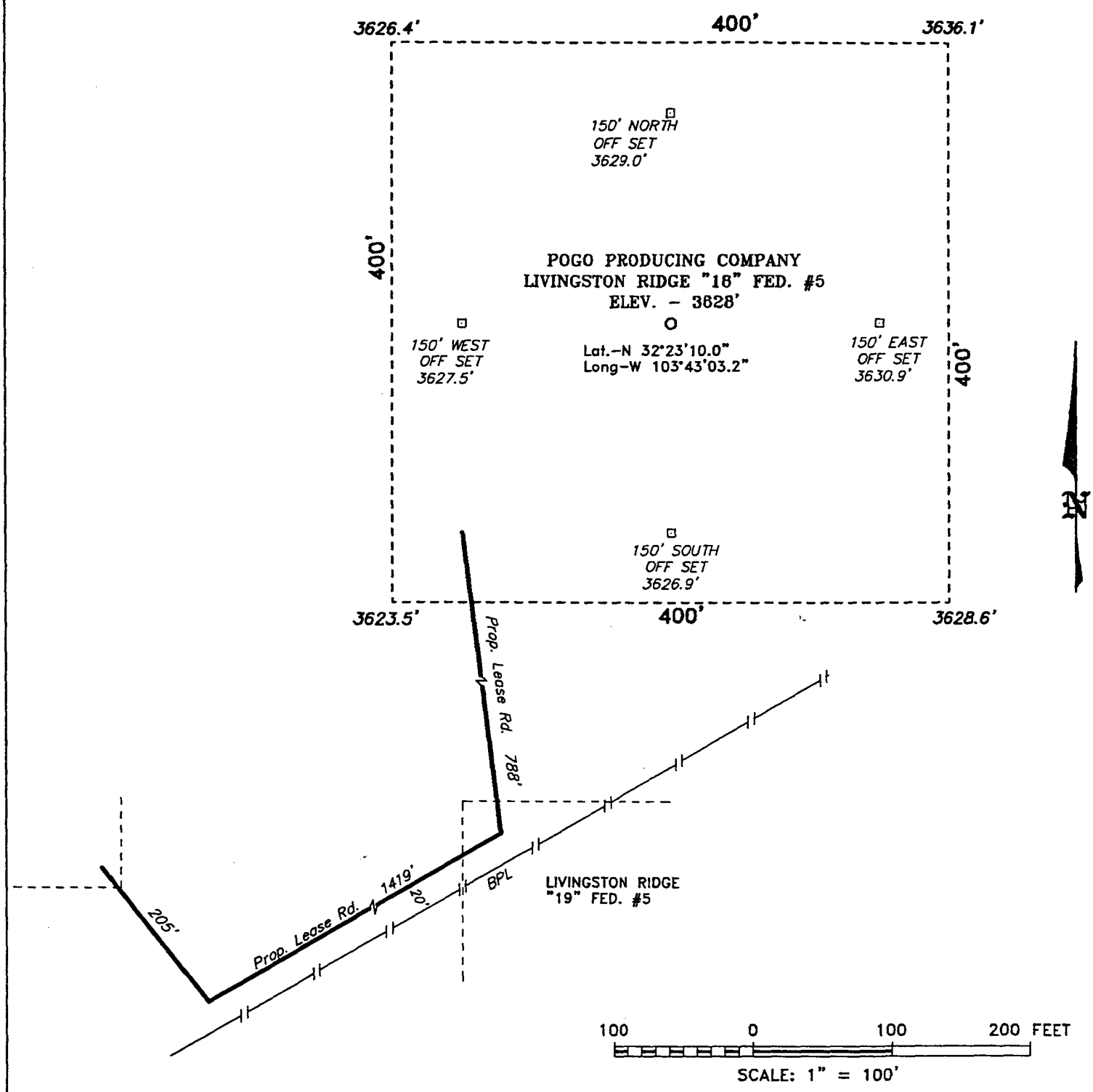
W.O. No. 3072

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

EXHIBIT "A"

# SECTION 18, TOWNSHIP 22 SOUTH, RANGE 32 EAST, N.M.P.M.,
**LEA COUNTY,** **NEW MEXICO.**




## POGO PRODUCING CO.

REF: LIVINGSTON RIDGE "18" FEDERAL #5 / Well Pad Topo

THE LIVINGSTON RIDGE "18" FED. No. 5 LOCATED 660' FROM THE SOUTH LINE AND 1650' FROM THE WEST LINE OF SECTION 18, TOWNSHIP 22 SOUTH, RANGE 32 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.

**BASIN SURVEYS** P.O. BOX 1786 – HOBBS, NEW MEXICO

| | | | |
|---|---|---|---|
| W.O. Number: 3072 | Drawn By: K. GOAD | | |
| Date: 03-07-2003 | Disk: KJG CD#4 – 3072A.DWG | Survey Date: 03-04-2003 | Sheet 1 of 1 Sheets |

APPLICATION TO DRILL

POGO PRODUCING COMPANY
LIVINGSTON RIDGE "18" FEDERAL # 5
UNIT "N" SECTION 18
T22S-R32E LEA CO. NM

In response to questions asked under Section II of Bulletin NTL-6 the following information on the above well is provided for your information.

1. Location of well: 330' FSL & 1650' FWL SECTION 18 T22S-R32E LEA CO. NM

2. Ground Elevation above Sea Level: 3628' GR.

3. Geological age of surface formation: Quaternary

4. Drilling tools and associated equipment: Conventional rotary drilling rig using drilling mud as a circulating medium to remove solids from hole.

5. Proposed drilling depth: 8700'

6. Estimated tops of geological markers:

| | | | |
|---|---|---|---|
| Rustler Anhydrite | 750' | Cherry Canyon | 5400' |
| Basal Anhydrite | 4238' | Brushy Canyon | 6630' |
| Delaware Lime | 4512' | Bone Spring | 8380' |
| Bell Canyon | 4570' | | |

7. Possible mineral bearing formations:

| | |
|---|---|
| Brushy Canyon | Oil |
| Bone Spring | Oil |

8. Casing Program:

| Hole Size | Interval | OD of Casing | Weight | Thread | Collar | Grade |
|---|---|---|---|---|---|---|
| 25" | 0-40 | 20" | NA | NA | NA | Conductor |
| 17½" | 0-~~800~~ 925' | 13 3/8" | 48# | 8-R | ST&C | H-40 |
| 11" | 0-4400' | 8 5/8" | 32# | 8-R | ST&C | J-55 |
| 7 7/8" | 0-8700' | 5½" | 17 & 15.5 | 8-R | LT&C | J-55 |

APPLICATION TO DRILL

POGO PRODUCING COMPANY
LIVINGSTON RIDGE "18" FEDERAL # 5
UNIT "N" SECTION 18
T22S-R32E LEA CO. NM

9. CASING CEMENTING & SETTING DEPTHS:

| | | |
|---|---|---|
| 20" | Conductor | Set 40' of 20" conductor and cement to surface with Redi-mix. |
| 13 3/8" | Surface | Set 800' of 13 3/8" 48# H-40 ST&C casing. Cement with 600 Sx. of 65/35/6 Class "C" POZ-Gel, tail in with 200 Sx. of Class "C" cement + 2% CaCl, + ¼# Flocele/Sx. Circulate cement. |
| 8 5/8" | Intermediate | Set 4400' of 8 5/8" 32# J-55 ST&C casing, Cement with 1300 Sx. of 65/35/6 Class "C" POZ-Gel, + 5% NaCl, tail in with 200 Sx. of Class "C" cement + 2% CaCl, + ¼# Flocele/Sx. Circulate cement to surface. |
| 5½" | Production | Set 8700' of 5½" casing as follows: 2700' of 5½" 17# J-55 LT&C, 5000' of 5½" 15.5# LT&C, 1000' of 5½" 17# J-55 LT&C. Cement in 3 stages, place DV Tools at 5800' & 3700'±. Cement 1st stage with 650 Sx. of Class "H" cement + additives, cement 2nd stage with 600 Sx. of Class "C" cement + 8# of Gilsonite/Sx., cement 3rd stage with 400 Sx. of 65/35/6 Class "C" POZ-Gel, tail in with 100 Sx. of Class "C" cement + 1% CaCl, circulate cement to surface. |

10. PRESSURE CONTROL EQUIPMENT: Exhibit "E" shows a 900 Series 3000 PSI working pressure B.O.P. consisting of an annular bag type preventor, middle blind rams and bottom pipe rams. The B.O.P. will be nippled up on the 13 3/8" casing and tested to API specifications. The B.O.P. will be operated at least once in each 24 hour period and the blind rams will be operated when drill pipe is out of hole on trips. Full opening stabbing valve and upper kelly cock will be utilized. Exhibit "E-1" shows a hydraulically operated closing unit and a 2" 3000 PSI choke manifold with dual adjustable chokes. No abnormal pressures or temperatures are expected.

11. PROPOSED MUD CIRCULATING SYSTEM:

| DEPTH | MUD WT. | VISC. | FLUID LOSS | TYPE MUD SYSTEM |
|---|---|---|---|---|
| 40-~~800~~ 925' | 8.4-8.7 | 29-32 | NC | Fresh water Spud Mud add paper to control seepage. |
| 800-4400' | 10.0-10.2 | 29-38 | NC | Brine water add paper to control seepage and use high viscosity sweeps to clean hole. |
| 4400-8700' | 8.4-8.7 | 29-40 | NC* | Fresh water mud system use high viscosity sweeps to clean hole. |

* If water loss control is required in order to take DST's, run logs, or run casing add Dris-Pac to system to control water loss.

Sufficient mud materials will be kept on location at all times in order to combat lost circulation, or unexpected kicks. In order to run DST's , open hole logs, and casing viscosity and/or water loss may have to be adjusted to meet these needs.

APPLICATION TO DRILL

POGO PRODUCING COMPANY
LIVINGSTON RIDGE "18" FEDERAL # 5
UNIT "N" SECTION 18
T22S-R32E LEA CO. NM

12. LOGGING, CORING, AND TESTING PROGRAM:

A. Open hole logs: Run Dual Induction, SNP, LDT, Gamma Ray, Caliper logs from TD back to 8 5/8" casing shoe.

B. Run Gamma Ray, Neutron logs from 8 5/8" casing shoe back to surface.

C. Mud logger may be placed on hole at 4400'±.

D. No cores or DST's are planned at this time.

13. POTENTIAL HAZARDS:

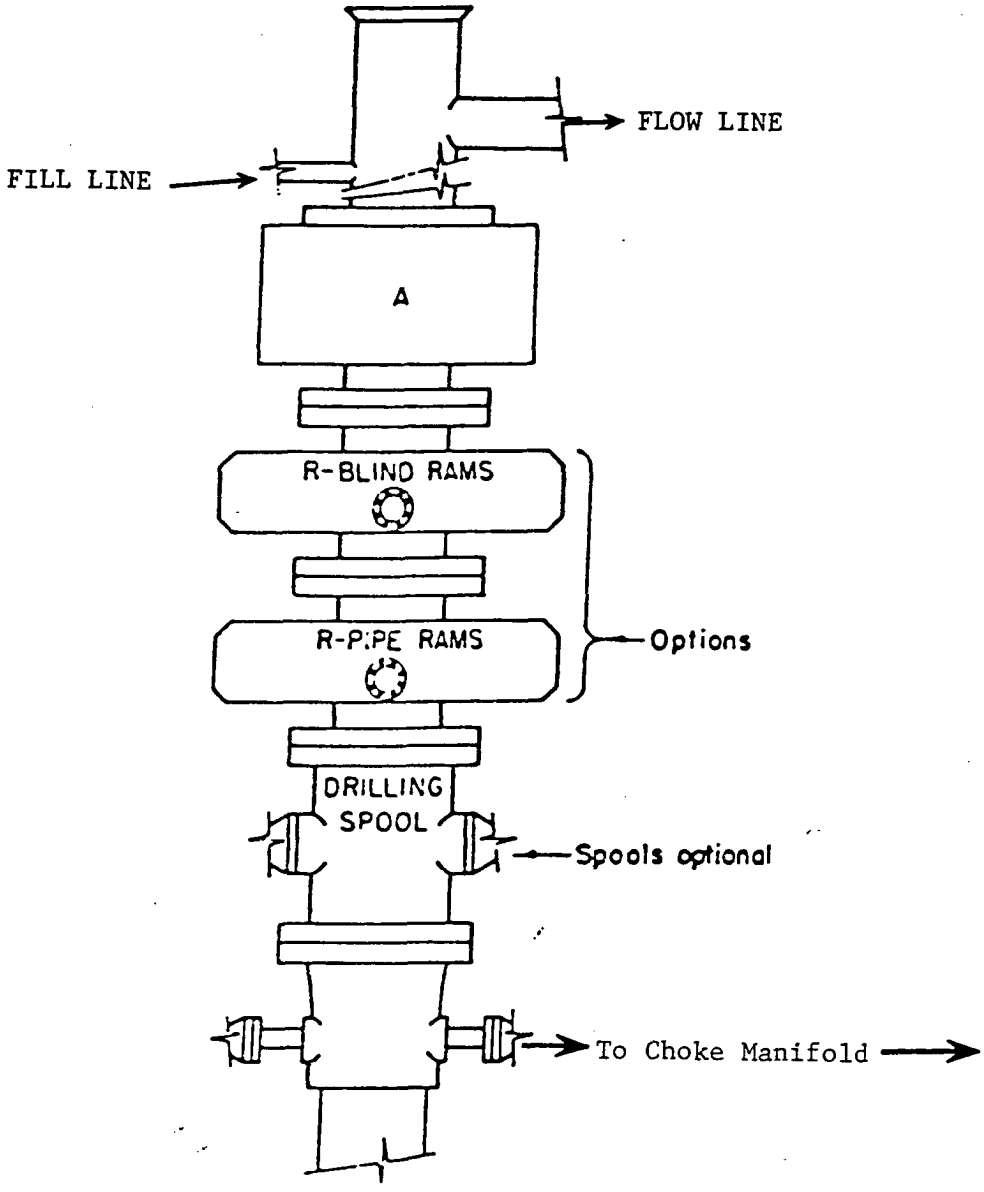
No abnormal pressures or temperatures are expected. There is no known presence of $H^2S$ in this area. If $H^2S$ is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 4300 PSI, and Estimated BHT 165°.

14. ANTICIPATED STARTING DATE AND DURATION OF OPERATION:

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operation and drilling is expected to take 28 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flowlines in order to place well on production.

15. OTHER FACETS OF OPERATIONS:

After running casing, cased hole Gamma Ray, Neutron Collar logs will be run from TD back to all possible productive zones. The Delaware(BS) formation will be perforated and stimulated in order to establish production. The well will be swab tested and potentialed as an oil well.




**ARRANGEMENT SRRA**

900 Series
3000 PSI WP

EXHIBIT "E"
SKETCH OF B.O.P. TO BE USED ON

POGO PRODUCING COMPANY
LIVINGSTON RIDGE "18" FEDERAL # 5
UNIT "N" SECTION 18
T22S-R32E LEA CO. NM

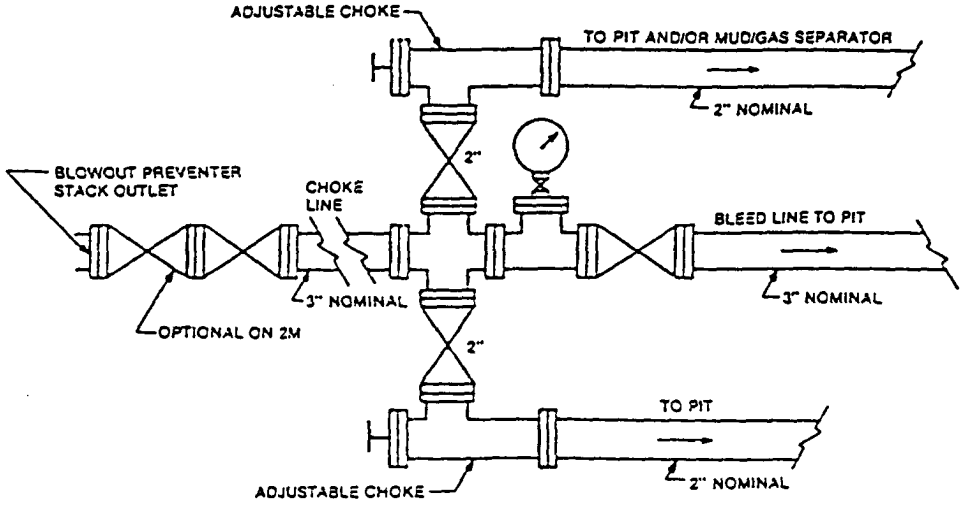



FIGURE K-1. Typical choke manifold assembly for 2M and 3M rated working pressure service — surface installation.

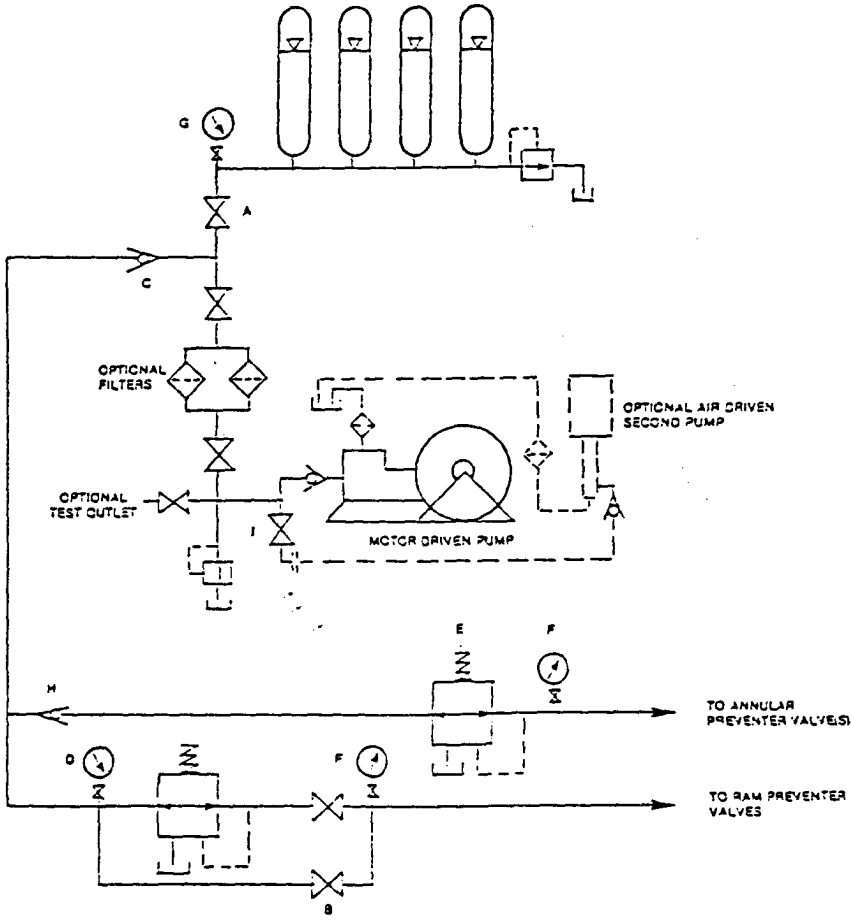



FIGURE K6-1. The schematic sketch of an accumulator system shows required and optional components.

EXHIBIT "E-1"
CHOKE MANIFOLD & CLOSING UNIT

POGO PRODUCING COMPANY
LIVINGSTON RIDGE "18" FEDERAL # 5
UNIT "N" SECTION 18
T22S R32E LEA CO. NM