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

N.M. OIL CONS COMMISSION
P.O. BOX 1980
HOBBS, NEW MEXICO 88240

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

5. LEASE DESIGNATION AND SERIAL NO.: NM-90586
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
7. UNIT AGREEMENT NAME:
8. FARM OR LEASE NAME: FEDERAL 8 Com.
9. WELL NO.: 2 (SJS)
10. FIELD AND POOL, OR WILDCAT: UNDES. ~~RED TANK MORROW~~ BILBREY MORROW
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: SEC.8, T.22 S., R.32 E.
12. COUNTY OR PARISH: LEA COUNTY
13. STATE: NEW MEXICO

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 79702

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 1980' FSL AND 1680' FWL 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 drlg. unit line, if any): 360'
16. NO. OF ACRES IN LEASE: 440
17. NO. OF ACRES ASSIGNED TO THIS WELL: 320
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: 2150'
19. PROPOSED DEPTH: 15,250'
20. ROTARY OR CABLE TOOLS: ROTARY
21. ELEVATIONS (Show whether DF, RT, GR, etc.): 3766' GR
22. APPROX. DATE WORK WILL START*: UPON APPROVAL

Secretary's Potash

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
12-1/4"	9-5/8"	43.5#	4500'	SUFFICIENT TO CIRCULATE
8-1/2"	7"	29#	12,250'	1200 SACKS - TO TIE BACK
6-1/8"	5" LINER	18#	12,000'-15,250'	300 SACKS - TO CIRCULATE LINER

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

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

BUREAU OF LAND MANAGEMENT
RECEIVED
SEP 12 1994
DIST. 6 N.M.
Carlsbad, New Mexico

OPER. OGRID NO. 17891
PROPERTY NO. 15880
POOL CODE ~~83720~~ 72124
EFF. DATE 10-25-94
API NO. 30-025-32716

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 (signature) TITLE Division Operations Mgr. DATE September 9, 1994
Richard L. Wright

(This space for Federal or State office use)

PERMIT NO. APPROVAL DATE

APPROVED BY (signature) TITLE Acting SD DATE 10-12-94
CONDITIONS OF APPROVAL, IF ANY:

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

*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
		UNDES. ~~RED TANK MORROW~~

Property Code	Property Name	Well Number
	FEDERAL 8 Com. (SJS)	2

OGRID No.	Operator Name	Elevation
17891	POGO PRODUCING COMPANY	3766'

Surface Location

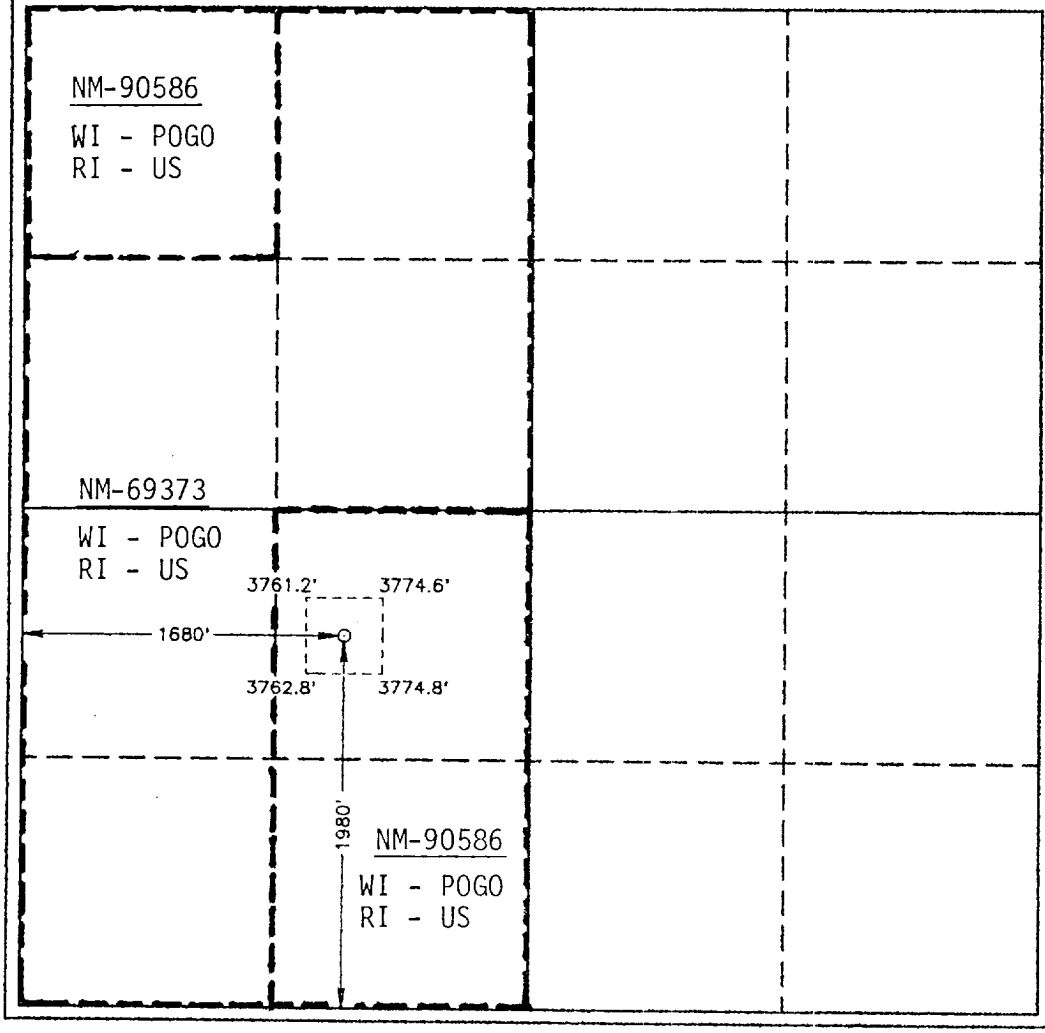
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	8	22 S	32 E		1980	SOUTH	1680	WEST	LEA

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.
320	N	P	

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: Richard L. Wright

Title: Division Operations Mgr.

Date: September 9, 1994

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.

Date Surveyed: SEPTEMBER 13, 1994

Signature & Seal of Professional Surveyor: Ronald J. Eidson

NEW MEXICO — RONALD J. EIDSON — 3239

W.O. Num. 94-11-1544

Certificate No. JOHN W. WEST, 676
RONALD J. EIDSON, 3239

SUPPLEMENTAL DRILLING DATA

POGO PRODUCING COMPANY

FEDERAL 8 WELL NO. 2

1. SURFACE FORMATION: Quaternary.

2. ESTIMATED TOPS OF GEOLOGIC MARKERS:

Rustler Anhydrite	800'
Delaware Lime	4650'
Bone Springs	8600'
Wolfcamp Shale	12,200'
Atoka	13,500'
Morrow	14,100'

3. ANTICIPATED POSSIBLE HYDROCARBON BEARING ZONES:

Delaware	Oil
Atoka	Gas
Morrow	Gas

4. PROPOSED CASING AND CEMENTING PROGRAM:

CASING SIZE	SETTING DEPTH FROM	TO	WEIGHT	GRADE	JOINT
13-3/8"	0	800'	54.5#	J-55	ST&C
9-5/8"	0	4500'	43.5#	N-80	LT&C
7"	0	6500'	29#	P-110	LT&C
7"	6500'	11,750'	29#	N-80	LT&C
7"	11,750'	12,250'	29#	P-110	LT&C
5" LINER	12,000'	15,250'	18#	P-110	PREMIUM

MINIMUM
DESIGN FACTORS: TENSION 1.2 COLLAPSE 1.1 BURST 1.1

13-3/8" casing to be cemented with approximately 400 sacks of light cement followed by 200 sacks of Class "C" with 2% CaCl. Cement to circulate.

9-5/8" casing to be cemented with approximately 1000 sacks of light cement with 5# salt per sack followed by 200 sacks of premium cement. Cement to circulate.

7" casing to be cemented with approximately 600 sacks of light cement followed by approximately 600 sacks of premium cement. Cement to tie back 200 feet into the 9-5/8" casing.

5" liner to be cemented with approximately 300 sacks of premium cement. Cement to circulate the liner.

If indications are that stage cementing of casing is needed to attain projected cement tops, staging tool(s) will be run and positioned to best suit hole conditions at the 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 below the surface casing will be a 3000 psi working pressure stack.

The BOP stack, while drilling below the first intermediate casing, will be a 5000 psi working pressure stack and manifold.

While drilling below the second intermediate casing, BOP equipment is to be a 10,000 psi working pressure stack and manifold.

Well control equipment is to be consistent with the provisions of Onshore Oil and Gas Order No. 2.

BOP sketches are attached.

6. CIRCULATING MEDIUM:

Surface to 800 feet: Fresh water gel spud mud. Weight 8.6 to 8.8. Viscosity 34 to 36 as required for hole cleaning.

800 feet to 4500 feet: Brine conditioned as necessary for control of viscosity and seepage. Weight 10 to 10.2. pH 9 to 10. Viscosity 28 to 30.

4500 feet to 12,250 feet: Fresh water cut with brine if necessary. Weight 8.4 to 9.0. pH 9-10. Viscosity 28-29.

12,250 feet to 13,000 feet: Brine conditioned as necessary. Weight 10 to 10.1. pH 9 to 10. Viscosity 28 to 29.

13,000 feet to T.D.: Water base drilling fluid conditioned as necessary for control of weight, pH, viscosity, and water-loss. Weight 10.0 to 12.5. pH 9 to 10. Viscosity 34-45. Filtrate 10 to 6.

7. AUXILIARY EQUIPMENT:

Geolograph from surface to total depth.

Mud logging trailer to be in use below 4500 feet.

8. TESTING, LOGGING, AND CORING PROGRAMS:

Drill stem tests will be run when 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:

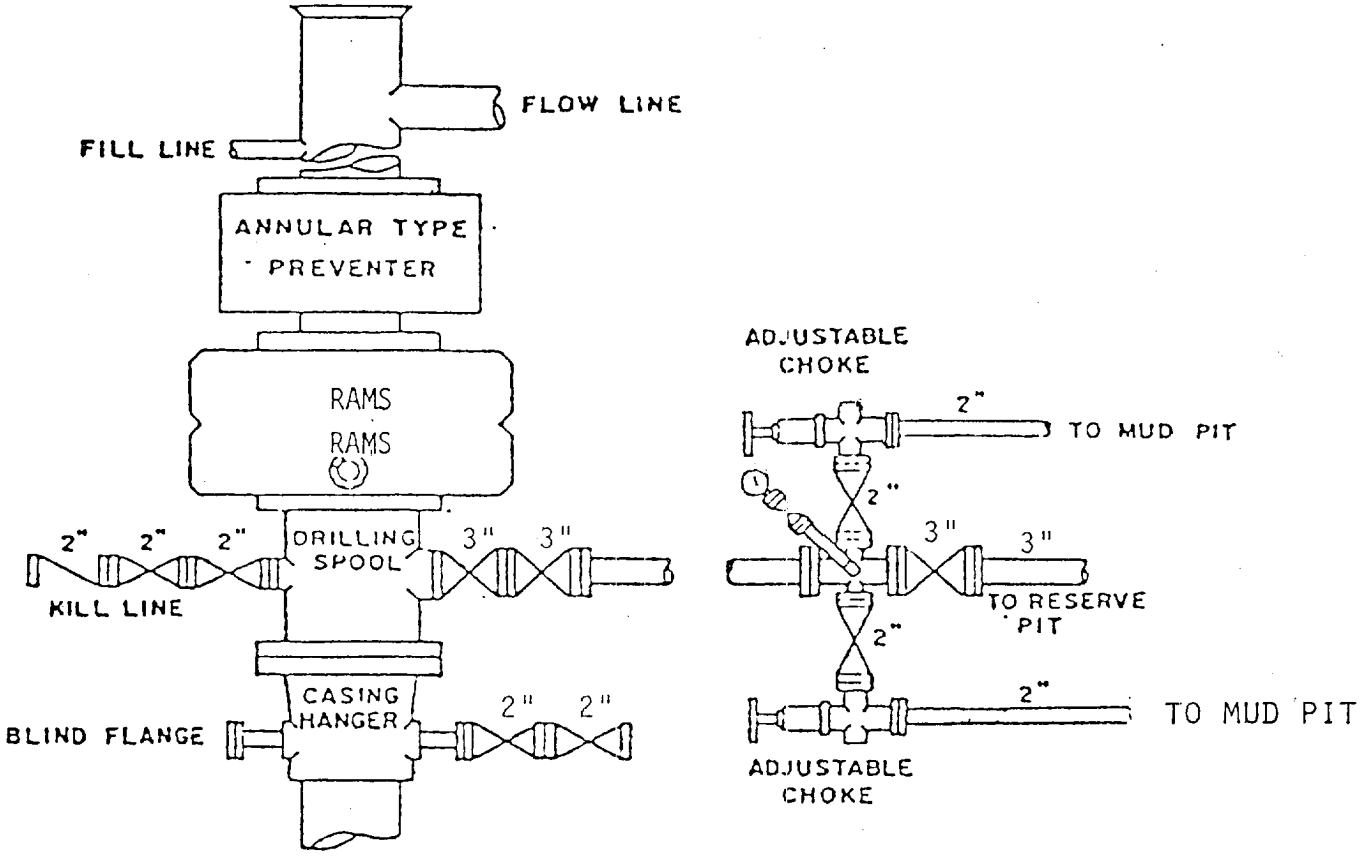
Abnormal gas pressure may be present in the Atoka formation. Maximum expected bottom hole pressure is about 10,000 psi.

Bottom hole temperature should be normal. Expected bottom hole temperature is about 190 degrees Fahr.

No hydrogen sulfide gas is expected. However, since it is possible that hydrogen sulfide gas may be present in permeable water zones of the Castile formation and, since there is an existing report of hydrogen sulfide gas in the Bone Springs in this area, 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 these possible sources of hydrogen sulfide gas are cased off.

10. ANTICIPATED STARTING DATE:

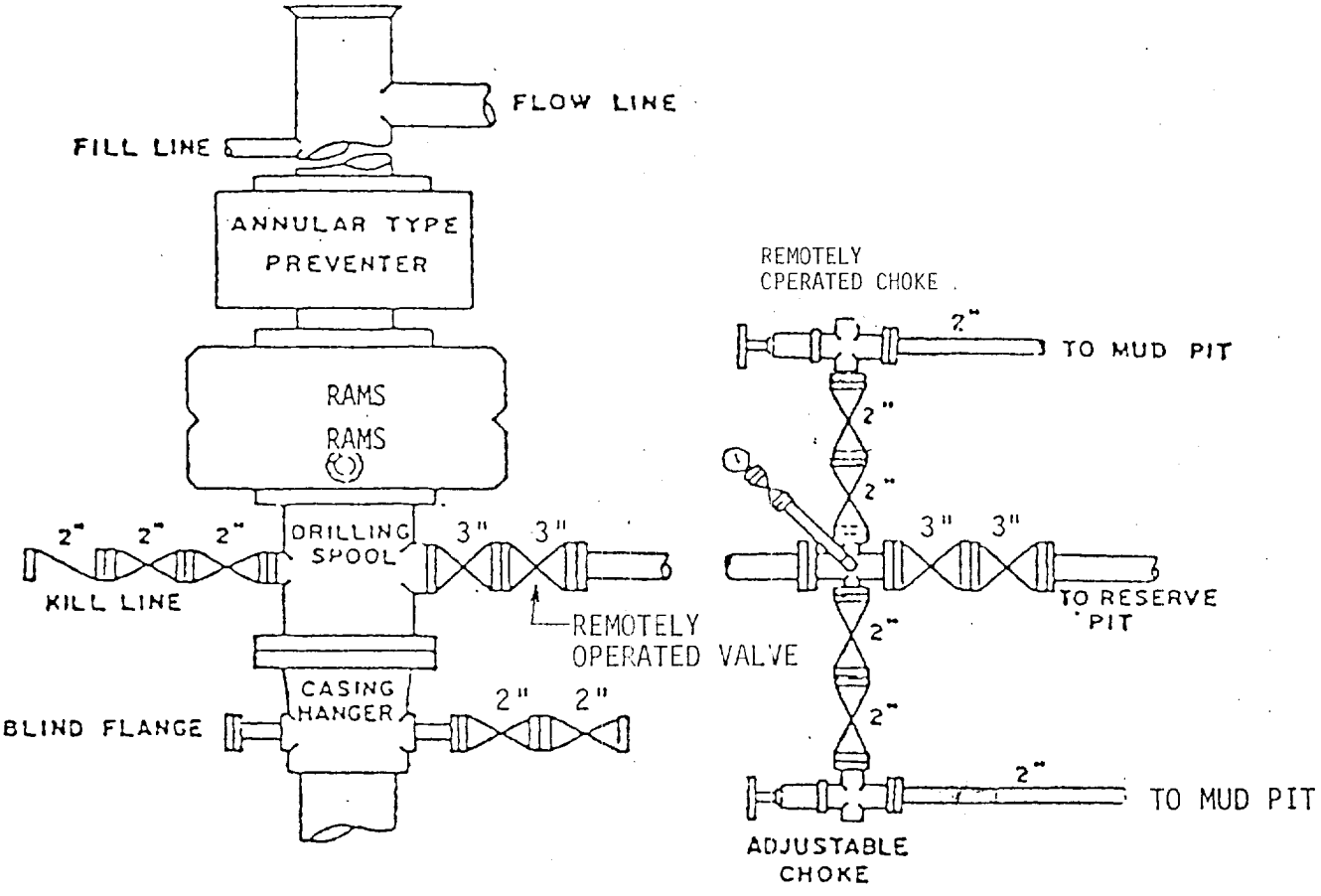
Plans are that operations will commence upon approval of this application, with drilling and completion operations lasting about 60 days.



BOP STACK AND CHOKE MANIFOLD

3000 PSI WORKING PRESSURE

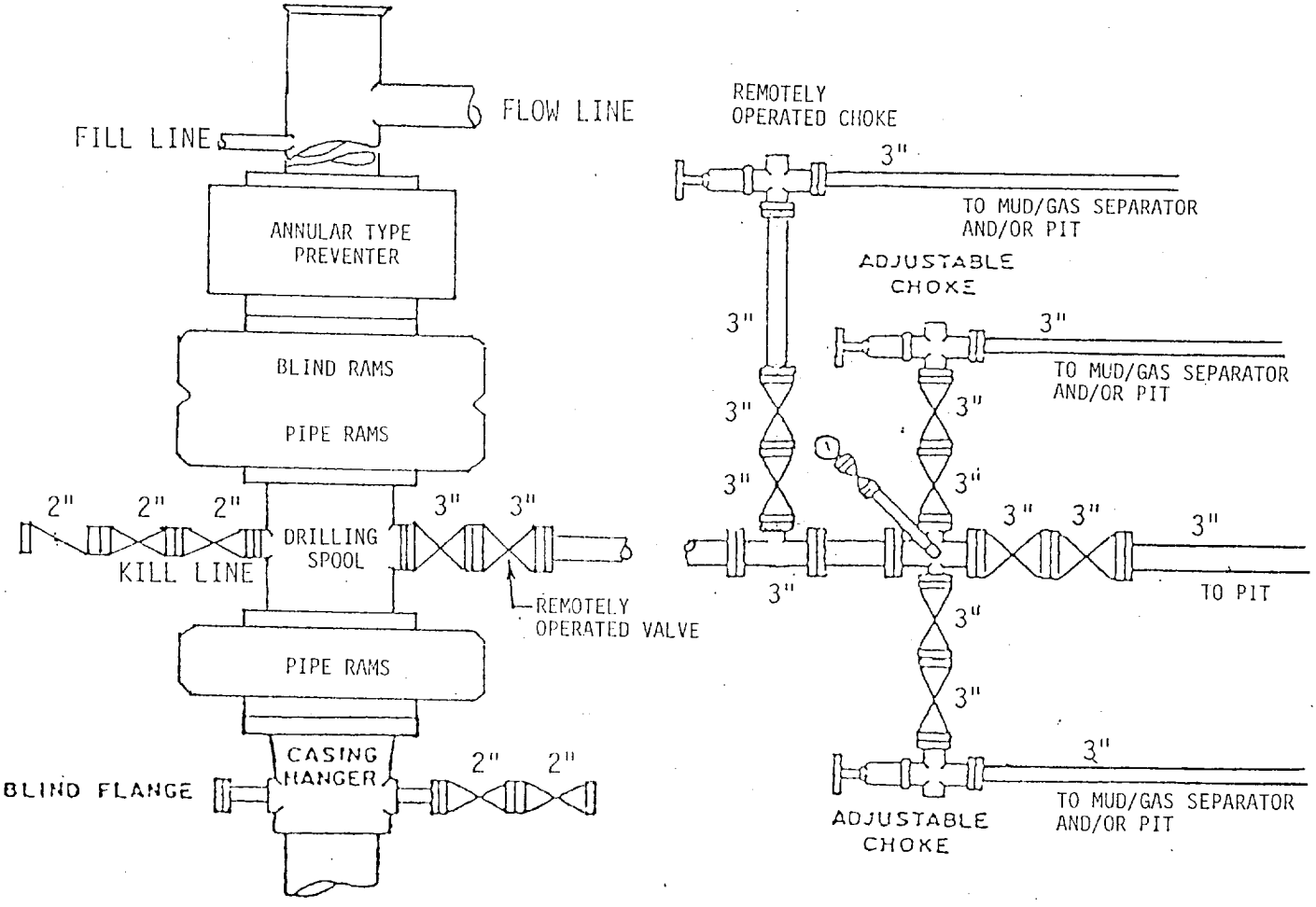
BOP ARRANGEMENT



BOP STACK AND CHOKE MANIFOLD

5000 PSI WORKING PRESSURE

BOP ARRANGEMENT



BOP STACK AND CHOKE MANIFOLD

10,000 PSI WORKING PRESSURE

BOP ARRANGEMENT