

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT(Other instructions on  
reverse side)OMB NO. 1004-0136  
Expires: February 28, 1995DESIGNATION AND SERIAL NO.  
NM-89819APPLICATION FOR PERMIT TO DRILL OR DEEPEN  
SECRETARY'S POTASH

## 1a. TYPE OF WORK

DRILL ☒DEEPEN ☐

## b. TYPE OF WELL

OIL  
WELL ☒GAS  
WELL ☐OTHER ☐SINGLE  
ZONE ☒MULTIPLE  
ZONE ☐

## 2. NAME OF OPERATOR

POGO PRODUCING COMPANY

(MR. RICHARD WRIGHT 432-685-8140)

## 3. ADDRESS AND TELEPHONE NO.

PO. BOX 10340 MIDLAND, TEXAS 79702-7340 (432-685-8100)

## 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

At surface

330' FSL & 2310' FWL SECTION 18 T24S-R31E EDDY CO. NM  
At proposed prod. zone SAME

RECEIVED

NOV 08 2004

## 6. IF INDIAN, ALLOTTEE OR TRIBE NAME

## 7. UNIT AGREEMENT NAME

## 8. FARM OR LEASE NAME, WELL NO.

PATTON "18" FEDERAL # 6

## 9. AP WELL NO.

30-015-33825

## 10. FIELD AND POOL, OR WILDCAT

POKER LAKE DELAWARE NW

11. SEC., T., R., M., OR BLK.  
AND SURVEY OR AREA

SECTION 18 T24S-R31E

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

Approximately 25 miles East of Carlsbad New Mexico

## 12. COUNTY OR PARISH

EDDY CO.

## 13. STATE

NM

## 15. DISTANCE FROM PROPOSED\*

LOCATION TO NEAREST  
PROPERTY OR LEASE LINE, FT.  
(Also to nearest drg. unit line, if any)

330'

## 16. NO. OF ACRES IN LEASE

640

17. NO. OF ACRES ASSIGNED  
TO THIS WELL

40

## 18. DISTANCE FROM PROPOSED LOCATION\*

TO NEAREST WELL, DRILLING, COMPLETED,  
OR APPLIED FOR, ON THIS LEASE, FT.

610'

## 19. PROPOSED DEPTH

8400'

## 20. ROTARY OR CABLE TOOLS

ROTARY

## 21. ELEVATIONS (Show whether DF, RT, GR, etc.)

3503' GR.

## 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"	20" Conductor	NA	40'	Cement to surface W/Redi-mix
WITNESS 17 1/2"	13 3/8" H-40	48	800' 930' SSS	800 Sx. circulate to surface
11"	J-55 8 5/8"	24 & 32	4200'	1200 Sx " " "
7 7/8"	J-55 5 1/2"	15.5 & 17	8400'	1300 Sx. 2 Stage job. TOC 3500'±

1. Drill 25" hole to 40'. Set 40' of 20" Conductor pipe and cement to surface with Redi-mix.
2. Drill 17 1/2" hole to 800'. Run and set 800' of 13 3/8" 48# H-40 ST&C casing. Cement with 800 Sx. of Class "C" cement + 2% CaCl<sub>2</sub> + 1/4# Floccle/Sx. Circulate cement to surface.
3. Drill 11" hole to 4200'. Run and set 4200' of 8 5/8" casing as follows: 2000' of 8 5/8" 32# J-55 ST&C, 1200' of 8 5/8" 24# J-55 ST&C, 1000' of 8 5/8" 32# J-55 ST&C casing. Cement with 1200 Sx. of Class "C" cement + additives, circulate cement to surface.
4. Drill 7 7/8" hole to 8400'. Run and set 8400' of 5 1/2" casing as follows: 2400' of 5 1/2" 17# J-55 LT&C, 5000' of 5 1/2" 15.5# J-55 LT&C, 1000' of 5 1/2" 17# J-55 LT&C casing. Cement in 2 stages with DV Tool at 6200'±. Cement 1st stage with 550 Sx. of Class "H" Premium Plus cement + additives, cement 2nd stage with 750 Sx. of Class "C" cement + additives. Estimate top of cement 3500' from surface.

CARLSBAD CONTROLLED WATER BASIN

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

TITLE

Agent

APPROVAL SUBJECT TO

04/09/04

GENERAL REQUIREMENTS

AND SPECIAL STIPULATIONS

ATTACHED

PERMIT NO.

Application approval does not

CONDITIONS OF APPROVAL IF A

If earthen pits are used in  
association with the drilling of this  
well, an OCD pit permit must be  
obtained prior to pit construction.

/s/ Linda S. C. Rundell

STATE DIRECTOR

DATE

1 NOV 2004

APPROVED BY

TITLE

\*See Instructions On Reverse Side

APPROVAL FOR 1 YEAR

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 IV**  
**2040 South Pacheco, Santa Fe, NM 87505**

**Energy, Minerals and Natural Resources Department**

Form C-102  
Revised March 17, 1999

**Submit to Appropriate District Office**  
**State Lease - 4 Copies**  
**Fee Lease - 3 Copies**

**2040 South Pacheco**

**Santa Fe, New Mexico 87504-2088**

☐ AMENDED REPORT

API Number		Pool Code 96046	Pool Name POKER LAKE-DELAWARE NORTHWEST
Property Code 30489	Property Name PATTON "18" FEDERAL		Well Number 6
OGRID No. 17891	Operator Name POGO PRODUCING COMPANY		Elevation 3503'

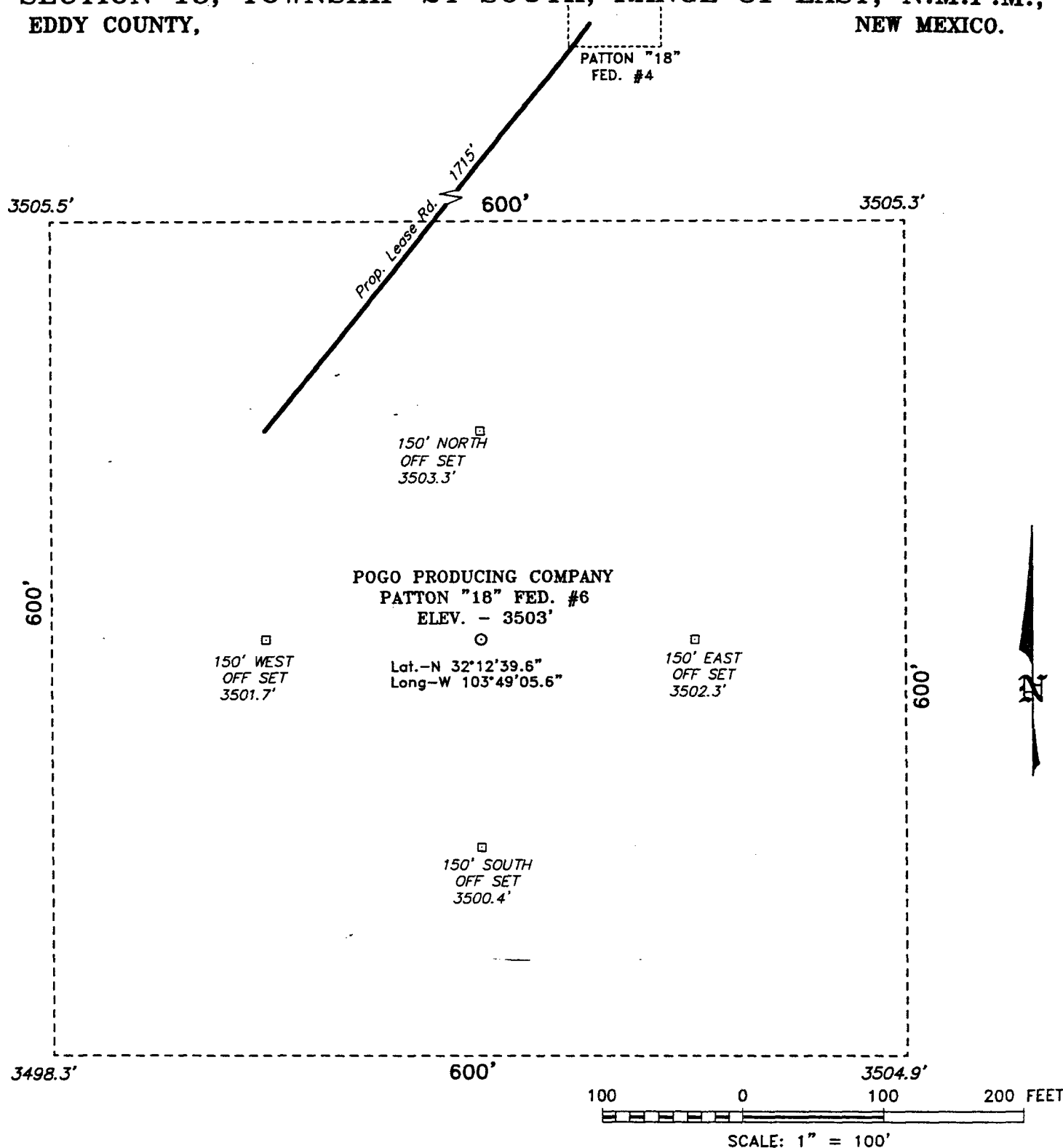
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	18	24 S	31 E		330	SOUTH	2310	WEST	EDDY

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40			

<div>LOT 1 - 41.87 AC.</div> <div>LOT 2 - 41.94 AC.</div> <div>LOT 3 - 42.00 AC.</div> <div>LOT 4 - 42.07 AC.</div>		<b>OPERATOR CERTIFICATION</b> <i>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</i> <div>Signature: <i>Joe T. Janica</i></div> <div>Printed Name: Joe T. Janica</div> <div>Title: Agent</div> <div>Date: 04/09/04</div>	
		<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> <div>Date Surveyed: APRIL 5, 2004</div> <div>Signature &amp; Seal of Professional Surveyor: <i>[Signature]</i></div> <div>W.O. No. 4157</div> <div>Certificate No. Gary L. Jones 7977</div>	
		<div>Lat.: N32°12'39.6"</div> <div>Long.: W103°49'05.6"</div> <div>2310'</div> <div>3505.5'</div> <div>330'</div> <div>3505.3'</div> <div>3498.3'</div> <div>3504.9'</div> <div>EXHIBIT "A"</div>	
		<div>Basin Surveys</div>	

SECTION 18, TOWNSHIP 24 SOUTH, RANGE 31 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



Directions to Location:

FROM THE JUNCTION OF CO. RD. 787 AND STATE HWY 128, GO SOUTHERLY ON CO. RD. 128 FOR 5.4 MILES AND WEST FOR 0.4 MILE TO THE PATTON #1 TANK BATTERY AND THE PROPOSED LEASE ROAD TO THE PATTON #4; THENCE ALONG PROPOSED LEASE ROAD TO THE #4 AND PROPOSED LEASE ROAD TO THE #6.

**POGO PRODUCING CO.**

REF: PATTON "18" FED. #6 / Well Pad Topo

THE PATTON "18" FED. No. 6 LOCATED 330' FROM THE SOUTH LINE AND 2310' FROM THE WEST LINE OF SECTION 18, TOWNSHIP 24 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

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

W.O. Number: 4157

Drawn By: K. GOAD

Date: 04-06-2004

Disk: KJG CD#4 - 4157A.DWG

Survey Date: 04-05-2004

Sheet 1 of 1 Sheets

# APPLICATION TO DRILL

POGO PRODUCING COMPANY  
PATTON "18" FEDERAL #6  
UNIT "N" SECTION 18  
T24S-R31E EDDY 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 consideration.

1. Location: 330' FSL & 2310' FWL SECTION 18 T24S-R31E EDDY CO. NM
2. Elevation above Sea Level: 3503' GR.
3. Geologic name of surface formation: Quaternary Aeolian Deposits.
4. Drilling tools and associated equipment: Conventional rotary drilling rig using drilling mud as a circulating medium for solids removal from hole.
5. Proposed drilling depth: 8400'
6. Estimated tops of geological markers:

Rustler Anhydrite	500'	Cherry Canyon	5184'
Salado	750'	Brushy Canyon	6421'
Delaware	4274'	Bone Spring	8104'
Bell Canyon	4299'		
7. Possible mineral bearing formations:

Bone Spring	Oil
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## 8. Casing program:

Hole size	Interval	OD of casing	Weight	Thread	Collar	Grade
25"	0-40	20"	NA	NA	NA	Conductor
17½"	0-800' <sup>930'</sup>	13 3/8"	48#	8-R	ST&C	H-40
11"	0-4200'	8 5/8"	32 & 24	8-R	ST&C	J-55
7 7/8"	0-8400'	5½"	17 & 15.5	8-R	LT&C	J-55

# APPLICATION TO DRILL

POGO PRODUCING COMPANY  
PATTON "18" FEDERAL #6  
UNIT "N" SECTION 18  
T24S-R31E EDDY CO. NM

## 9. CASING CEMENTING & SETTING DEPTH:

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 800 Sx. of Class "C" cement + 2% CaCl <sub>2</sub> + 1/2# Flocele/Sx. Circulate cement to surface.
8 5/8"	Inter-mediate	Set 4200' of 8 5/8" casing as follows: 2000' of 8 5/8" 32# J-55 ST&C, 1200' of 8 5/8" 24# J-55 ST&C, 1000' of 8 5/8" 32# J-55 ST&C casing. Cement with 1200 Sx. of Class "C" cement + additives, circulate cement to surface.
5 1/2"	Production	Set 8400' of 5 1/2" casing as follows: 2400' of 5 1/2" 17# J-55 LT&C, 5000' of 5 1/2" 15.5# J-55 LT&C, 1000' of 5 1/2" 17# J-55 LT&C casing. Cement in 2 stages DV Tool at 6200'±. Cement 1st stage with 550 Sx. of Class "H" cement + additives. 2nd stage cement with 750 Sx. of Class "C" cement + additives. Estimate top of cement 3500' from 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 nipped up on the 13 3/8" casing and tested to API specifications. The B.O.P. will be operated at least once each 24 Hr. period and the blind rams will be operated when the drill pipe is out of on trips. Full opening stabbing valve and upper kelly cock will be available in case if needed. Exhibit "E-1" shows a hydraulically operated closing unit and a 3" 3000 PSI choke manifold with adjustable chokes. No abnormal pressures or temperatures are expected while drilling this well. No problems in offset wells.

## 11. PROPOSED MUD CIRCULATING SYSTEM:

DEPTH	MUD WT.	VISC.	FLUID LOSS	TYPE MUD SYSTEM
40-800' <sup>030</sup>	8.4-8.7	29-34	NC	Fresh water spud mud add paper to control seepage.
<sup>030</sup> 800-4200'	10.0-10.2	29-38	NC	Brine water use paper to control seepage & High viscosity sweeps to clean hole.
4200-8400'	8.4-8.7	29-40	NC*	Fresh water mud system use Gel for viscosity control, use high viscosity sweeps to clean hole.

\* Water loss may have to be reduced to 10 cc or less in order to protect formation, run logs, DST's and casing. If needed use a Dris-pac system.

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 water loss may have to be adjusted to meet these needs.

APPLICATION TO DRILL

POGO PRODUCING COMPANY  
PATTON "18" FEDERAL #6  
UNIT "N" SECTION 18  
T24S-R31E EDDY CO. NM

12. LOGGING, CORING, AND TESTING PROGRAM:

- A. Open hole logs: Dual Induction, LDT, SNP, Gamma Ray, Caliper from TD back to 8 5/8" casing shoe. Run Gamma Ray, Neutron from 8 5/8" casing shoe back to surface.
- B. Mud logger may be placed on hole at 4200' and remain on hole to TD.
- C. 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<sup>2</sup>S in this area. If H<sup>2</sup>S 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 4500 PSI, and Estimated BHT 160°.

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 25 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 Bone Spring formation will be perforated and stimulated in order to establish production. The well will be swab tested and potentialized as an oil well.

1. All Company and Contract personnel admitted on location must be trained by a qualified H<sub>2</sub>S safety instructor to the following:
  - A. Characteristics of H<sub>2</sub>S
  - B. Physical effects and hazards
  - C. Proper use of safety equipment and life support systems.
  - D. Principle and operation of H<sub>2</sub>S detectors, warning system and briefing areas.
  - E. Evacuation procedure, routes and first aid.
  - F. Proper use of 30 minute pressure demand air pack.
2. H<sub>2</sub>S Detection and Alarm Systems
  - A. H<sub>2</sub>S detectors and audio alarm system to be located at bell nipple, end of blooie line (mud pit) and on derrick floor or doghouse.
3. Windsock and/or wind streamers
  - A. Windsock at mudpit area should be high enough to be visible.
  - B. Windsock at briefing area should be high enough to be visible.
  - C. There should be a windsock at entrance to location.
4. Condition Flags and Signs
  - A. Warning sign on access road to location.
  - B. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow flag indicates potential pressure and danger. Red flag, danger, H<sub>2</sub>S present in dangerous concentration. Only emergency personnel admitted to location.
5. Well control equipment
  - A. See exhibit "E" & "E-1"
6. Communication
  - A. While working under masks chalkboards will be used for communication.
  - B. Hand signals will be used where chalk board is inappropriate.
  - C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephoned will be available at most drilling foreman's trailer or living quarters.
7. Drillstem Testing
  - A. Exhausts will be watered.
  - B. Flare line will be equipped with an electric ignitor or a propane pilot light in case gas reaches the surface.
  - C. If the location is near to a dwelling a closed DST will be performed.

## HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

8. Drilling contractor supervisor will be required to be familiar with the effects  $H_2S$  has on tubular goods and other mechanical equipment.
9. If  $H_2S$  is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with  $H_2S$  scavengers if necessary.



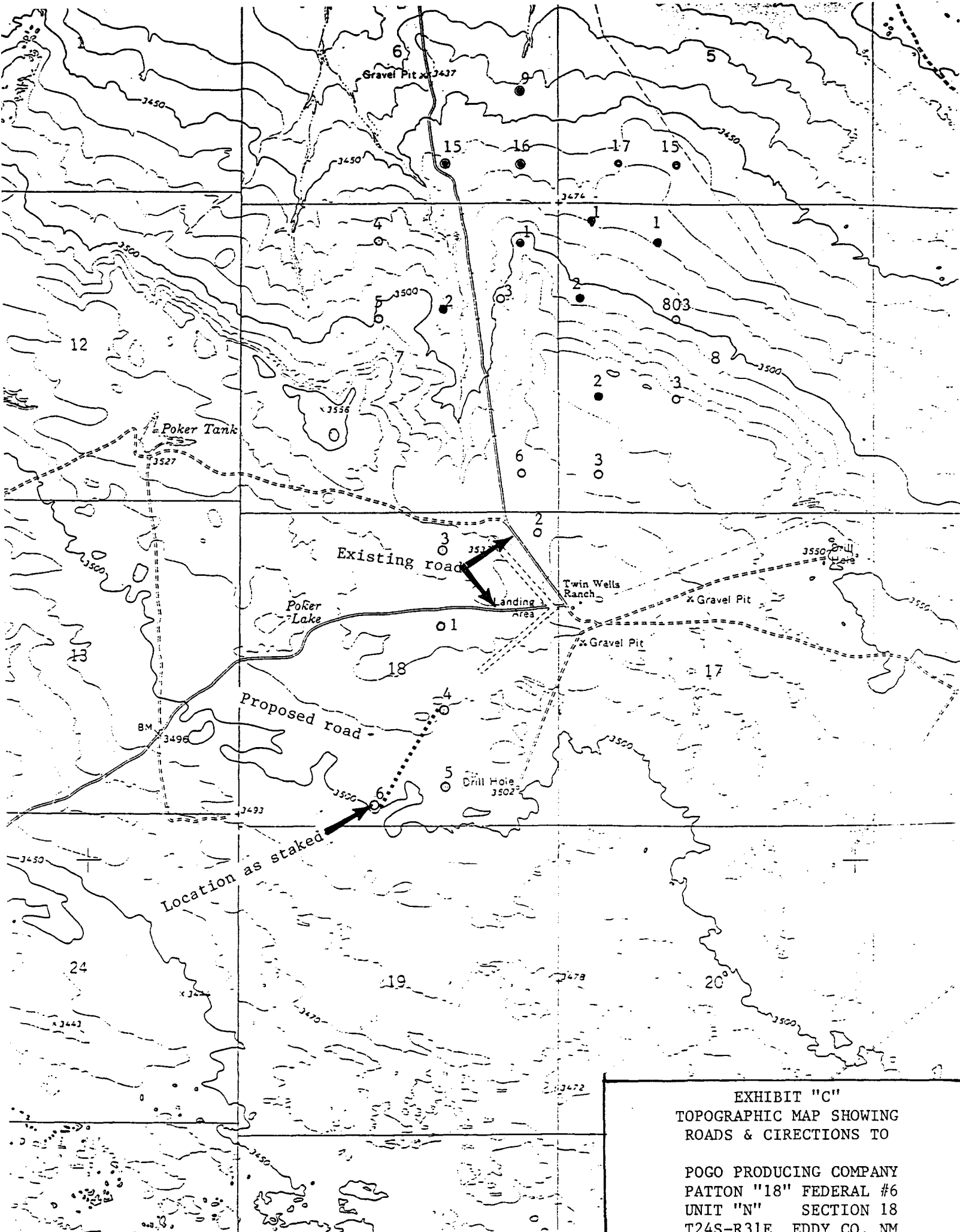
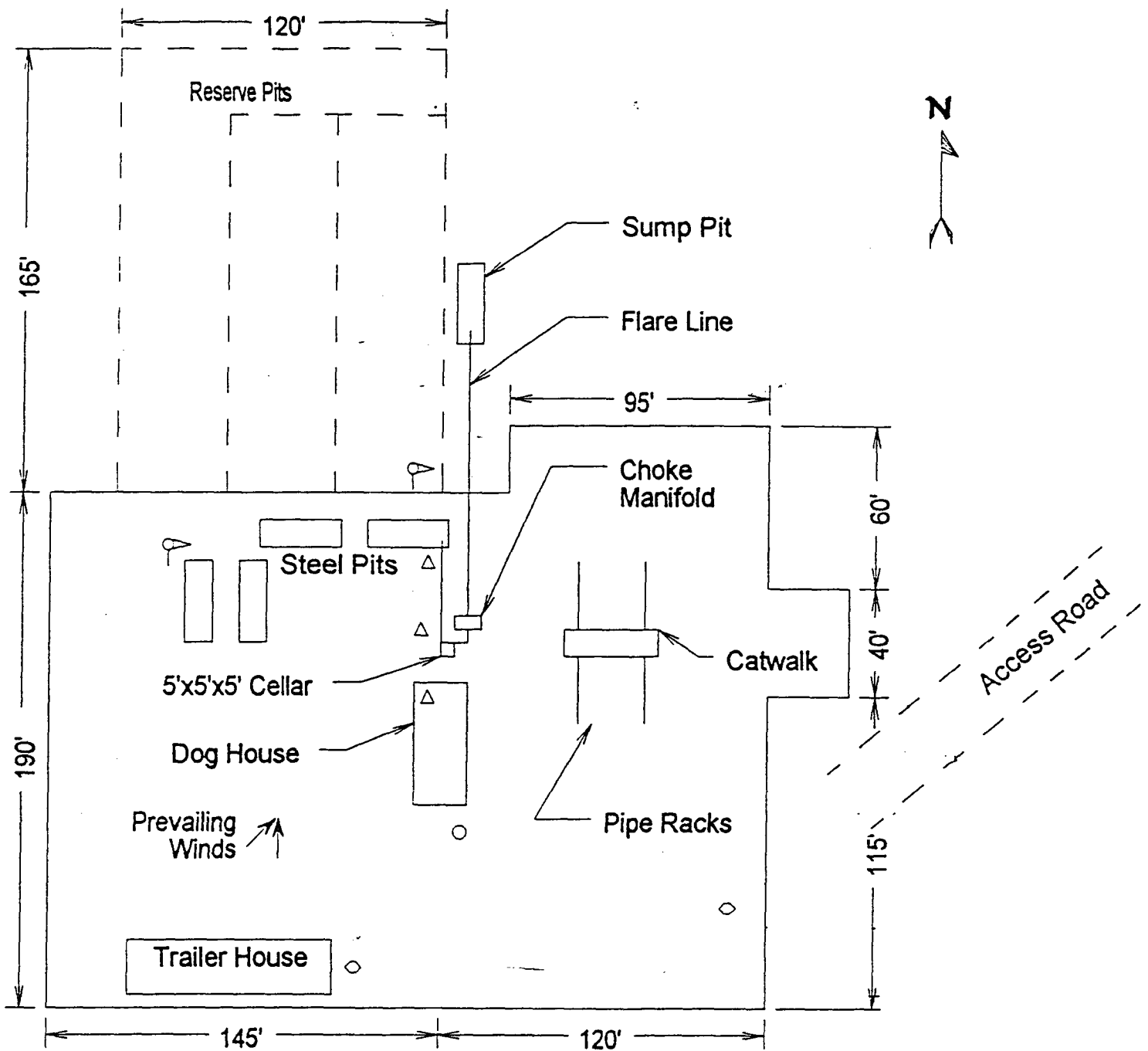


EXHIBIT "C"  
TOPOGRAPHIC MAP SHOWING  
ROADS & DIRECTIONS TO

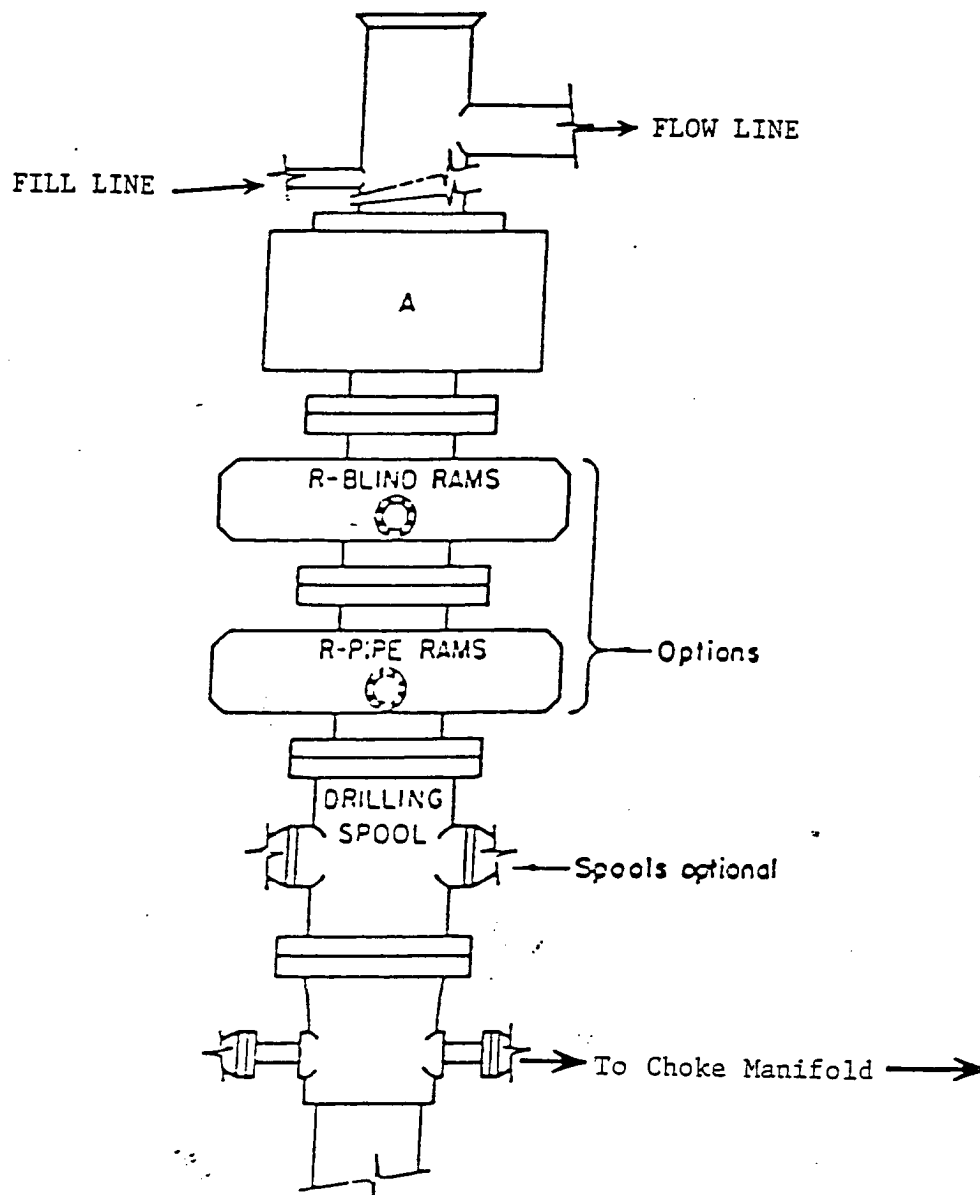
POGO PRODUCING COMPANY  
PATTON "18" FEDERAL #6  
UNIT "N" SECTION 18  
T24S-R31E EDDY CO. NM



- ⌂ Wind Direction Indicators  
(wind sock or streamers)
- △ H2S Monitors  
(alarms at bell nipple and shale shaker)
- Briefing Areas
- Remote BOP Closing Unit
- Sign and Condition Flags

EXHIBIT "D"  
RIG LAY OUT PLAT

POGO PRODUCING COMPANY  
PATTON "18" FEDERAL #6  
UNIT "N" SECTION 18  
T24S-R31E EDDY CO. NM

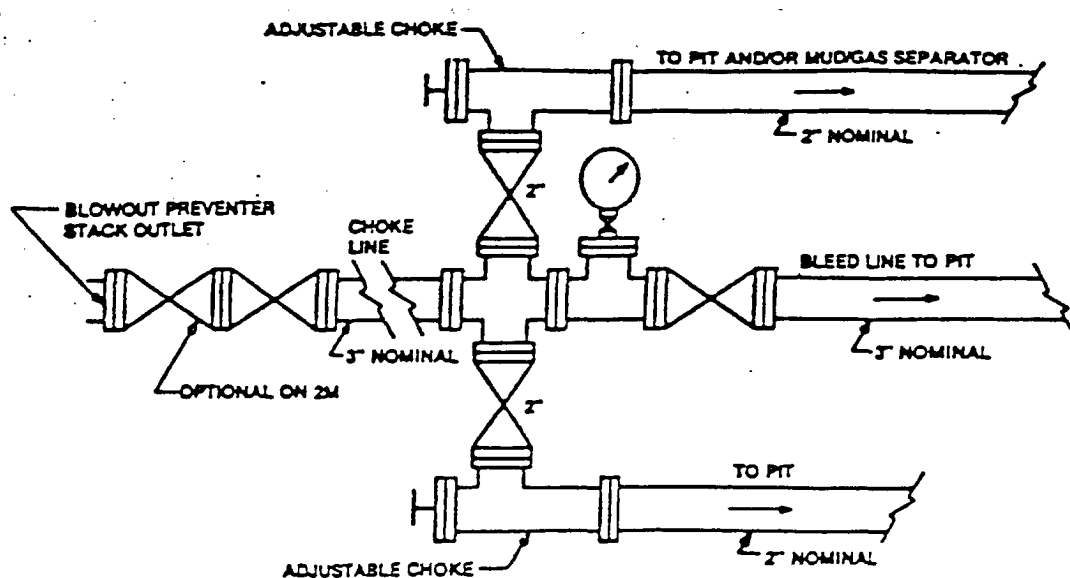


# ARRANGEMENT SRRA

900 Series  
3000 PSI WP

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

POGO PRODUCING COMPANY  
PATTON "18" FEDERAL #6  
UNIT "N" SECTION 18  
T24S-R31E EDDY CO. NM



Typical choke manifold assembly for 3M WP system

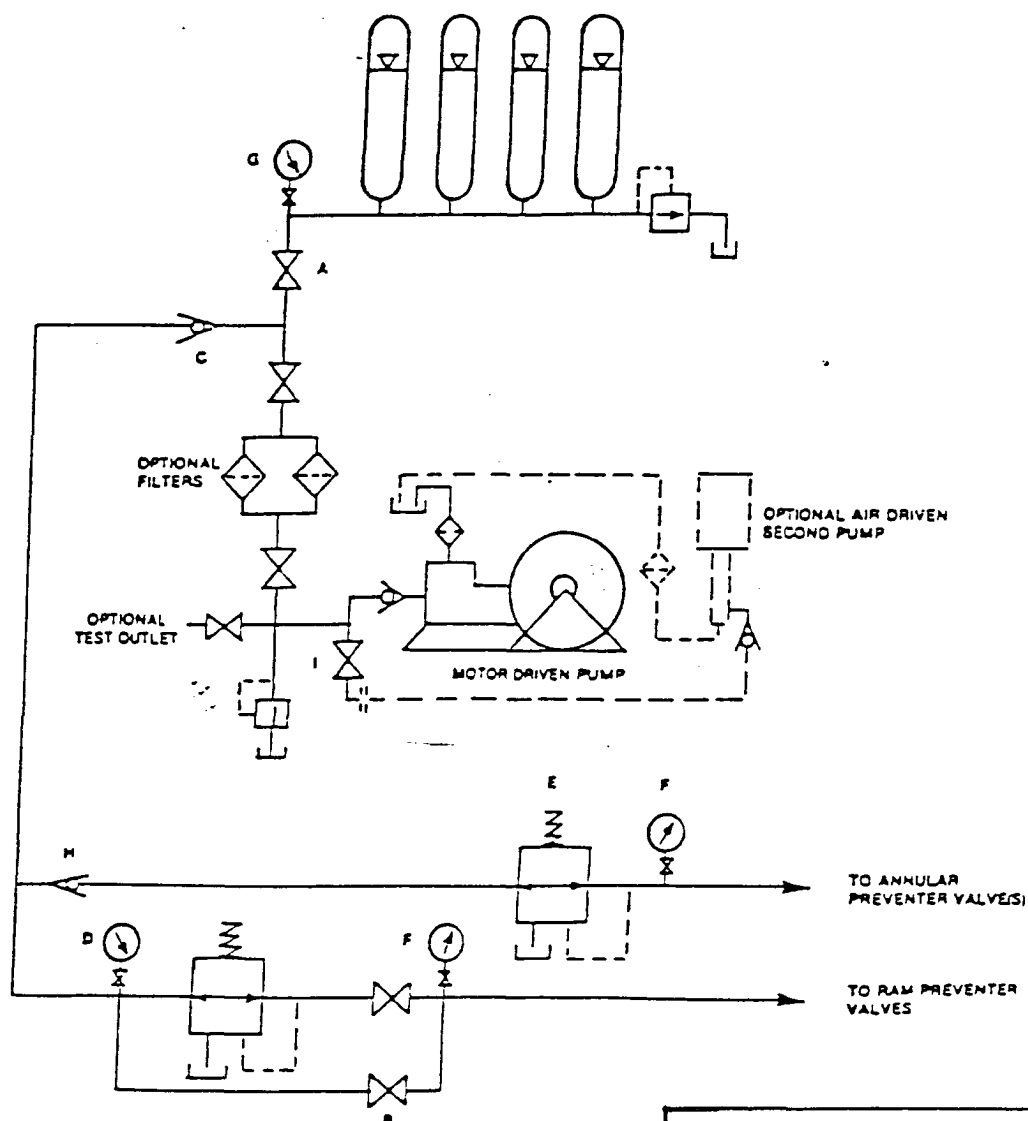


EXHIBIT "E-1"  
CHOKE MANIFOLD & CLOSING UNIT

POGO PRODUCING COMPANY  
PATTON "18" FEDERAL #6  
UNIT "N" SECTION 18  
T24S-R31E EDDY CO. NM