

(July 1992)

Barry UNITED STATES N.M. Oil Cons. Div-Dist. 2  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
1301 W. Grand Avenue  
Alamosa, NM 88210

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

APPLICATION FOR PERMIT TO DRILL

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐ SECRETARY'S POTASH

b. TYPE OF WELL

OIL WELL ☒

GAS WELL ☐

OTHER

SINGLE ZONE ☒

MULTIPLE ZONE ☐

2. NAME OF OPERATOR

POGO PRODUCING COMPANY (RICHARD WRIGHT 432-685-8140)

3. ADDRESS AND TELEPHONE NO.

p.o. 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

660' FNL & 990' FEL SECTION 8 T24S-R31E EDDY CO. NM

At proposed prod. zone SAME

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

Approximately 30 miles East of Carlsbad, New Mexico

15. DISTANCE FROM PROPOSED\*

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

660'

16. NO. OF ACRES IN LEASE

320

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.

1320'

19. PROPOSED DEPTH

8400'

20. ROTARY OR CABLE TOOLS

ROTARY

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

3459' GR.

22. APPROX. DATE WORK WILL START\*

WHEN APPROVED

23.

PROPOSED CASING AND CEMENTING PROGRAM

CARLSBAD CONTROLLED WATER BASIN

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
25"	Conductor	NA	WITNESS 40'	Cement to surface/Redi-mix
17 1/2"	H-40 13 3/8"	48	WITNESS 975'	800 Sx. circulate cement to sur.
11"	J-55 8 5/8"	32	4200'	1200 Sx. " " " "
7 7/8"	J-55 5 1/2"	17 & 15.5	8400'	1750 Sx. " " " "

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 975'. Run and set 975' 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, circulate cement to surface.
3. Drill 11" hole to 4200'. Run and set 4200' of 8 5/8" 32# J-55 ST&C casing. Cement with 1000 Sx. of 65/35/6 Class "C" POZ/GEL + 5% Salt, tail in with 200 Sx. of Class "C" cement + 2% CaCl, 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 3 stages with 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# 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.

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

APPROVAL SUBJECT TO

GENERAL REQUIREMENTS

08/18/04

AND SPECIAL STIPULATIONS

ATTACHED

(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

/s/ Jesse J. Juen

TITLE

ACTING STATE DIRECTOR

DATE

27 SEP 2004

\*See Instructions On Reverse Side

APPROVAL FOR 1 YEAR

## State of New Mexico

Energy, Minerals and Natural Resources Department

## DISTRICT I

1625 N. FRENCH DR., BOBBS, NM 88240

## DISTRICT II

1361 W. GRAND AVENUE, ARTESIA, NM 88210

## DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

## DISTRICT IV

1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

OIL CONSERVATION DIVISION  
1220 SOUTH ST. FRANCIS DR.  
Santa Fe, New Mexico 87505

Form C-102

Revised JUNE 10, 2003

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

## WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code 53815	Pool Name SAND DUNES DELAWARE-WEST
Property Code	Property Name SUNRISE 8 FEDERAL	Well Number 3
OGRID No. 17891	Operator Name POGO PRODUCING COMPANY	Elevation 3459'

## Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	8	24-S	31-E		660'	NORTH	990'	EAST	EDDY

## 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

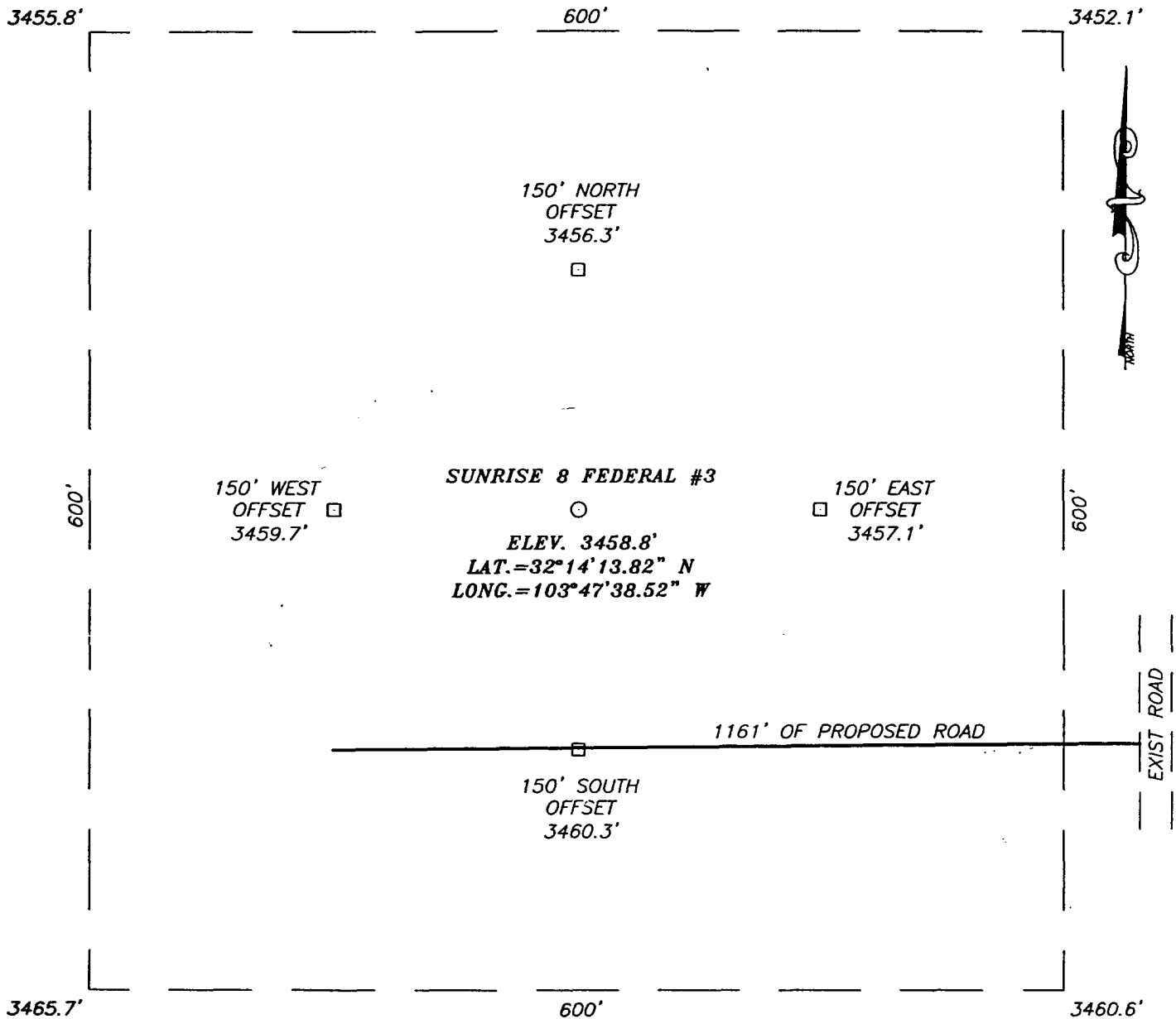
Dedicated Acres 40	Joint or Infill	Consolidation Code	Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	<p>GEODETIC COORDINATES NAD 27 NME</p> <p>Y=450420.4 N X=666749.7 E</p> <p>LAT.=32°14'13.82" N LONG.=103°47'38.52" W</p>	<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Joe T. Janica</i> Signature</p> <p>Joe T. Janica Printed Name</p> <p>Agent</p> <p>Title</p> <p>08/18/04 Date</p>
	<p><b>SURVEYOR CERTIFICATION</b></p> <p>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.</p> <p>JULY 15, 2004</p> <p>Date Surveyed</p> <p>Signature &amp; Seal of Professional Surveyor</p> <p><i>G. Eidson</i> Professional Surveyor</p> <p>04-11-0881</p> <p>Certificate No. 12841</p>	

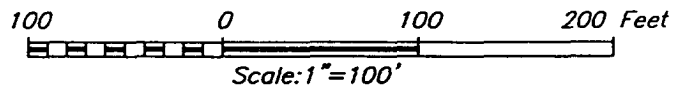
EXHIBIT "A"

**SECTION 8, TOWNSHIP 24 SOUTH, RANGE 31 EAST, N.M.P.M.,**  
**EDDY COUNTY, NEW MEXICO**



**DIRECTIONS TO LOCATION**

FROM THE INTERSECTION OF ST. HWY #128 AND CO. RD. #787 (TWIN WELLS RD.) GO SE ON ST. HWY #128 FOR APPROX. 1.0 MILE. TURN RIGHT ON CALICHE ROAD AND GO SOUTH FOR APPROX. 4.1 MILES. TURN RIGHT (WEST) AND GO APPROX. 700'. PROPOSED LOCATION IS APPROX. 1200' SOUTH.



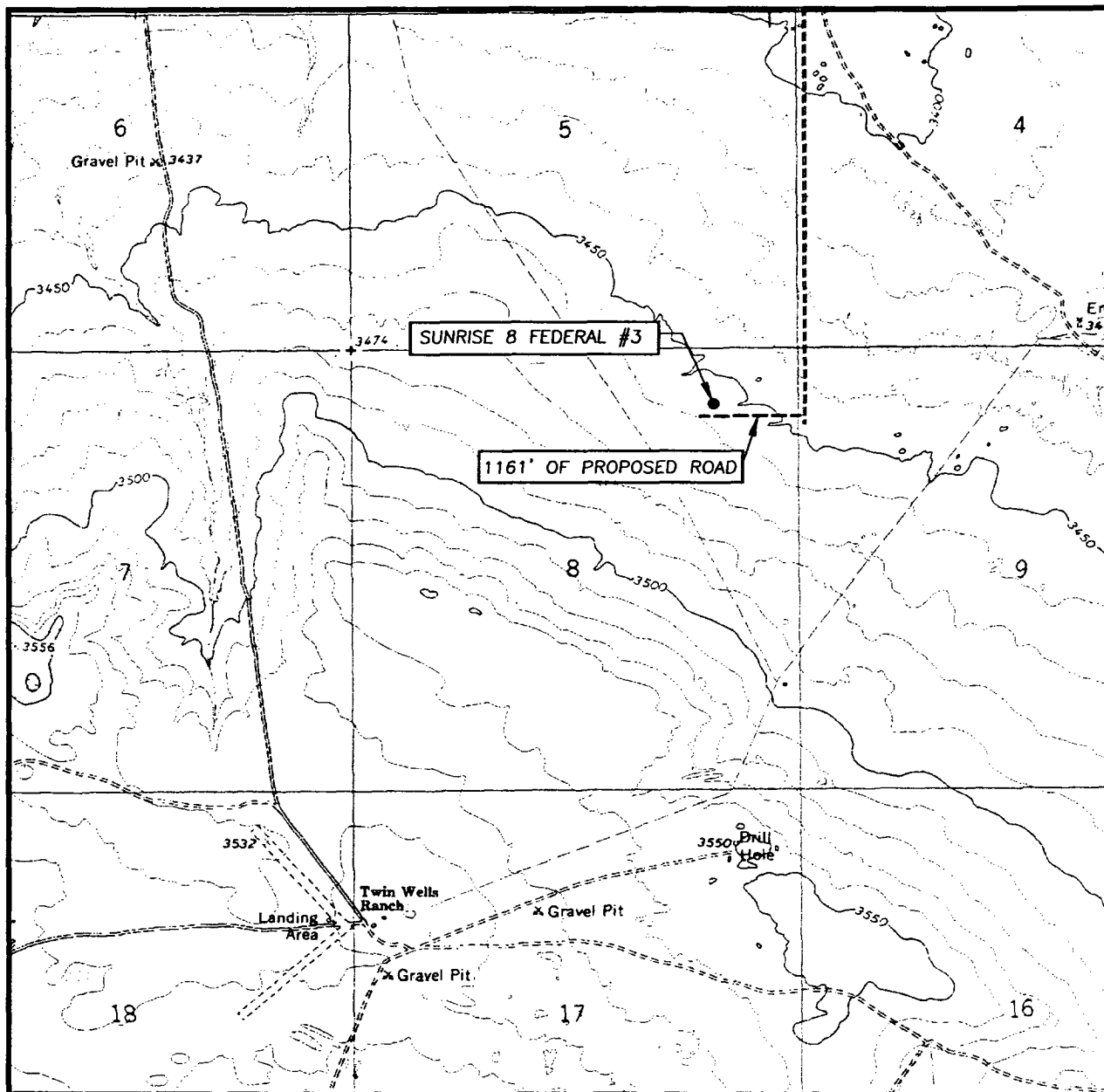
**POGO PRODUCING COMPANY**

SUNRISE 8 FEDERAL #3 WELL  
 LOCATED 660 FEET FROM THE NORTH LINE  
 AND 990 FEET FROM THE EAST LINE OF SECTION 8,  
 TOWNSHIP 24 SOUTH, RANGE 31 EAST, N.M.P.M.,  
 EDDY COUNTY, NEW MEXICO.

Survey Date: 07/15/04	Sheet 1 of 1 Sheets
W.O. Number: 04.11.0881	Dr By: J. RIVERO Rev 1:N/A
Date: 07/22/04	Disk: CD#10 04110881 Scale: 1"=100'

PROVIDING SURVEYING SERVICES  
 SINCE 1948  
**JOHN WEST SURVEYING COMPANY**  
 412 N. DAL PASO  
 HOBBS, N.M. 88240  
 (505) 383-3117

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:  
BIG SINKS, N.M. — 10'

SEC. 8 TWP. 24-S RGE. 31-E

SURVEY \_\_\_\_\_ N.M.P.M.

COUNTY \_\_\_\_\_ EDDY

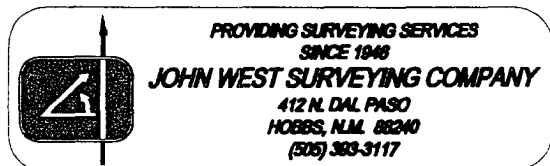
DESCRIPTION 660' FNL & 990' FEL

ELEVATION \_\_\_\_\_ 3459'

OPERATOR \_\_\_\_\_ POGO  
PRODUCING COMPANY

LEASE \_\_\_\_\_ SUNRISE 8 FEDERAL

U.S.G.S. TOPOGRAPHIC MAP  
BIG SINKS, N.M.



# APPLICATION TO DRILL

POGO PRODUCING COMPANY  
SUNRISE "8" FEDERAL # 3  
UNIT "A" SECTION 8  
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 of well: 660' FNL & 990' FEL SECTION 8 T24S-R31E EDDY CO. NM
2. Ground Elevation above Sea Level: 3459' GR.
3. Geological age of surface formation: Quaternary Deposits:
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: 8400'

6. Estimated tops of geological markers:

Rustler Anhydrite		Cherry Canyon	5160'
Basal Anhydrite	4020'	Manzanita	5340'
Delaware Lime	4240'	Brushy Canyon	6400'
Bell Canyon	4260'	Bone Spring	8070'

7. Possible mineral bearing formations:

Cherry Canyon	Oil	Bone Spring	Oil
Brushy Canyon	Oil		

8. Casing Program:

Hole Size	Interval	OD of Casing	Weight	Thread	Collar	Grade
25"	0-40'	20"	NA	NA	NA	Conductor
17½"	0-975'	13 3/8"	48	8-R	ST&C	H-40
11"	0-4200'	8 5/8"	32	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  
SUNRISE "8" FEDERAL # 3  
UNIT "A" SECTION 8  
T24S-R31E EDDY CO. NM

## 9. CASING SETTING DEPTHS & CEMENTING"

20"	Conductor	Set 40' of 20" conductor and cement to surface with Redi-mix.
13 3/8"	Surface	Set 975' of 13 3/8" 48# H-40 ST&C casing. Cement with 600 Sx. of Class "C" 65/35/6 POZ/GEL, tail in with 200 Sx. of Class "C" cement + 2% CaCl, circulate cement to Surface.
8 5/8"	Intermediate	Set 4200' of 8 5/8" 32# J-55 ST&C casing. Cement with 1000 Sx. of Class "C" 65/35/6 POZ/Gel + 5% NaCl, tail in with 200 Sx. of Class "C" cement + 2% CaCl, 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. Cement in 3 stages with DV Tools at 5800'± & 3700'±. 1st stage cement with 650 Sx. of Class "H" cement + additives, 2nd stage cement with 600 Sx. of Class "C" cement + 8# of Gilsonite/Sx., 3rd stage cement with 400 Sx. of 65/35/6 Class "C" POZ/Gel, tail in with 100 Sx. of Class "C" + 1% CaCl, circulate cement to surface.

10. PRESSURE CONTROL EQUIPMENT: Exhibit "E" shows a 2000 PSI working pressure B.O.P. consisting of a stripper head instead of an annular preventor, blind rams, and pipe rams. This B.O.P. stack is being used because of sub-structure limitations of the drilling rig being used to drill this well. Pressures encountered while drilling are not expected to exceed 1700 PSI at total depth, Pogo requests permission to 3rd party test of the B.O.P. after setting the intermediate casing at 4200'. The B.O.P. will be tested according to APT specifications. Exhibit "E-1" shows a manually operated choke manifold as no remote B.O.P equipment will be necessary.

## 11. PROPOSED MUD SYSTEM:

DEPTH	MUD WT.	VISC.	FLUID LOSS	TYPE MUD
40-975'	8.4-8.7	29-34	NC	Fresh water spud mud add paper to control seepage.
975-4200'	10.0-10.2	29-38	NC	Brine water use paper to control seepage and use high viscosity sweeps to clean hole.
4200-8400'	8.4-8.7	29-40	NC*	Fresh water add fresh water Gel to control Visc. use high viscosity sweeps to clean hole.

\* The water loss may have to be reduced and controled in order to protect formation, log, and/or run casing. If water loss control is required use a Polymer system.

Sufficient mud materials to maintain mud properties, for lost circulation, increased weight requirements, will be kept at the well site at all times. In order to run casing, logs, and/or DST's the water loss may have to be controled. These materials will be on location.

APPLICATION TO DRILL

POGO PRODUCING COMPANY  
SUNRISE "8" FEDERAL # 3  
UNIT "A" SECTION 8  
T24S-R31E EDDY CO. NM

12. LOGGING, CORING, AND TESTING PROGRAM:

- A. Open hole logs: Dual Induction, SNP, LDT, Gamma Ray, Caliper from TD back to 8 5/8" casing shoe.
- B. Cased hole logs: Gamma Ray, Neutron will be run from 8 5/8" casing shoe back to surface.
- C. Mud logger may be rigged up on hole after 8 5/8" casing is cemented in place.
- 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<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 1700± PSI, and Estimated BHT 145°.

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

## HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

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<sub>2</sub>S has on tubular goods and other mechanical equipment.
9. If H<sub>2</sub>S 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<sub>2</sub>S scavengers if necessary.

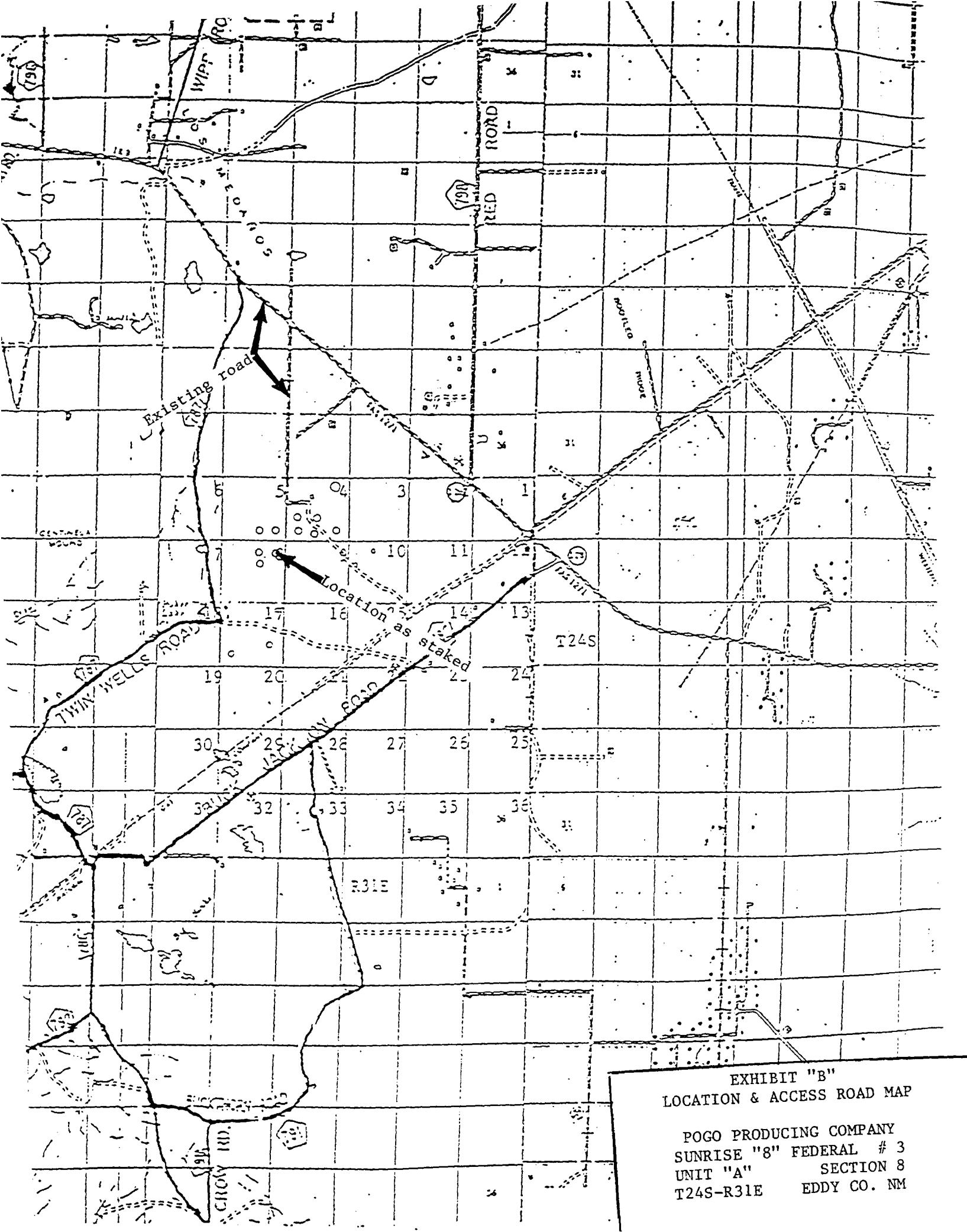
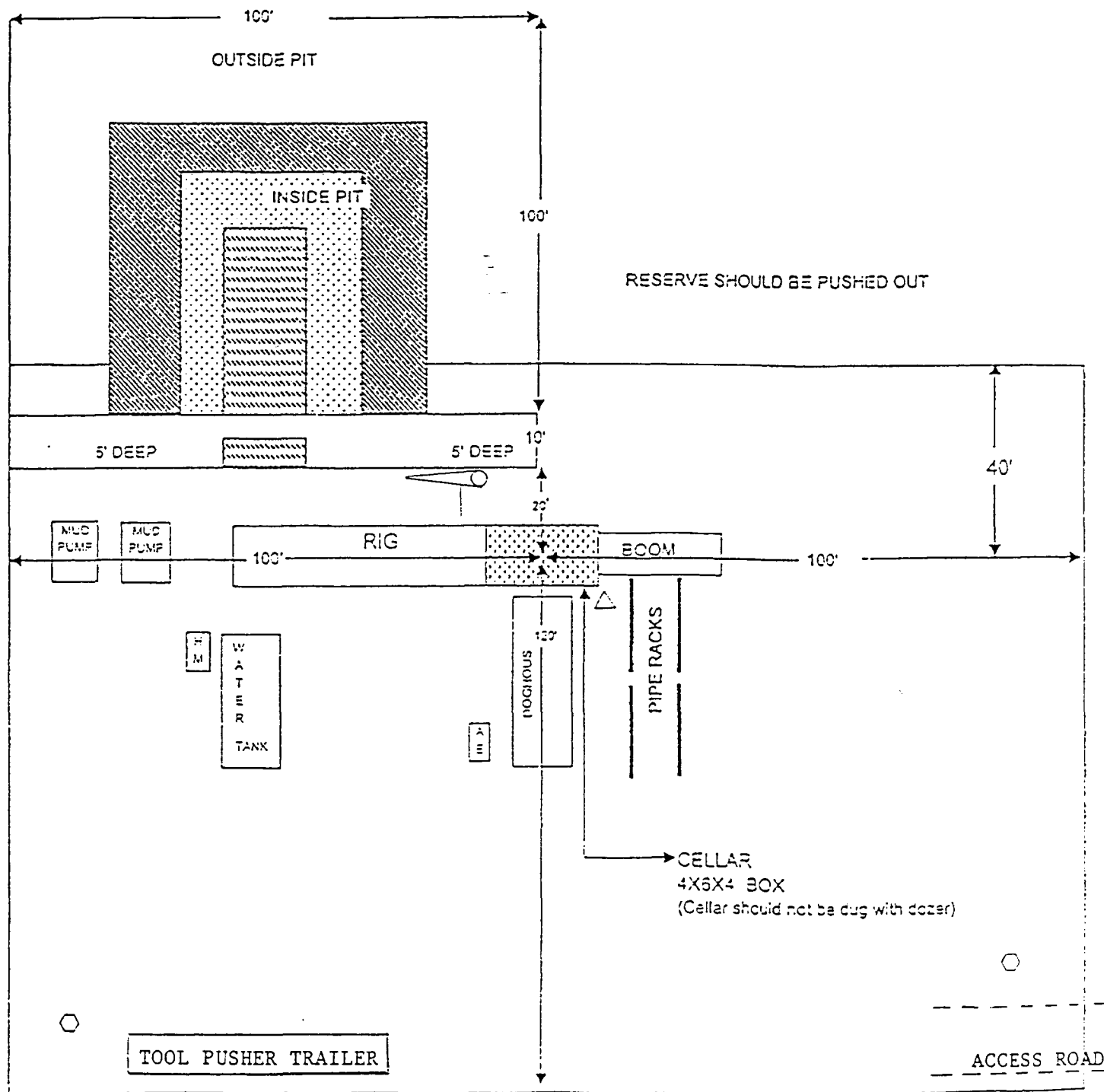


EXHIBIT "B"  
LOCATION & ACCESS ROAD MAP

POGO PRODUCING COMPANY  
SUNRISE "8" FEDERAL # 3  
UNIT "A" SECTION 8  
T24S-R31E EDDY CO. NM

# LOCATION SPECIFICATIONS AND RIG LAYOUT FOR EARTH PITS



Cellar can be 4X4X4 if using a screw-on wellhead  
Working Pits dug 5' below ground level

- 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

Location Specs

## EXHIBIT "D" RIG LAY OUT PLAT

POGO PRODUCING COMPANY  
SUNRISE "8" FEDERAL # 3  
UNIT "A" SECTION 8  
T24S-R31E EDDY CO. NM

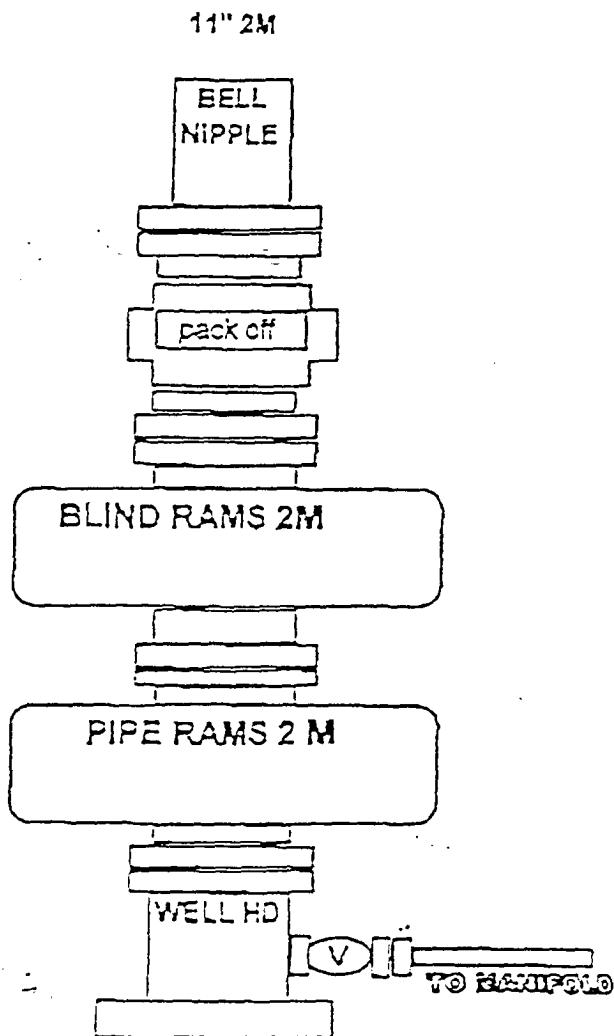


EXHIBIT "E"  
 SKETCH OF B.O.P. TO BE USED ON

POGO PRODUCING COMPANY  
 SUNRISE "8" FEDERAL # 3  
 UNIT "A" SECTION 8  
 T24S-R31E EDDY CO. NM

3000 PSI WP

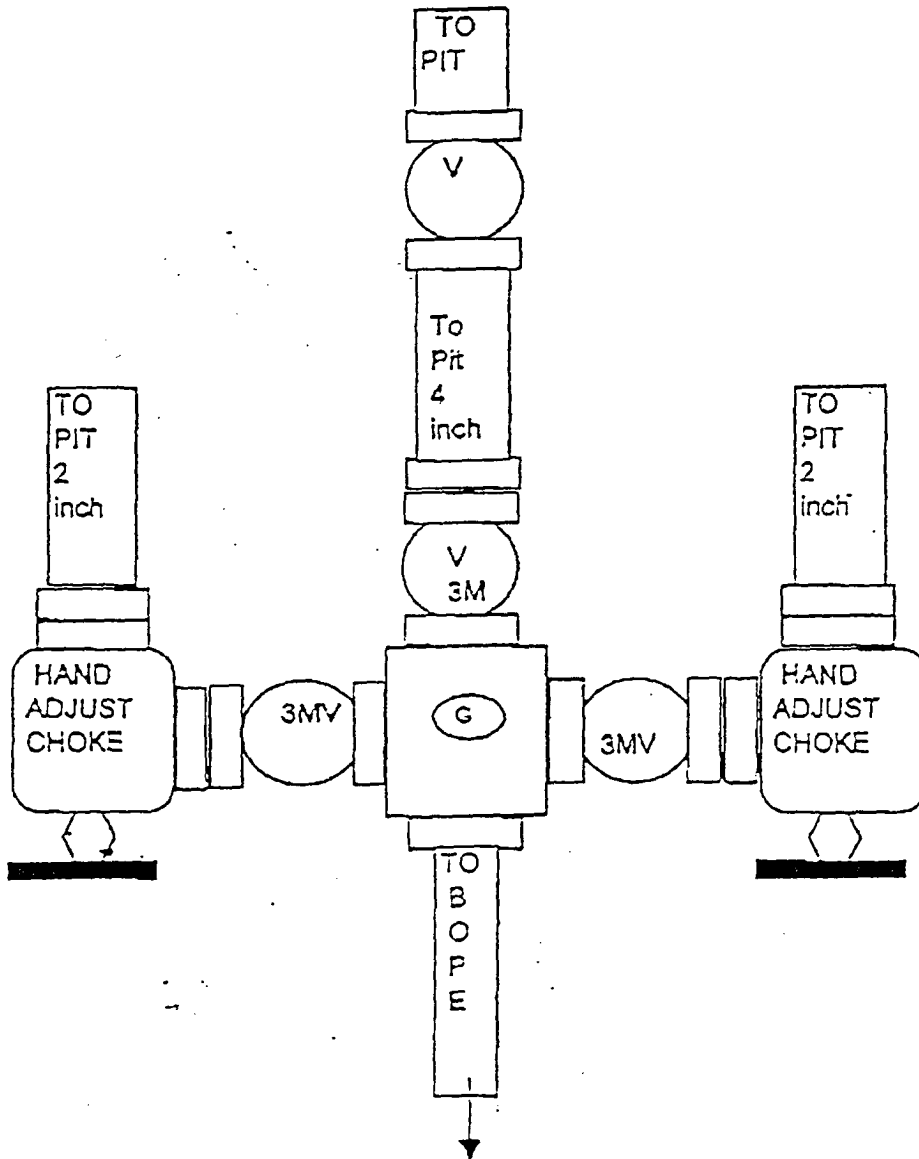


EXHIBIT "E-1"  
SKETCH OF CHOKE MANIFOLD

POGO PRODUCING COMPANY  
SUNRISE "8" FEDERAL # 3  
UNIT "A" SECTION 8  
T24S-R31E EDDY CO. NM