

OPER. CGRID NO. 1789  
PROPERTY NO. 9331  
HOBBS POOL CODE 39366  
UNIT EFF. DATE 9/25/96  
DEPARTMENT APPL. NO. 30-025-33608

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

# APPLICATION FOR PERMIT TO DRILL OR DEEPEN

## 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

## 3. ADDRESS AND TELEPHONE NO.

Phone 915-682-6822

P.O. BOX 10340 MIDLAND, TEXAS 79702-7340 (RICHARD WRIGHT)

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

At surface

1650' FNL & 660' FEL SEC. 18 T22S-R32E Lea Co. NM  
At proposed prod. zone Same

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

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

360

## 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.

990'

## 19. PROPOSED DEPTH

8750'

## 20. ROTARY OR CABLE TOOLS

Rotary

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

3739' GR.

## 22. APPROX. DATE WORK WILL START\*

As soon as approved

## 23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
14 3/4"	H-40 10 3/4"	32.75	800'	675 Sx. Circulate To Surface
9 7/8"	J-55 7 5/8"	26.75	4500"	1350 Sx. Circulate To Surface
6 3/4 "	J-5- & N-80 4 1/2	11.5	8750'	900 Sx. TOC 3500'

- Set 40' of 20" conductor pipe and cement to surface with Redi-Mix.
- Drill 14 3/4" hole to 800'. Run and set 800' of 10 3/4" H-40 32.75# ST&C casing. Cement with 675 Sx of cement + additive, circulate cement to surface.
- Drill 9 7/8" hole to 4500'. Run and set 4500' of 7 5/8" J-55 26.4# ST&C casing. Cement with 1350 Sx. of cement + additives. Circulate cement to surface.
- Drill 6 3/4" hole to 8750'. Run and set 8750' of 4 1/2" J-55 & N-80 LT&C 11.6 # LT&C casing. Cement with 900 Sx of cement with additives. Bring cement top back up to 3500', verify with log or temp. survey.

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.

SIGNED Joe T. Janica TITLE Agent DATE 8/20/96

(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 (ORIG. SCD.) RICHARD L. MANUS

TITLE

DATE

SEP 20 1996

\*See Instructions On Reverse Side

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88211-0719

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

DISTRICT IV  
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised February 10, 1994  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <b>30-025-33608</b>	Pool Code <b>39166 39366</b>	Pool Name <b>LIVINGSTON RIDGE EAST DELAWARE</b>
Property Code <b>09331</b>	Property Name <b>EAST LIVINGSTON RIDGE UNIT</b>	Well Number <b>11</b>
OGRID No. <b>17981 17891</b>	Operator Name <b>POGO PRODUCING COMPANY</b>	Elevation <b>3739'</b>

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	18	22 S	32 E		1650	NORTH	660	EAST	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 <b>40</b>		Joint or Infill		Consolidation Code		Order No.			

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

LOT 1 44.44 AC.			
LOT 2 44.50 AC.			
LOT 3 44.58 AC.			
LOT 4 44.64 AC.			

**OPERATOR CERTIFICATION**

I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.

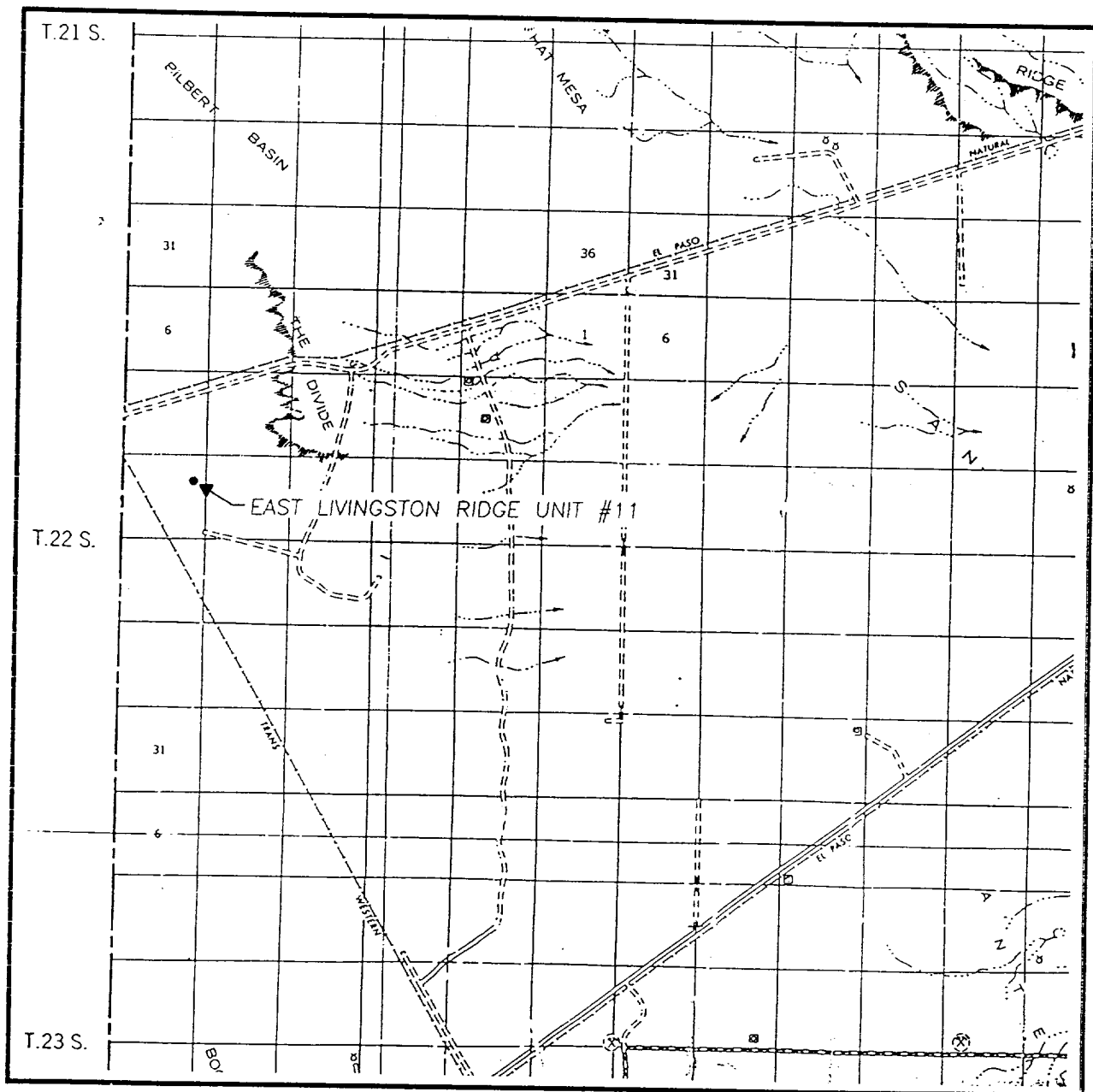
*Joe T. Janica*  
Signature  
**Joe T. Janica**  
Printed Name  
**Agent**  
Title  
**8/20/96**  
Date

**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 belief.

**AUGUST 12, 1996**  
Date Surveyed  
Signature & Seal of Professional Surveyor  
*Ronald W. Edson*  
Certificate No. **3232**  
JOHN W. EDSON  
RONALD W. EDSON  
NEW MEXICO  
REGISTERED PROFESSIONAL SURVEYOR  
8-16-96  
676  
3239  
1284

# VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 18 TWP. 22-S RGE. 32-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 1650' FNL & 660' FEL

ELEVATION 3739'

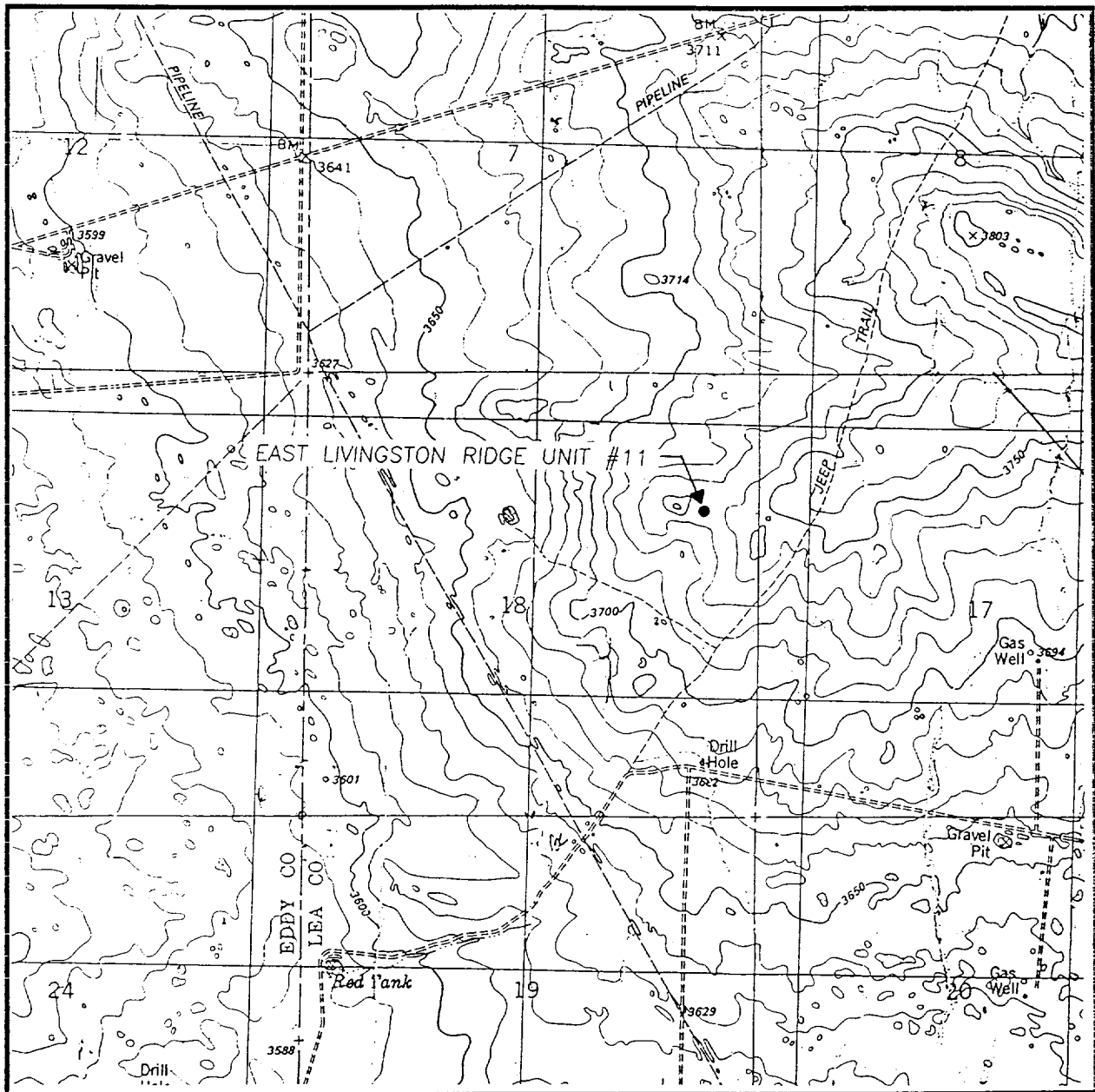
OPERATOR POGO PRODUCING COMPANY

LEASE EAST LIVINGSTON RIDGE UNIT

**JOHN WEST ENGINEERING  
HOBBS, NEW MEXICO**

**(505) 393-3117**

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:  
THE DIVIDE - 10'

SEC. 18 TWP. 22-S RGE. 32-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 1650' FNL & 660' FEL

ELEVATION 3739'

OPERATOR POGO PRODUCING COMPANY

LEASE EAST LIVINGSTON RIDGE UNIT

U.S.G.S. TOPOGRAPHIC MAP

THE DIVIDE, N.M.

**JOHN WEST ENGINEERING  
HOBBS, NEW MEXICO  
(505) 393-3117**

APPLICATION TO DRILL  
POGO PRODUCING COMPANY  
EAST LIVINGSTON RIDGE UNIT # 11  
1650' FNL & 660' FEL SEC. 18  
T22S-R32E LEA CO. NM

In response to questions asked under Section II B of Bulletin NTL-6 the following information is provided for your consideration:

1. Location: 1650' FNL & 660' FEL SEC. 18 T22S-R32E LEA CO. NEW MEXICO
2. Elevation above sea level: 3739' GR.
3. Geologic name of surface formation: Quaternary Aeolian Deposits.
4. Drilling tools and associated equipment: Conventional rotary drilling rig using fluid as a circulating medium for solids removal.
5. Proposed drilling depth: 8750'
6. Estimated tops of geological markers:

Rustler Anhydrite	775'
Delaware	4475'
Cherry Canyon	5550'
Brushy Canyon	7300'

7. Possible mineral bearing formation:

Delaware OIL

8. Casing program:

Hole size	Interval	OD casing	Weight	Thread	Collar	Grade	Condition
26"	0-40'	20"	NA	NA	NA	NA	New
14 3/4"	0-800'	10 3/4"	32.75	8-R	ST&C	H-40	New
9 7/8"	0-4500'	7 5/8"	26.4	8-R	ST&C	J-55	New
6 3/4"	0-8750'	4 1/2"	11.6	8-R	LT&C	J-55 & N-80	New

APPLICATION TO DRILL  
 POGO PRODUCING COMPANY  
 EAST LIVINGSTON RIDGE UNIT # 11  
 1650' FNL & 660' FEL SEC. 18  
 T22S-R32E LEA CO. NM

9. Cementing & Casing setting depth:

20" Conductor	Set 40' of 20" conductor and cement to surface with Redi-Mix.
10 3/4" Surface	Set 800' of 10 3/4" H-40 32.75# ST&C casing cement with 675 Sx. of cement + additives, circulate cement to surface.
7 5/8" Intermediate	Set 4500' of 7 5/8" J-55 26.4# ST&C casing cement with 1350 Sx of cement + additives circulate cement to surface.
4 1/2" Production	Set 8750' of 4 1/2" J-55 & N-80 11.6# LT&C casing cement with 900 Sx. cement + additives. Bring top of cement back to 3500' verify with log or temp. survey.

10. Pressure Control Equipment:

Exhibit "E" shows a 900 Series 3000 PSI working pressure double ram type Blow Out preventor, hydraulically operated. Exhibit "E-1" shows the choke manifold and closing unit. Blind rams on top and pipe rams on bottom to correspond with the drill pipe size being used. The BOP will be nipped up on the 10 3/4" casing and remain on the hole till the casing is run and cemented. The BOP will be tested after each string of casing is run and will be worked at least once each day while drilling and blind rams will be worked when drill pipe is out of hole. Flow sensor, PVT, full opening stabbing valve and upper kelley cock will be utilized.

11. Proposed Mud Circulating System:

Depth	Mud Wt.	Mud Visc.	Fluid Loss	Type Mud
0-800'	8.6	29-34	NC	Fresh water Spud Mud
800-4500'	10-10.5	28-30	NC	Brine water paper fo Seepage control.
4500-8750'	10-10.5	28-34	NC	Brine water paper fo Seepage control.

Sufficient mud materials to maintain mud properties, meet lost circulation and weight increase requirments will be kept at the well site at all times. In order to log well and run casing the viscosity may have to be raised and the water loss lowered.

APPLICATION TO DRILL  
POGO PRODUCING COMPANY  
EAST LIVINGSTON RIDGE UNIT # 11  
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T22S-R32E LEA CO. NM

12. Testing, Logging and Coring Program:

- A. DST'S may be run if shows dictate.
- B. Mud logger will be employed from 4500' to TD.
- C. Open hole electric logs will be run. Gamma Ray, Caliper, CNL-DENSITY, Dual -Laterlog.
- D. No cores are planned.

13. Potential Hazards:

No abnormal pressures or temperatures are expected. Hydrogen Sulfide gas may be encountered, H<sub>2</sub>S detectors will be in place to detect any presence. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used. Estimated BHP 3200 PSI, estimated BHT 125°. H<sub>2</sub>S contingency plan is included with this APD.

14. Anticipated Starting Date and Duration of Operation:

Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved. Drilling expected to take 20 days. If production casing is run an additional 30 days will be required to complete and construct surface facilities.

15. Other Facets of Operations:

After running casing, cased hole gamma ray neutron collar logs will be run from total depth over possible pay intervals. The Delaware pay will be perforated and stimulated. The well will be swab tested and potentialized as an Oilwell.

## 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. Windsack and/or wind streamers
  - A. Windsack at mudpit area should be high enough to be visible.
  - B. Windsack at briefing area should be high enough to be visible.
  - C. There should be a windsack 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"
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. All testing will be done in daylight hours.
  - B. Exhausts will be watered
  - C. Flare line will be equipped with an electric ignitor or a propane pilot light in case gas reaches the surface.
  - D. If location is near any dwelling a closed D.S.T. 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.



SURFACE USE PLAN

POGO PRODUCING COMPANY  
EAST LIVINGSTON RIDGE UNIT # 11  
1650' FNL & 660' FEL SEC. 18  
T22S-R32E LEA CO. NM

1. EXISTING ROADS. Area map, Exhibit "B" is a reproduction of the New Mexico General Hi-way Co. Map. Exhibit "C" is a reproduction of a topographic map. Existing roads and proposed roads are shown on each exhibit. All roads will be maintained in a condition equal to or better than existed prior to start of construction.
  - A. Exhibit "A" shows the proposed development well as staked.
  - B. From Hobbs New Mexico take U.S. Highway 62-180 West toward Carlsbad NM, go 38 miles to mile post 67. Turn South on C-29 go 10.3 miles turn left (East) go .1 mile turn South then East go .7 miles then turn South and go .5 miles to location.
  - C. Construct a 1250 KV power line from existing power Line to well # 11 along existing road.
  - D. Lay a pipe line from well # 11 to a point 990' FEL & 660' FNL Sec. 18 this is tank battery at well # 1.
2. PLANNED ACCESS ROADS No new road will be required.
  - A. The access road will be crowned and ditched to a 12'00" wide travel surface with 40' right-of-way.
  - B. Gradient on all roads will be less than 5.00%.
  - C. No turnouts will be necessary.
  - D. If needed, road will be surfaced with a minimum of 4" of caliche. This material will be obtained from a local source.
  - E. Centerline for the new access road has been flagged. Earthwork will be as required by field conditions.
  - F. Culverts in the access road will not be used. The road will be constructed to utilize low water crossings for drainage as required by the Topography.
3. LOCATION OF EXISTING WELLS IN A ONE-MILE RADIUS EXHIBIT "A-1"
  - A. Water wells - None known
  - B. Disposal wells - 1 Well approximately .9 miles Northwest.
  - C. Drilling wells - none known
  - D. Producing wells - As shown on EXHIBIT "A-1"
  - E. Abandoned wells - As shown on EXHIBIT "A-1"



SURFACE USE PLAN

POGO PRODUCING COMPANY  
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T22S-R32E LEA CO. NM

4. If, upon completion, the well is a producer, Pogo Producing Company will furnish maps or plats showing On Well Pad facilities and Off well Pad facilities (if needed) on a Sundry Notice before construction of these facilities starts.

5. LOCATION AND TYPE OF WATER SUPPLY

Water will be purchased locally from a private source and trucked over the access roads or piped in flexible lines laid on top of the ground.

6. SOURCE OF CONSTRUCTION MATERIALS

If needed, construction materials will be obtained from the drill site's excavations or from a local source. These materials will be transported over the access route as shown on Exhibit "A".

7. METHODS FOR HANDLING WASTE DISPOSAL

- A. 1. Drill cuttings will be disposed of in the reserve pit.
2. Trash, waste paper, and garbage will either be contained in a fenced trash trailer or in a trash pit, fenced with mesh wire to prevent wind-scattering during storage. When the rig moves out, all trash and debris left at the site will be contained to prevent scattering and will be buried at least 36" deep within a reasonable period of time.
3. Salts remaining after completion of the well will be picked up by the supplier, including broken sacks.
4. Sewage from trailer houses will drain into holes with minimum depth of 10'00". These holes will be covered during drilling and backfilled upon completion. A "porta John" will be provided for the rig crews. This will be properly maintained during the drilling operations and removed upon completion of the well.
- B. Remaining drilling fluids will be allowed to evaporate in the reserve pit until the pit is dry enough for backfilling. In the event drilling fluids will not evaporate in a reasonable period of time they will be transported by tank truck to a state approved disposal site.

Water produced during testing of the well will be disposed of in the reserve pit. Oil produced during testing of the well will be stored in test tanks until sold and hauled from the site.

8. ANCILLARY FACILITIES

No camps or airstrips will be constructed.



## SURFACE USE PLAN

POGO PRODUCING COMPANY  
EAST LIVINGSTON RIDGE UNIT # 11  
1650' FNL & 660' FEL SEC. 18  
T22S-R32E LEA CO. NM

### 9. WELL SITE LAYOUT

- A. Exhibit "D" shows the proposed well site layout.
- B. This exhibit indicated proposed location of reserve and sump pits and living facilities.
- C. Mud pits in the active circulating system will be steel pits and the reserve pit is proposed to be unlined, unless subsurface condition encountered during pit construction indicate that lining is needed for lateral containment of fluids.
- D. If needed, the reserve pit is to be lined with polyethylene. The pit liner will be 6 mils thick. Pit liner will extend a minimum 2'00" over the reserve pits dikes where the liner will be anchored down.
- E. The reserve pit will be fenced on three sides with four strands of barbed wire during drilling and completion phases. The fourth side will be fenced after all drilling operations have ceased. If the well is a producer, the reserve pit fence will be torn down. The reserve pit and those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.

### 10. PLANS FOR RESTORATION OF SURFACE

Rehabilitation of the location and reserve pit will start in a timely manner after all drilling operations cease. The type of reclamation will depend on whether the well is a producer or a dry hole.

However, in either event, the reserve pit will be allowed to dry properly, and fluid removed and disposed of in accordance with Article 7.B as previously noted. The pit area will then be leveled and contoured to conform to the original and surrounding area. Drainage systems, if any, will be reshaped to the original configuration with provisions made to alleviate erosion. These may need to be modified in certain circumstances to prevent inundation of the location's pad and surface facilities. After the area has been shaped and contoured, topsoil from the spoil pile will be placed over the disturbed area to the extent possible. Revegetation procedures will comply with BLM standards.

If the well is a dry hole, the pad and road area will be contoured to match the existing terrain. Topsoil will be spread to the extent possible. Revegetation will comply with BLM standards.

Should the well be a producer, the previously noted procedures will apply to those areas which are not required for production facilities.





SURFACE USE PLAN  
POGO PRODUCING COMPANY  
EAST LIVINGSTON RIDGE UNIT # 11  
1650' FNL & 660' FEL SEC. 18  
T22S-R32E LEA CO. NM

11. OTHER INFORMATION

- A. Topography consists of sand dunes with a slight regional dip to the West. Soil supports native grasses mesquites and miniature oaks.
- B. The surface is used mainly for grazing livestock. Surface is owned by The Department of Interior, BLM, Grazing lessee is J.C. Mills of Abernathy, Texas P.O. Box 190 79331
- C. An Archeological survey will be conducted and copies will be sent to the BLM., Carlsbad Resource Area in Carlsbad, N.M.
- D. There are no dwellings or habitation within three miles of this location.

12. OPERATOR'S REPRESENTATIVE

Field representative to contact regarding compliance with surface use plan:

Before Construction:

Tierra Exploration Inc.  
P.O. Box 2188  
Hobbs, NM 88241  
Office Phone: 505-392-2112  
Joe T. Janica

During and after Construction

Pogo Producing Company  
P.O. Box 10340  
Midland, Tx 79702  
Office Phone: 915-682-6822  
Mr. Richard Wright

13. CERTIFICATION: I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are to the best of my knowledge, are true and correct; and that the work associated with the operations proposed herein will be performed by Pogo Producing Company, its' Contractors/ Subcontractors in conformity with this plan and the terms and conditions underwhich it is approved. This statement is subject to the provision of 18 U.S.C. 1001 for the filing of a false statement.

NAME: \_\_\_\_\_

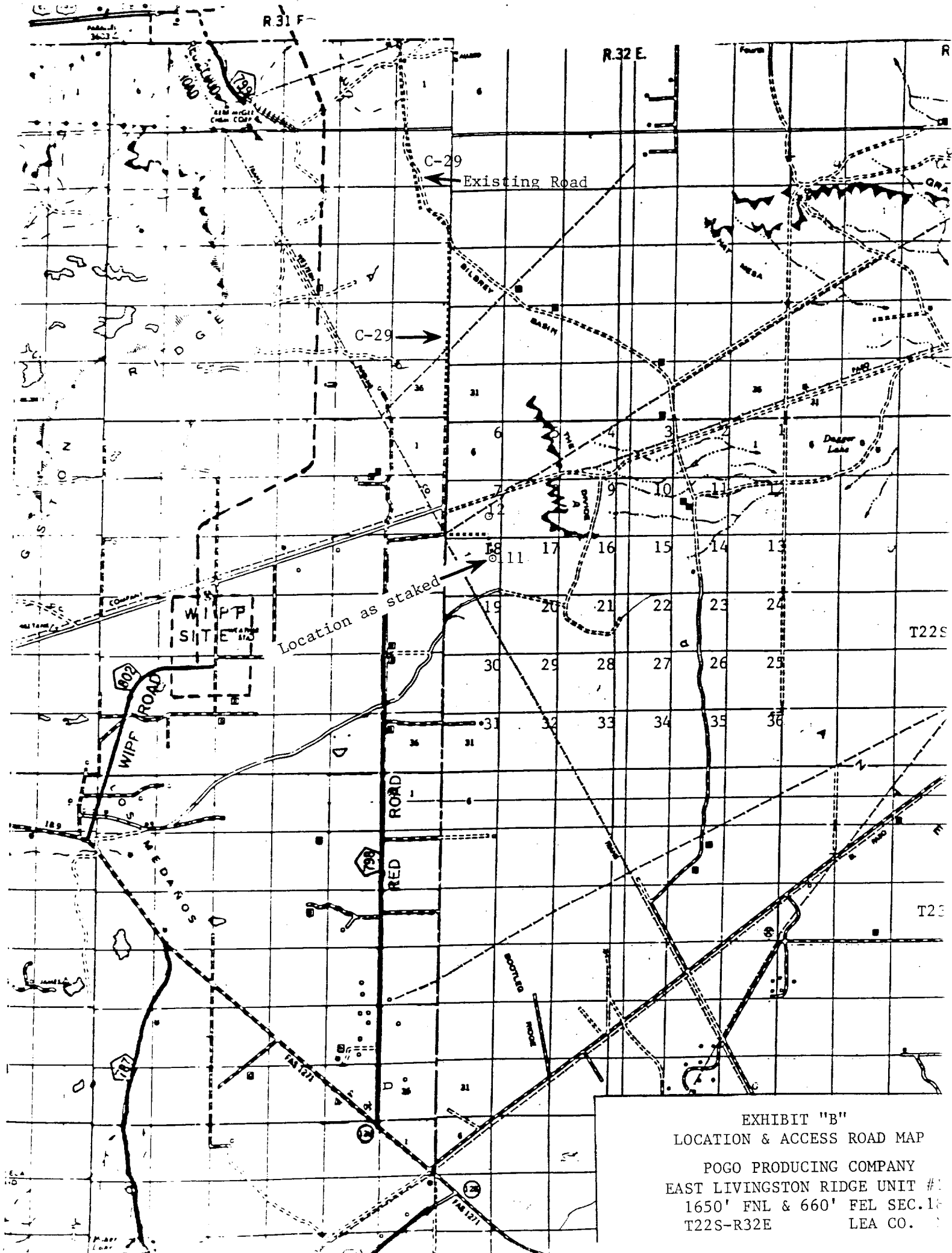
DATE: \_\_\_\_\_

TITLE: \_\_\_\_\_

AGENT

















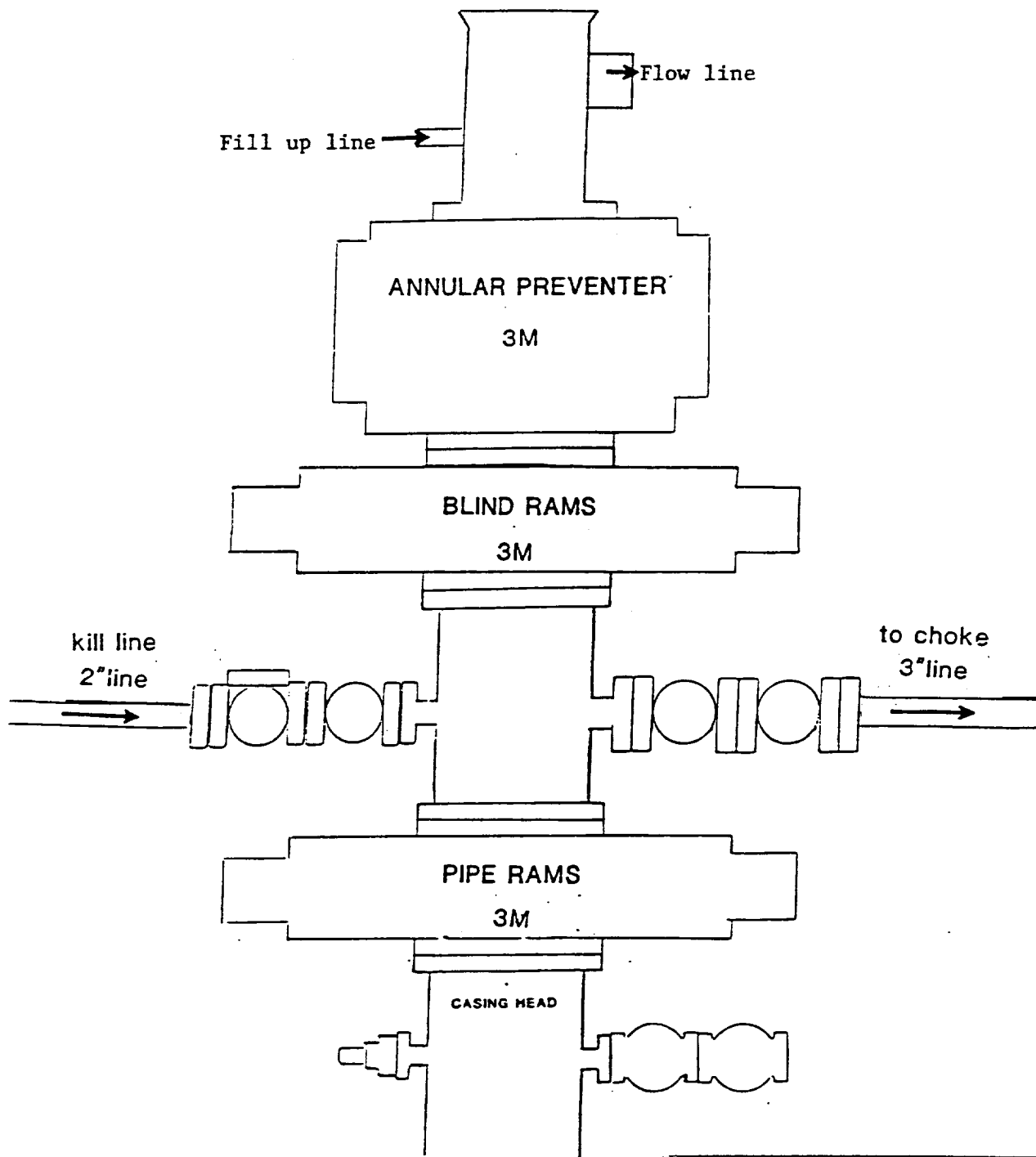
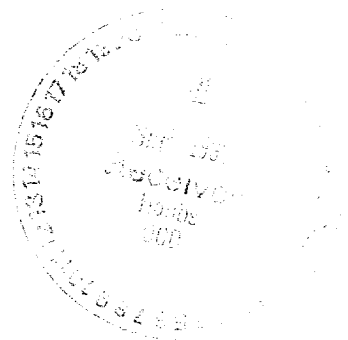
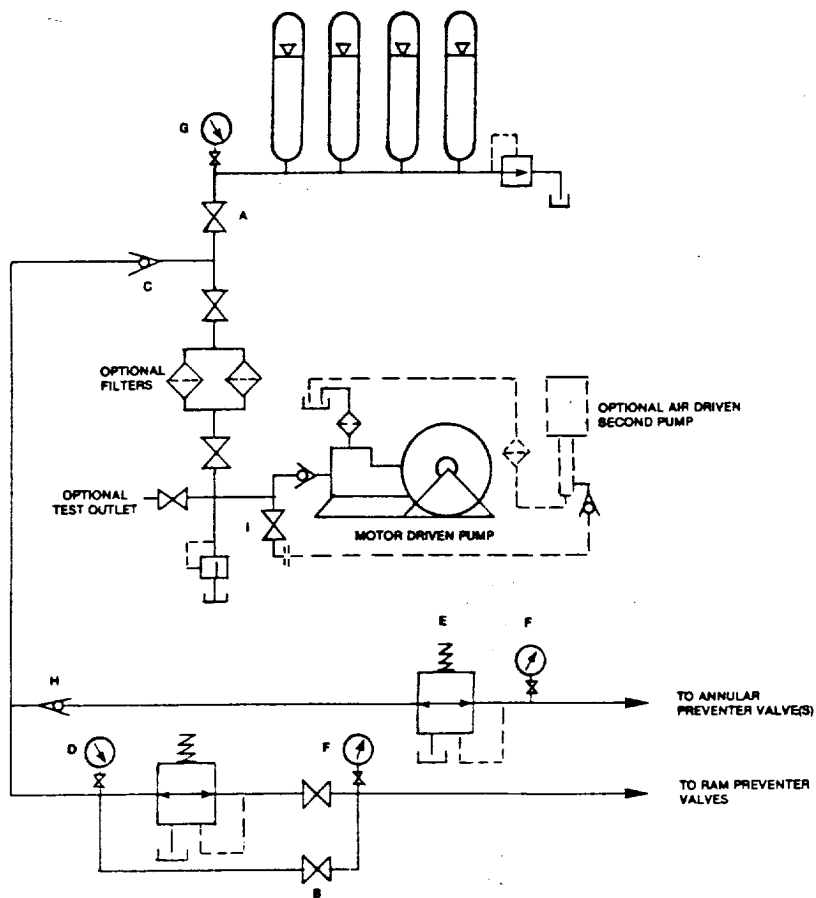


EXHIBIT "E"  
B.O.P. SKETCH TO BE USED ON  
POGO PRODUCING COMPANY  
EAST LIVINGSTON RIDGE UNIT  
1650' FNL & 660' FEL SEC. 18  
T22S-R32E LEA CO. N





HAND AJUSTABLE CHOKE

POGO PRODUCING CO  
3M CHOKE MANIFOLD

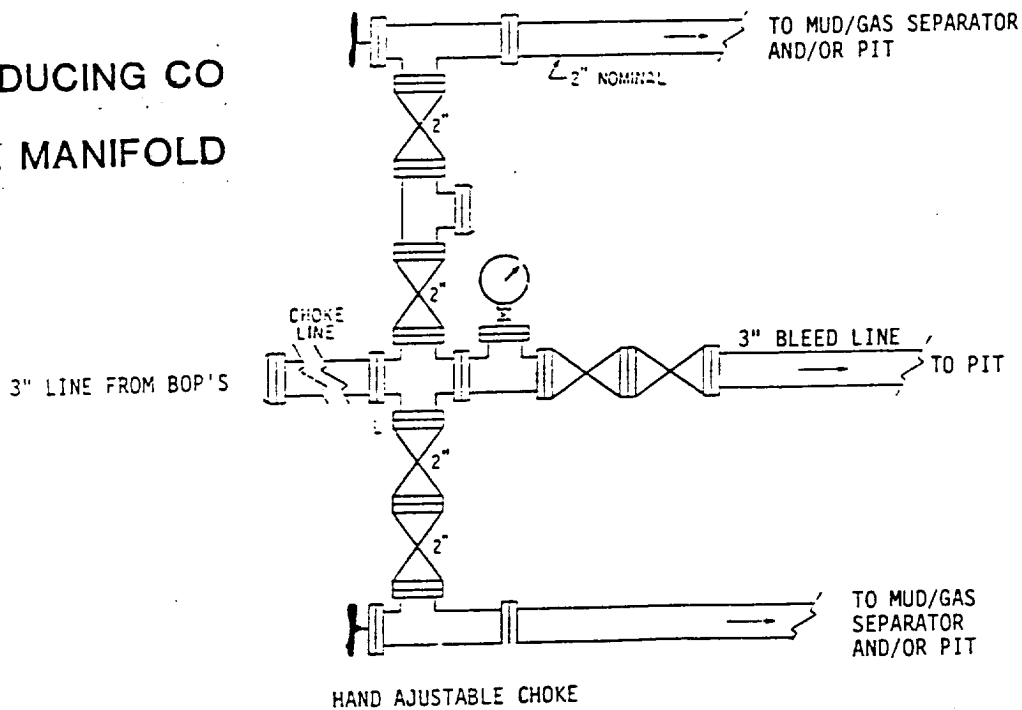


EXHIBIT 1-E"  
CHOKE MANIFOLD & CLOSING UNIT  
POGO PRODUCING COMPANY  
EAST LIVINGSTON RIDGE UNIT #11  
1650' FNL & 660' FEL SEC.18  
T22S-R32E LEA CO. NM

