

D-05-15

UNITED STATES *Bureau* (Other instructions on reverse side)  
DEPARTMENT OF THE INTERIOR Cons. Div.-Dist. 2  
BUREAU OF LAND MANAGEMENT 1601 W. Grand Avenue  
APPLICATION FOR PERMIT TO DRILL OR DEEPEN Artesia, NM 88210

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

## 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

(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

810' FSL &amp; 1650' FWL SECTION 29 T19S-R27E EDDY CO. NM

At proposed prod. zone SAME

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

Approximately 18 miles North of Carlsbad New Mexico.

## 15. DISTANCE FROM PROPOSED\*

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

540'

## 16. NO. OF ACRES IN LEASE

320

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.

2300'

## 19. PROPOSED DEPTH

10,500'

## 20. ROTARY OR CABLE TOOLS

ROTARY

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

3334' 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"	Conductor	NA	40"	Cement to surface W/Redi-mix.
17½"	H-40 13 3/8"	48	500'	550 Sx. circulate to surface
12½"	J-55 9 5/8"	40.5	2900'	1200 Sx " " "
8½"-7 7/8"	N-80, J-55 5½"	17	10,500'	1000 Sx. 2000' From Surface
6 1/8"	N-80 5"	18	8800-10,500'	400 Sx. top of liner.

SEE ATTACHED SHEET

Kosvoh Controlled Water Basin

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED

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

DATE 01/12/05

(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/ Joe G. Lara

TITLE

FIELD MANAGER

DATE

FEB 22 2005

\*See Instructions On Reverse Side

APPROVAL FOR 1 YEAR

1. Drill 25" hole to 40'. Set 40' of 20" conductor pipe and cement to surface with Redi-mix.
2. Drill 17½" hole to 500'. Run and set 500' of 13 3/8" 48# H-40 ST&C casing. Cement with 550 Sx. of Class "C" cement + 2% CaCl, + ¼# Flocele/Sx. Circulate cement to surface.
3. Drill 12¼" hole to 2900'. Run and set 2900' of 9 5/8" 40.5# J-55 ST&C casing. Cement with 1200 Sx. of Class "C" cement + additives, circulate cement to surface.
4. Drill 8½" hole to 9000', if no lost circulation problems occur in the Cisco reduce hole to 7 7/8" and drill to TD 10,500'. Run 10,500' of 5½" casing as follows: 2500' of 5½" 17# N-80 LT&C, 6000' of 5½" 17# J-55 LT&C, 2000' of 5½" 17# N-80 LT&C casing. Cement in three stages, cement 1st stage with 300 Sx. of Class "H" Premium Plus cement + additive, cement 2nd stage with 500 Sx. of Class "H" Premium Plus cement + additives, cement third stage with 500 Sx. of Class "C" cement + additives. Estimate top of cement 2000' from surface.
5. If problems of lost circulation is encountered in the Cisco try to drill to 9000' through the problem zones. Run and set 9000' of 7" 26# N-80 LT&C casing and cement with 420 Sx. of Class "C" Halco Light, tail in with 280 Sx. of Class "H" cement + additives, estimate top of cement 2000' from surface.
6. Drill 6 1/8" hole to 10,500'. Run and set a 1700' 5" 18# N-80 LT&C liner from TD back to 8800'. Cement with 150 Sx. of Class "H" Premium Plus cement + additives, cement back to top of liner.

DISTRICT I  
1625 N. FRENCH DR., HOBBS, NM 88240

DISTRICT II  
1301 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

State of New Mexico  
Energy, Minerals and Natural Resources Department

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	Pool Name
	81280	MCMILLIAN MORROW NORTH GAS
Property Code	Property Name	Well Number
	HUBER 29 FEDERAL COM.	2
OGRID No.	Operator Name	Elevation
17891	POGO PRODUCING COMPANY	3334'

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	29	19-S	27-E		810	SOUTH	1650	WEST	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	Joint or Infill	Consolidation Code	Order No.						
320									

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 Y=591646.0 N X=509050.8 E Well # 1 Location → S=32°37'35.53" N LONG.=104°8'14.17" W</p> <p>Dimensions: 1650', 810', 3335.2', 3332.3', 3328.5', 3339.3', 600', 600'</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 Joe T. Janica Printed Name Agent Title 01/12/05 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>NOVEMBER 22, 2004 Date Surveyed JR Signature &amp; Seal of Professional Surveyor <i>Gary B. Edson</i> 11/29/04 04.11/1532 Certificate No. GARY EDSON 12641</p>
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State of New Mexico  
Energy Minerals and Natural Resources

Form C-144  
March 12, 2004

1000 Rio Brazos Road, Aztec, NM 87410  
District III  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
District IV

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

For drilling and production facilities, submit to  
appropriate NMOCD District Office.  
For downstream facilities, submit to Santa Fe  
office

FEB 25 2005

COO-ARTESIA

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☒

Type of action: Registration of a pit or below-grade tank ☒ Closure of a pit or below-grade tank ☐

Operator: Pogo Producing Company Telephone: 432-685-8100 e-mail address: wrightc@pogoproducing.com  
Address: P. O. Box 10340, Midland, TX 79702-7340  
Facility or well name: Huber 29 Fed Com #2 API #: 30-D15-33967 U/L or Qtr/Qtr: N Sec: 29 T: 19 R: 27  
County: Eddy Latitude: 32:37:35.53N Longitude: 104:18:14.17W NAD: 1927 ☒ 1983 ☐ Surface Owner Federal ☒ State ☐ Private ☐ Indian ☐

Pit

Type: Drilling ☒ Production ☐ Disposal ☐

Workover ☐ Emergency ☐

Lined ☒ Unlined ☐

Liner type: Synthetic ☒ Thickness: 12 mil Clay ☐ Volume

16000 bbl

Below-grade tank

Volume: \_\_\_\_\_ bbl Type of fluid: \_\_\_\_\_

Construction material: \_\_\_\_\_

Double-walled, with leak detection? Yes ☐ If not, explain why not.

Depth to ground water (vertical distance from bottom of pit to seasonal high  
water elevation of ground water.)

Less than 50 feet	(20 points)
50 feet or more, but less than 100 feet	(10 points)
100 feet or more	(0 points) 0

Wellhead protection area: (Less than 200 feet from a private domestic  
water source, or less than 1000 feet from all other water sources.)

Yes	(20 points)
No	(0 points) 0

Distance to surface water: (horizontal distance to all wetlands, playas,  
irrigation canals, ditches, and perennial and ephemeral watercourses.)

Less than 200 feet	(20 points)
200 feet or more, but less than 1000 feet	(10 points)
1000 feet or more	(0 points) 0

Ranking Score (Total Points)

0

If this is a pit closure: (1) attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location:

onsite ☐ offsite ☐ If offsite, name of facility: \_\_\_\_\_ (3) Attach a general description of remedial action taken including remediation start date and  
end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface \_\_\_\_\_ ft. and attach sample results. (5) Attach soil sample results  
and a diagram of sample locations and excavations.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has  
been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Date: 02/24/05

Printed Name/Title: Cathy Wright, Sr Eng Tech

Signature: Cathy Wright

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or  
otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or  
regulations.

Approval: FEB 25 2005

Date: \_\_\_\_\_

Printed Name/Title: Paul Sep

Signature: Paul Sep

Water Resources

Data Category:

Site Information

Geographic Area:

New Mexico



# Site Map for New Mexico

USGS 323950104143501 19S.27E.14.242343

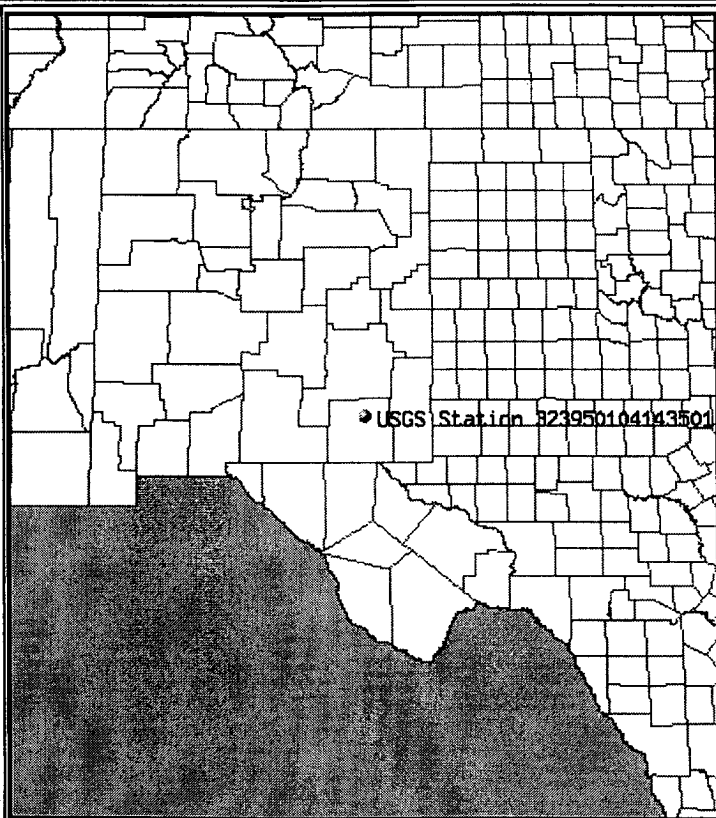
Available data for this site

site map

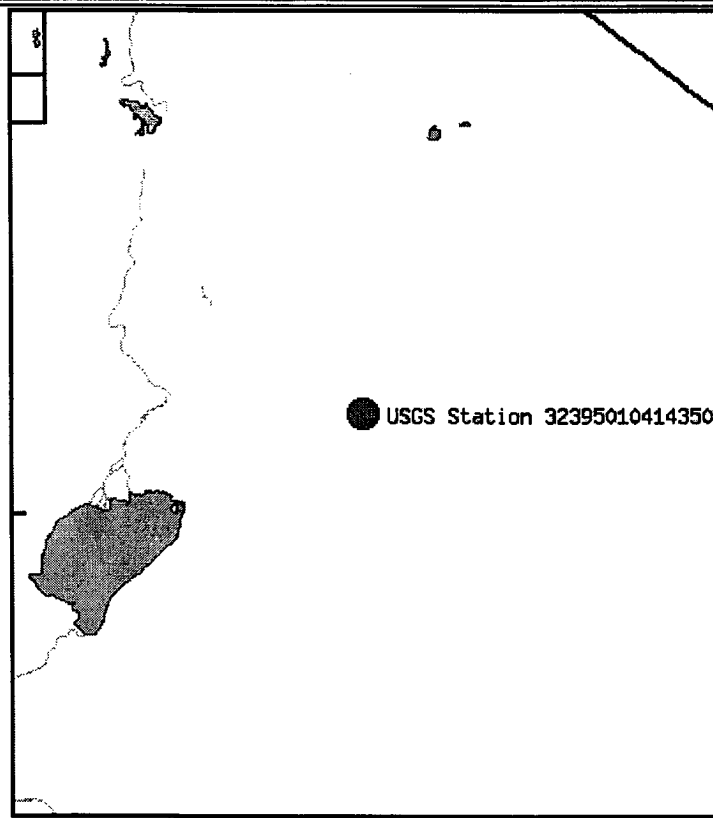
GO

Eddy County, New Mexico  
Hydrologic Unit Code  
Latitude 32°39'50", Longitude 104°14'35" NAD27  
Gage datum 3,456.20 feet above sea level NGVD29

Location of the site in New Mexico.



Site map.



ZOOM IN 2X, 4X, 6X, 8X, or ZOOM OUT 2X, 4X, 6X, 8X.

Maps are generated by US Census Bureau TIGER Mapping Service.

Questions about data    [New Mexico NWISWeb Data Inquiries](#)  
Feedback on this website [New Mexico NWISWeb Maintainer](#)  
NWIS Site Inventory for New Mexico: Site Map  
<http://waterdata.usgs.gov/nm/nwis/nwismap?>

[Top](#)  
[Explanation of terms](#)

Retrieved on 2005-02-24 12:05:36 EST  
Department of the Interior, U.S. Geological Survey  
USGS Water Resources of New Mexico  
[Privacy Statement](#) || [Disclaimer](#) || [Accessibility](#) || [FOIA](#)  
1.17 0.94 nadww01

Water Resources

Data Category:

Ground Water

Geographic Area:

New Mexico

go

# Ground-water levels for New Mexico

## Search Results -- 1 sites found

Search Criteria

site_no list =	• 323950104143501
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[Save file of selected sites to local disk for future upload](#)
**USGS 323950104143501 19S.27E.14.242343**

Available data for this site

Ground-water: Levels

GO

Eddy County, New Mexico

Hydrologic Unit Code

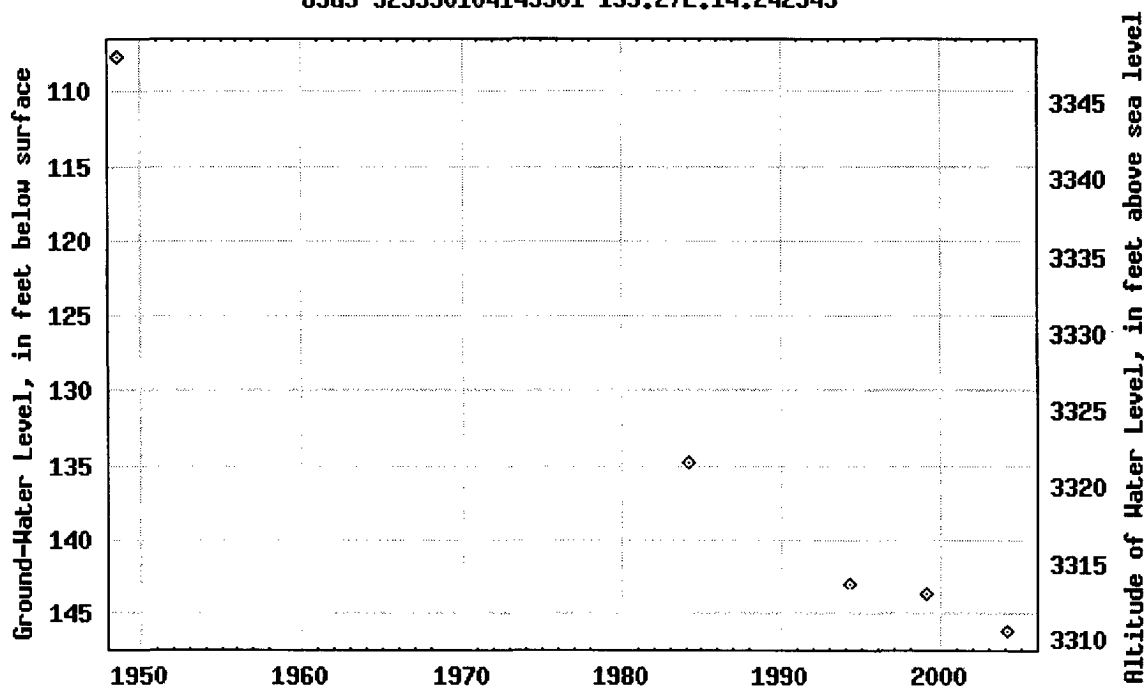
Latitude 32°39'50", Longitude 104°14'35" NAD27

Gage datum 3,456.20 feet above sea level NGVD29

The depth of the well is 152 feet below land surface.

This well is completed in ARTESIA GROUP (313ARTS)

### Output formats

[Table of data](#)[Tab-separated data](#)[Graph of data](#)[Reselect period](#)
**USGS 323950104143501 19S.27E.14.242343**


Breaks in the plot represent a gap of at least one calendar year between two consecutive points.  
[Download a presentation-quality graph](#)

# Great Circle Calculator.

By Ed Williams

You need Javascript enabled if you want this page to do anything useful! For Netscape, it's under Options/Network Preferences/Languages.

## Compute true course and distance between points.

Enter lat/lon of points, select distance units and earth model and click "compute". Lat/lons may be entered in DD.DD, DD:MM.MM or DD:MM:SS.SS formats.

Note that if either point is very close to a pole, the course may be inaccurate, because of its extreme sensitivity to position and inevitable rounding error.

### Input Data

Lat1		Lon1	
32:39:50	N	104:14:35	W
Lat2		Lon2	
32:37:35.53	N	104:18:14.17	W

### Output

Course 1-2	Course 2-1	Distance
233.937514	53.9046731	3.805689917

Distance Units:  Earth model:

## Compute lat/lon given radial and distance from a known point

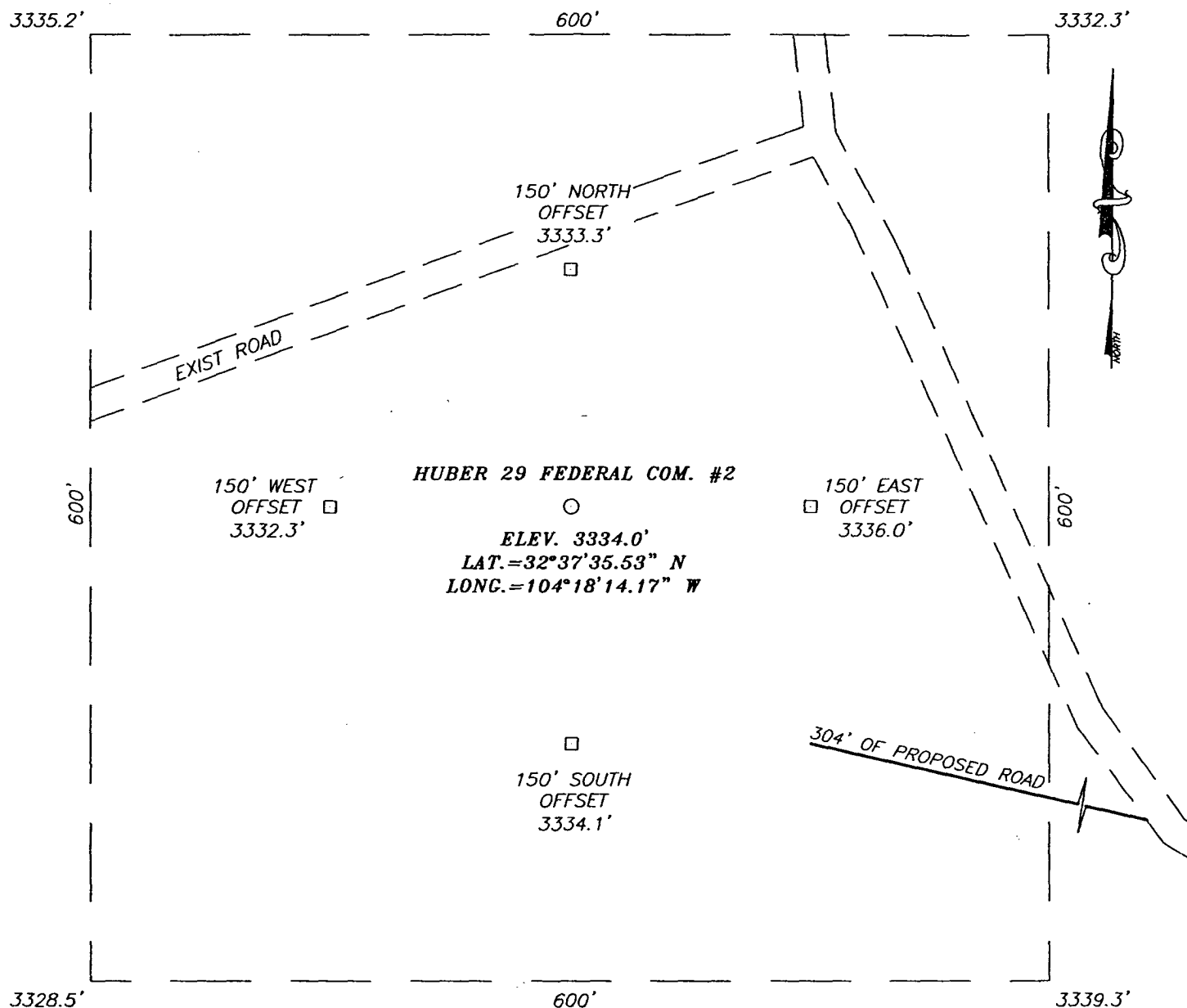
Enter lat/lon of initial point, true course and distance. Select distance units and earth model and click "compute". Lat/lons may be entered in DD.DD, DD:MM.MM or DD:MM:SS.SS formats.

Note that the starting point cannot be a pole.

### Input data

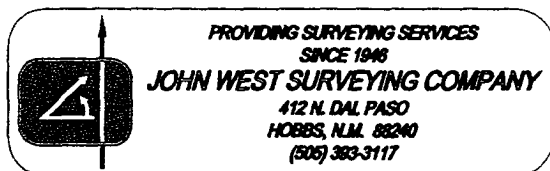
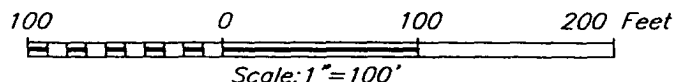
Lat1		Lon1	
0:00.00	N	0:00.00	W
Course 1-2		Distance 1-2	
360		0.0	

**SECTION 29, TOWNSHIP 19 SOUTH, RANGE 27 EAST, N.M.P.M.,**  
**EDDY COUNTY, NEW MEXICO**



**DIRECTIONS TO LOCATION**

FROM THE INTERSECTION OF CO. RD. #34 (LAKE RD.) AND CO. RD. #236 (NETHERLIN RD.) GO NE ON CO. RD. #236 FOR APPROX. 3.7 MILES TO A CALICHE ROAD ON THE LEFT. TURN LEFT (NW) AND GO APPROX. 0.4 MILES TO A "Y" IN THE ROAD. TAKE RIGHT FORK THRU CATTLEGUARD AND GO APPROX. 0.3 MILES TO A PROPOSED ROAD SURVEY. FOLLOW PROPOSED ROAD SURVEY FOR APPROX. 300' TO PROPOSED LOCATION.



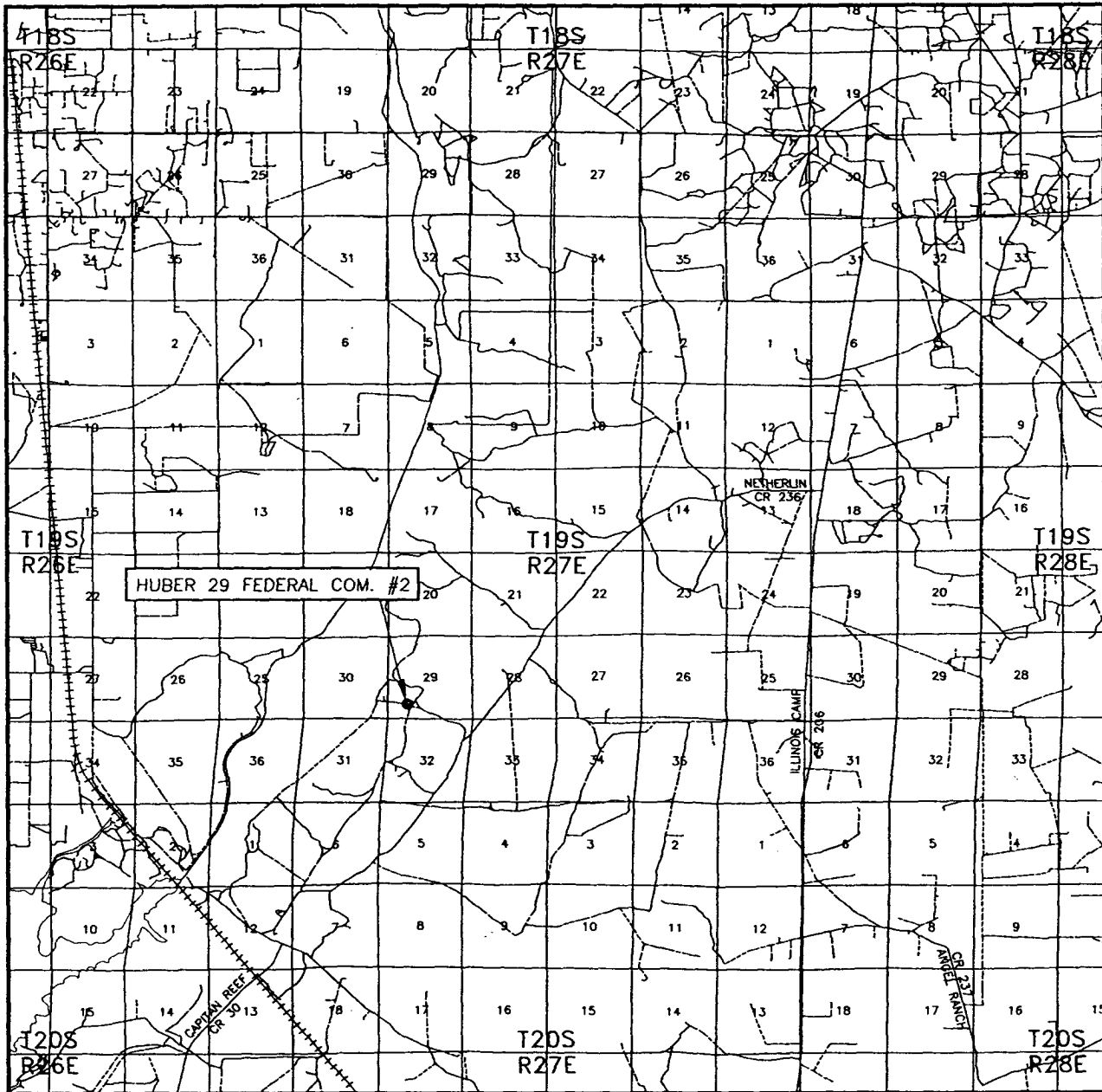
**POGO PRODUCING COMPANY**

HUBER 29 FEDERAL COM #2 WELL  
 LOCATED 810 FEET FROM THE SOUTH LINE  
 AND 1650 FEET FROM THE WEST LINE OF SECTION 29,  
 TOWNSHIP 19 SOUTH, RANGE 27 EAST, N.M.P.M.,  
 EDDY COUNTY, NEW MEXICO.

Survey Date: 11/22/04	Sheet 1 of 1 Sheets
W.O. Number: 04.11.1532	Dr By: J.R.
Date: 11/24/04	Disk: CD#10
04111532	Scale: 1"=100'



# VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 29 TWP. 19-S RGE. 27-E

SURVEY N.M.P.M.

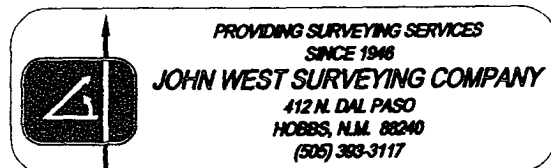
COUNTY EDDY

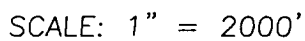
DESCRIPTION 810' FSL & 1650' FWL

ELEVATION 3334'

OPERATOR POGO PRODUCING COMPANY

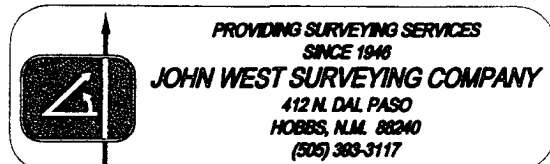
LEASE HUBER 29 FEDERAL COM.





U.S.G.S. TOPOGRAPHIC MAP  
LAKE McMILLAN NORTH, N.M.

LAKE McMILLAN SOUTH, N.M. - 10'



# APPLICATION TO DRILL

POGO PRODUCING COMPANY  
HUBER "29" FEDERAL COM. # 2  
UNIT "N" SECTION 29  
T19S-R27E 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: 1650' FWL & 810' FSL SECTION 29 T19S-R27E
2. Elevation above Sea Level: 3334' 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: 10,500'
6. Estimated tops of geological markers:

Queen	700'	Cisco	8180'
Bone Spring Lime	2330'	Strawn	8900'
1st Bone Spring Sd.	5250'	Atoka	9420'
Wolfcamp	7710'	Morrow Clastics	9900'
7. Possible mineral bearing formations:

Bone Spring	Oil	Strawn	Gas
Wolfcamp	Gas	Atoka	Gas
Cisco	Gas	Morrow	Gas
8. Casing program:

Hole size	Interval	OD of casing	Weight	Thread	Collar	Grade
25"	0-40	20"	NA	NA	NA	Conductor
17½"	0-500'	13 3/8"	48	8-R	ST&C	H-40
12½"	0-2900'	9 5/8"	40.5	8-R	ST&C	J-55 N-80
8½"-7 7/8"	0-10,500'	5½"	17	8-R	LT&C	J-55 N-80
* 8½"	0-9000'	7"	26	8-R	LT&C	N-80
* 6 1/8"	9000-10,500'	5" Liner	18	8-R	LT&C	N-80

\* This is if no lost circulation occurs in the Cisco.

APPLICATION TO DRILL

POGO PRODUCING COMPANY  
HUBER "29" FEDERAL COM. # 2  
UNIT "N" SECTION 29  
T19S-R27E EDDY CO. NM

9. CEMENTING & CASING SETTING DEPTHS.

25"	Conductor	Set 40' of 20" conductor pipe and cement to surface with Redi-mix.
13 3/8"	Surface	Set 500' of 13 3/8" 48# H-40 ST&C casing. cement with 550 Sx. of Class "C" cement + 2% CaCl, + 1/4# Flocele/Sx. Circulate cement to surface.
9 5/8"	Intermediate	Set 2900' of 9 5/8" 40.5# J-55 ST&C casing. Cement with 1200 Sx. of Class "C" cement = Additives, circulate cement to surface.
5 1/2"	Production	Set 10,500' of 5 1/2" casing as follows: 2500' of 5 1/2" 17# N-80 LT&C, 6000' of 17# J-55 LT&C, 2000' of 17# N-80 LT&C casing. Cement in three stages. Cement 1st stage with 300 Sx. of Class "H" Premium Plus cement + additives, Cement 2nd stage with 500 Sx. of Class of Class "H" cement + additives, cement 3rd stage with 500 Sx. of Class "C" cement + additives, estimate top of cement 2000' FS.

IF LOST CIRCULATION OCCURS IN THE CISCO

7"	2nd Intermediate	Set 9000' of 7" 26# N-80 LT&C casing, Cement with 420 Sx. of Class "C" Light weight cement, tail in with 280 Sx. of Class "H" cement + additives, estimate top of cement 2000' from surface.
5"	Liner	Set a 1700' 5" 18# N-80 LT&C liner from TD back to 8800'. Cement with 150 Sx. of Class "H" Premium Plus cement + additives.

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 9 5/8" 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 the 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 in this well.

# APPLICATION TO DRILL

POGO PRODUCING COMPANY  
 HUBER "29" FEDERAL COM. # 2  
 UNIT "N" SECTION 29  
 T19S-R27E EDDY CO. NM

## 11. PROPOSED MUD CIRCULATING SYSTEM:

DEPTH	MUD WT.	VISC.	FLUID LOSS	TYPE SYSTEM
40-500'	8.4-8.7	29-34	NC	Fresh water spud mud add paper to control seepage.
500-2900'	10.0-10.2	29-38	NC	Brine water add paper to to control seepage and use high viscosity sweeps to clean hole.
2900-9500'	8.4-8.7	29-38	NC	Fresh water use high viscosity to clean hole.
9500-10,500'	9.8-10.0	29-40	10 CC or Less	Cut Brine using using Gel to control viscosity and starch and dris-pac 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, & casing the viscosity and/or water loss may have to be adjusted to meet these needs.

APPLICATION TO DRILL

POGO PRODUCING COMPANY  
HUBER "29" FEDERAL COM. # 2  
UNIT "N" SECTION 29  
T19S-R27E EDDY CO. NM

12. LOGGING, CORING, AND TESTING PROGRAM:

A. Open hole logs: Run Dual Laterolog, SNP, LDT Gamma Ray, Caliper from TD  
Back to 9 5/8" casing shoe. Run Gamma Ray, Neutron from 9 5/8" casing shoe  
back to surface.

B. Rig up mud logger on hole at 2900' and keep on hole to TD.

DST's and cores may be taken at the discretion of the Geologist.

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 5000 PSI, and Estimated BHT 185°.

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 38 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 MORROW formation will be perforated and stimulated in order to establish production. The well will be swab tested and potentialized as a gas 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 blowline (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 telephones 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.



SURFACE USE PLAN

POGO PRODUCING COMPANY  
HUBER "29" FEDERAL COM. # 2  
UNIT "N" SECTION 29  
T19S-R27E EDDY CO. NM

1. EXISTING AND PROPOSED ROADS: Area maps: Exhibit "B" is a reproduction of a County General Hi-way map showing access roads to the location. Exhibit "C" is a reproduction of a USGS Topographic map showing existing roads in close proximity to the location and the proposed access roads. All existing roads will be maintained in a condition equal to or better than their current conditions. All new roads will be constructed to BLM specifications.
  - A. Exhibit "A" shows the location of the proposed well site as staked.
  - B. From approximately 3 miles Northeast of Carlsbad at the junction of U.S. Hi-way 62-180 and North Loop road (CR-604), turn left go 4.5 mile to CR-206 turn Right go 2.5 miles to CR-34 turn Left on to CR-34 go 8.7± miles to CR-236 (Netherlin Road) turn Right on to CR-236 go 3.5± miles to a caliche road turn Left go .4 mi. bear X cattle guard go .3 mi bear Right go to stock pens and follow staked road to wells.
  - C. Exhibit "C" shows existing roads leading into location.
2. PLANNED ACCESS ROADS: No new road required.
  - A. The access road will be crowned and ditched to a 12' wide traveled surface with a 40' Right-Of-Way.
  - B. Gradient on all roads will be less than 5% if possible.
  - C. Turn-outs will be constructed where necessary.
  - D. If needed roads will be surfaced to the BLM requirements with material obtained from a local source.
  - E. Center line of new road will be flagged.
  - F. The new road will be constructed to utilize low water crossings where drainage currently exists, and culverts will be installed where necessary.
3. EXHIBIT "A-1" SHOWS THE BELOW LISTED TYPE WELLS WITHIN A 1 MILE RADIUS:
  - A. Water wells - None known
  - B. Disposal wells - None known
  - 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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4. If on completion this well is a producer the operator will lay pipelines and construct powerlines along existing road R-O-W's or other existing R-O-W's. Possible routes of pipelines, flowlines and powerlines are shown on Exhibit "C".

### 5. LOCATION AND TYPE OF WATER SUPPLY:

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

### 6. SOURCE OF CONSTRUCTION MATERIAL:

If possible construction material will be obtained from the excavation of drill site, if additional material is needed it will be obtained from a local source and transported over the access roads as shown on Exhibit "C".

### 7. METHODS OF HANDLING WASTE MATERIAL:

- A. Drill cuttings will be disposed of in the reserve pits.
- B. All trash, junk and other waste material will be contained in trash cages or trash bins to prevent scattering. When the job is completed all contents will be removed and disposed of in a approved sanitary land fill.
- C. Salts remaining after completion of well will be picked up by the supplier, including broken sacks.
- D. Waste water from living quarters will be drained into holes with a minium of 10'. These holes will be covered during drilling and will be back filled when the well is completed. A Porto-John will be provided for the rig crews. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.
- E. Remaining drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry enough to be broken out for further drying. If the drilling fluids do not evaporate in a reasonable time they will be hauled off by transports to a state approve disposal site. Later pits will be broken out to speed drying. Water produced during completion will be put in reserve pits. Oil and condensate produced will be put in storage tanks and sold.

### 8. ANCILLARY FACILITIES:

- A. No camps or air strips will be constructed on location.

## SURFACE USE PLAN

POGO PRODUCING COMPANY  
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### 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 & 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 polyethelene. 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  
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11. OTHER INFORMATION:

- A. Topography consists of Limestone hills cut by relatively shallow canyons which drain into the Pecos River which is West of the location. Vegetation consists of Catclaw, Creosote, Yucca, Prickley Pear, and Native Grasses.
- B. Surface is owned by the U.S. Government and is administered by the Bureau of Land Management. The surface is used for grazing livestock and the production of oil and gas.
- C. An archaeological survey will be conducted on the location and access roads. This report will be filed with The Bureau of Land Management in the Carlsbad field office.
- D. There are no dwellings in the near vicinity of this location.

12. OPERATORS REPRESENTIVES:

Before construction:

TIERRA EXPLORATION, INC  
P.O. BOX 2188  
HOBBS, NEW MEXICO 88241  
OFFICE Ph. 505-391-8503  
JOE T. JANICA

During and after construction:

POGO PRODUCING COMPANY  
P.O. BOX 10340  
MIDLAND, TEXAS 79702-7340  
OFFICE Ph. 915-685-8100  
Mr. RICHARD WRIGHT 915-685-8140

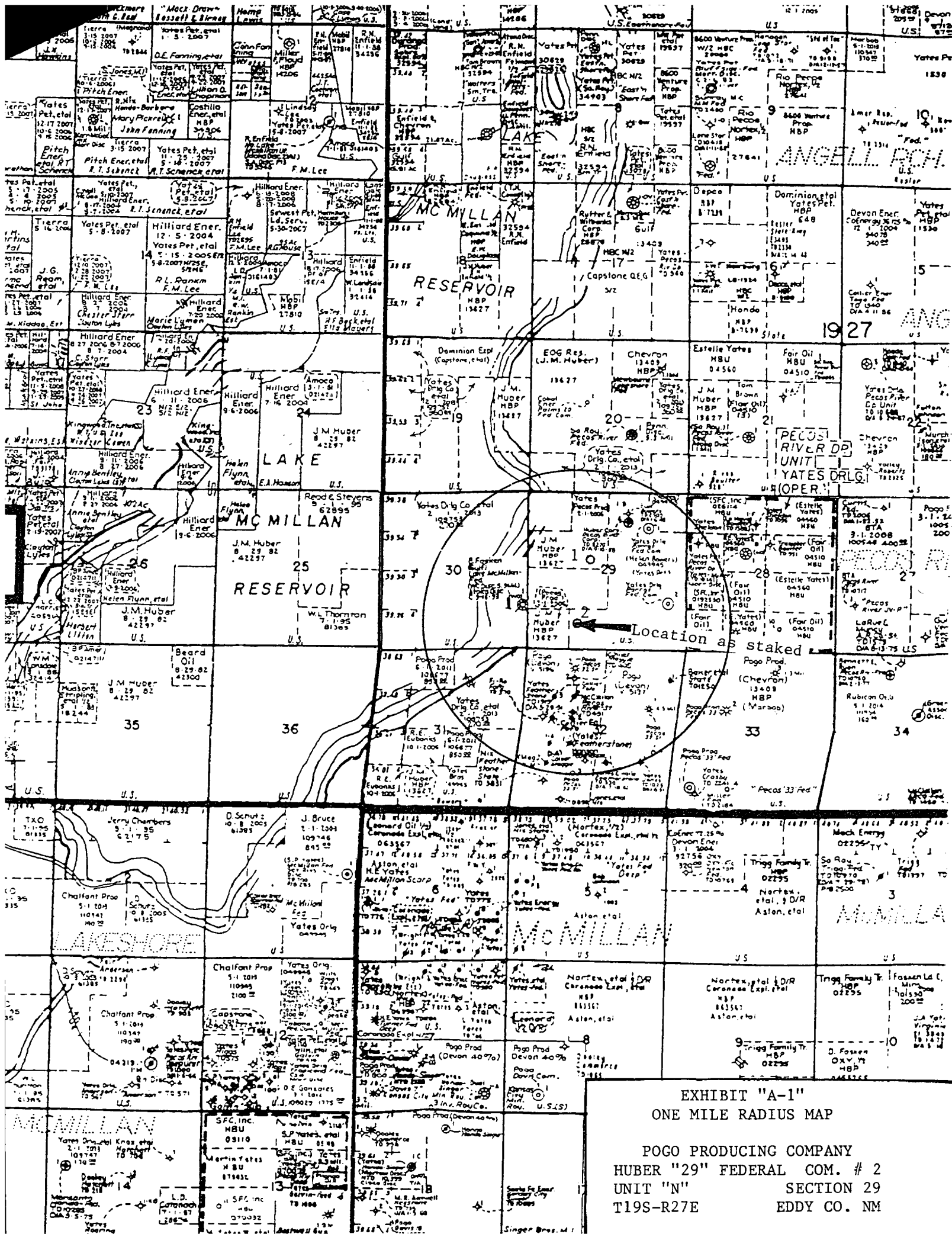
13. CERTIFICATION: I hereby certify that I, or persons under my direct supervision have inspected the proposed drill site and access roads, and that I am familiar with the conditions which currently exist, that the statements made in this plan are to the best of my knowledge true and correct, and that the work associated with the operations proposed herein will be performed by POGO PRODUCING COMPANY it's contractors/subcontractors is in compfornity with this plan and the terms and conditions under which it is approved. This statement is subject to the provision of U.S.C. 1001 for the filing of a false report.

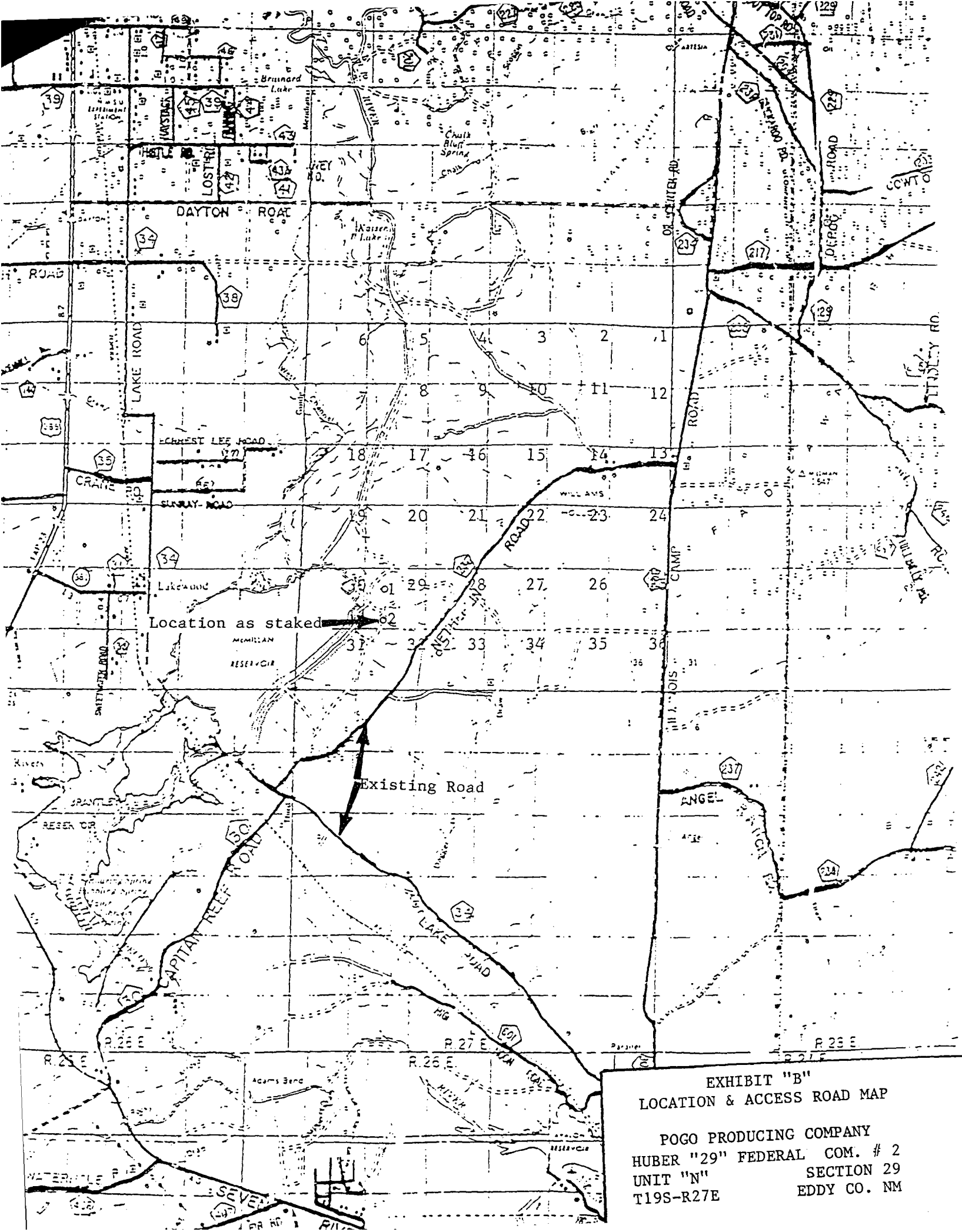
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DATE :

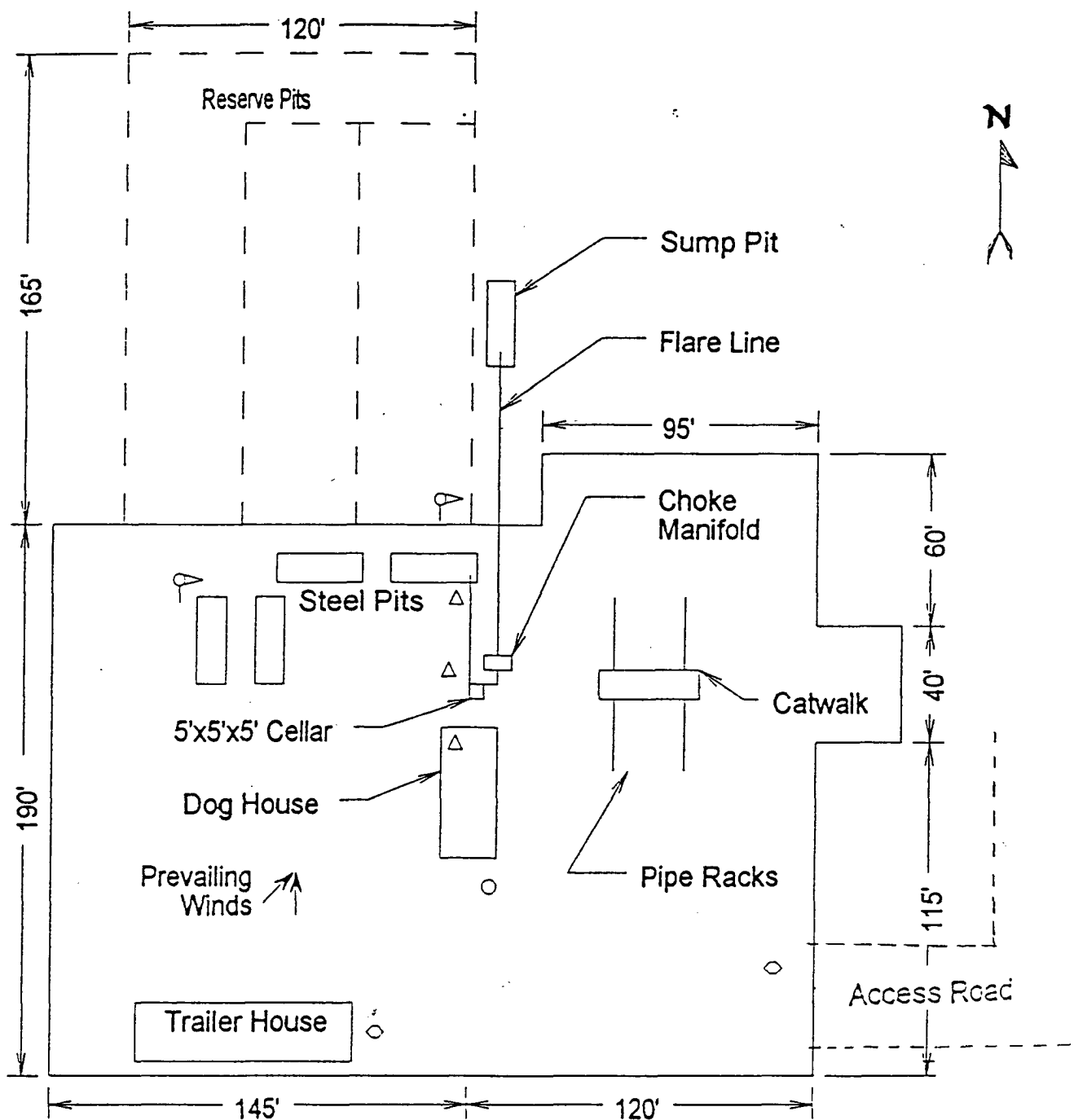
TITLE :

*Joe T Janica*  
01/12/05  
Agent







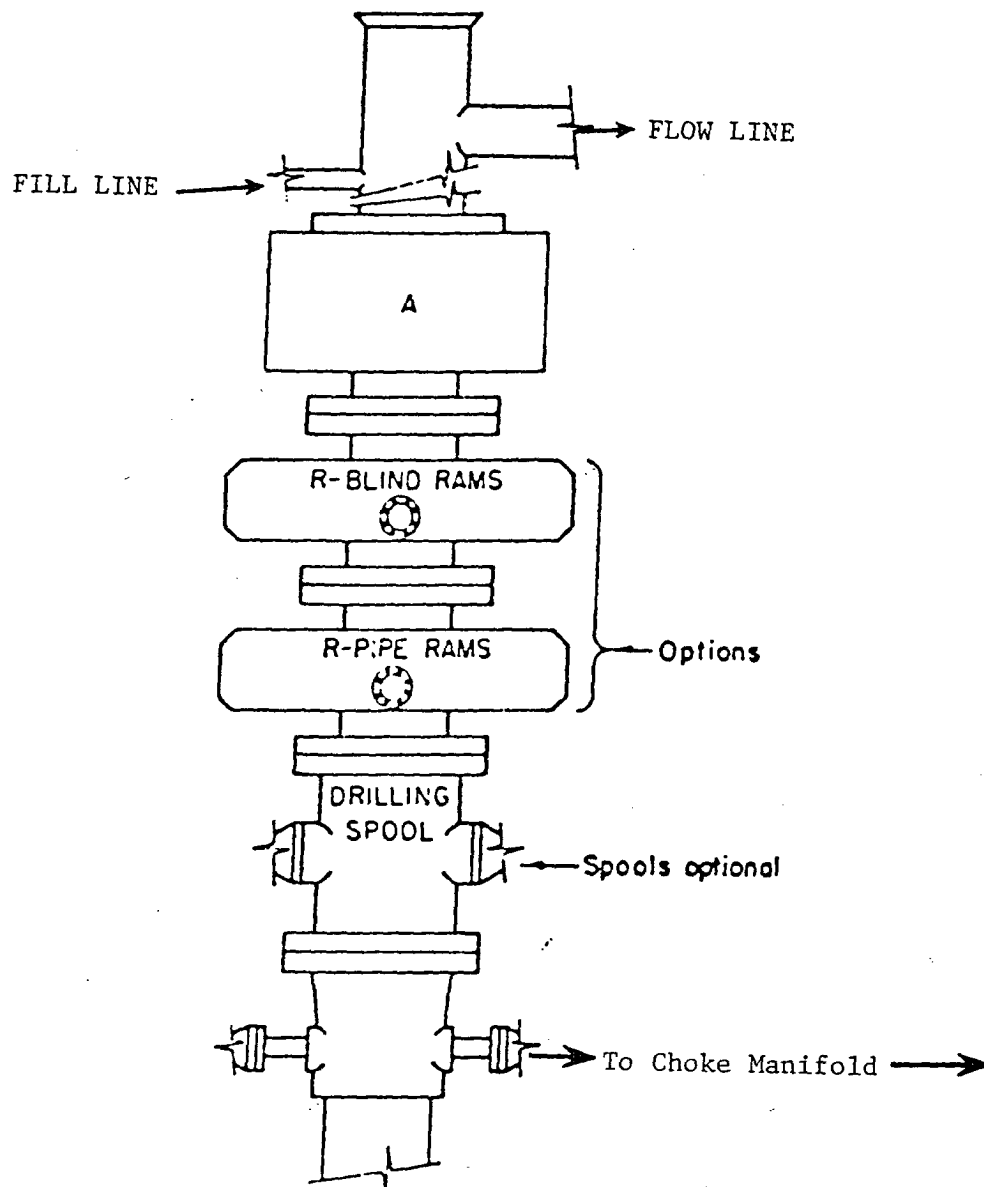


- Wind Direction Indicators  
(wind sock or streamers)
- △ H2S Monitors  
(alarms at bell nipple and shale shaker)
- Briefing Areas
- Remote BOP Closing Unit
- Sign and Condition Flags

EXHIBIT "D"  
RIG LAY OUT PLAT

POGO PRODUCING COMPANY  
HUBER "29" FEDERAL COM. # 2  
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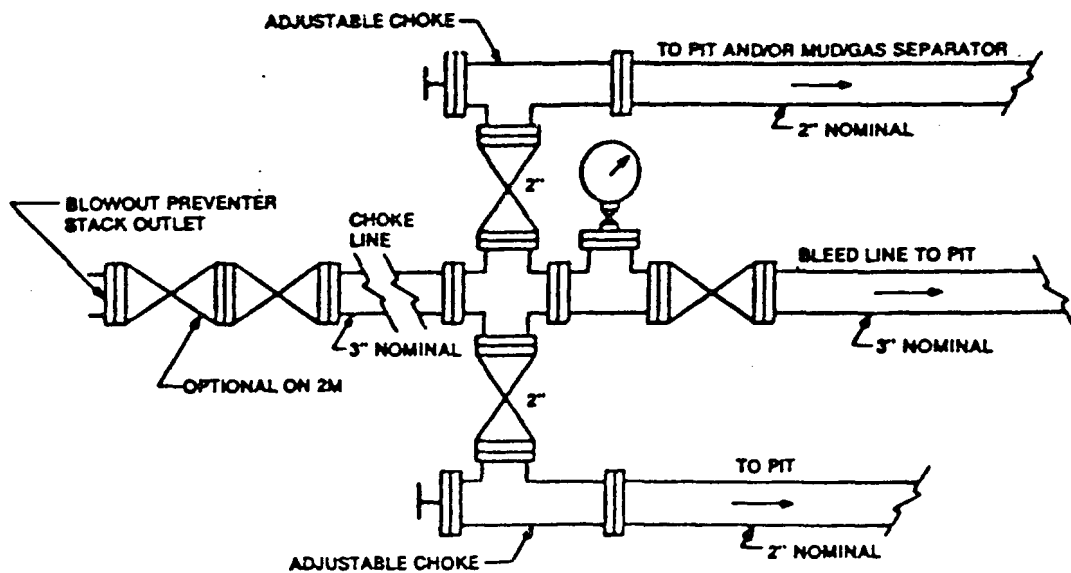


# **ARRANGEMENT SRRA**

900 Series  
3000 PSI WP

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

POGO PRODUCING COMPANY  
HUBER "29" FEDERAL COM. # 2  
UNIT "N" SECTION 29  
T19S-R27E EDDY CO. NM



Typical choke manifold assembly for 3M WP system

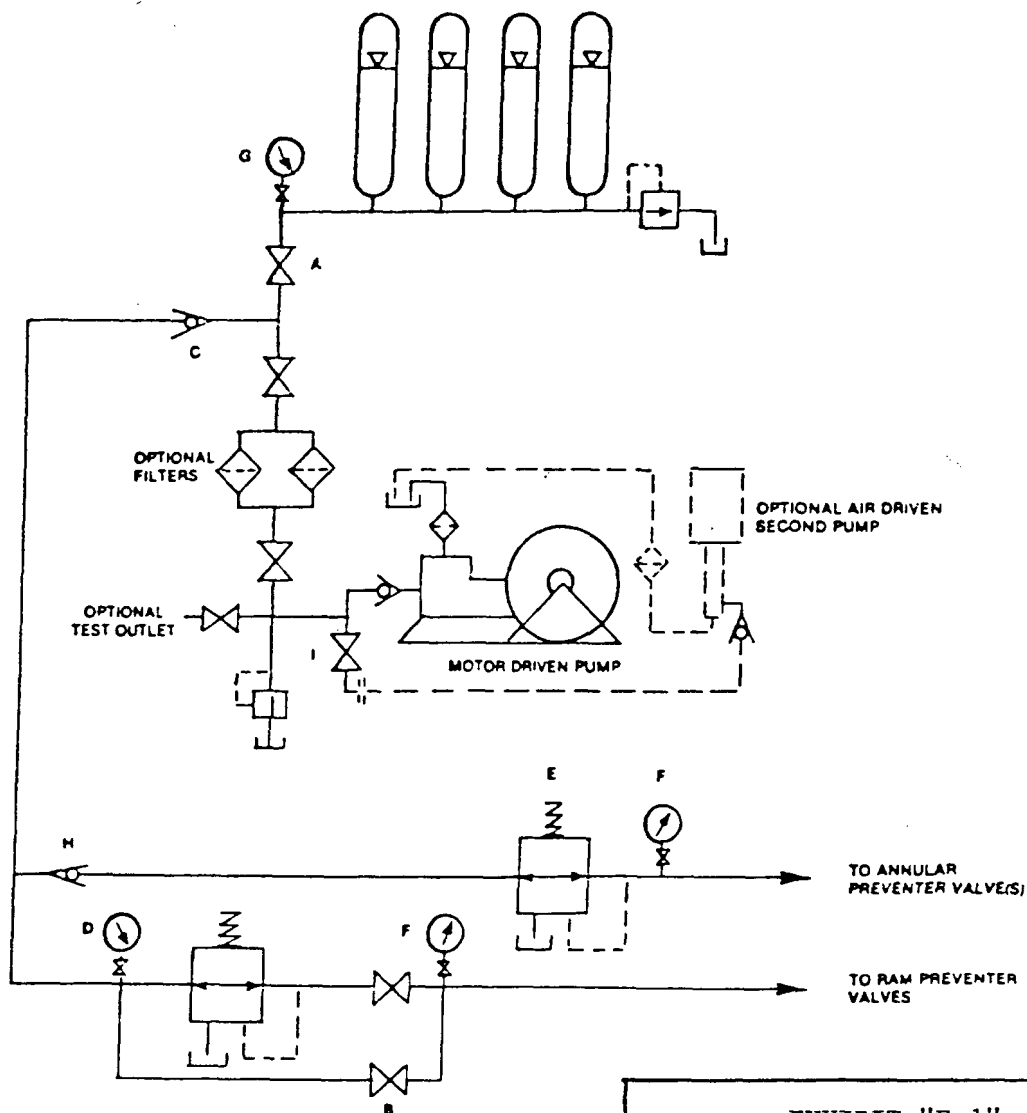


EXHIBIT "E-1"  
CHOKE MANIFOLD & CLOSING UNIT

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