

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

0558

*Bany*

APPLICATION FOR PERMIT TO DRILL **ARTESIA NM 88210**

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 (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: 1980' FSL & 1980' FEL SECTION 18 T24S-R31E EDDY CO. NM  
 At proposed prod. zone: SAME

5. LEASE DESIGNATION AND SERIAL NO.  
 PATTON "18" FEDERAL # 4

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME, WELL NO.  
 30-015-33710

9. AP WELL NO.

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

12. COUNTY OR PARISH  
 EDDY CO.

13. STATE  
 NM

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
 Approximately 25 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)  
 1980'

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.  
 1320'

19. PROPOSED DEPTH  
 8400'

20. ROTARY OR CABLE TOOLS  
 ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
 3514' GR.

22. APPROX. DATE WORK WILL START\*  
 WHEN APPROVED

RECEIVED  
NOV 08 2004

ARTESIA

PROPOSED CASING AND CEMENTING PROGRAM

WITNESS

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
17 1/2"	13 3/8" H-40	48	800' <i>930' JSS</i>	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> + 1/2# Flocele/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. APPROVAL SUBJECT TO  
 GENERAL REQUIREMENTS 09/04  
 AND SPECIAL STIPULATIONS  
 ATTACHED

SIGNED: *[Signature]* TITLE: Agent

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/ Linda S. C. Rundell* TITLE: STATE DIRECTOR DATE: 1 NOV 2004

\*See Instructions On Reverse Side APPROVAL FOR 1 YEAR

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

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

Form C-144  
March 12, 2004

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

**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: Patton 18 Fed #4 API #: \_\_\_\_\_ U/L or Qtr/Qtr U Sec 18 T 24S R 31E  
County: Eddy Latitude 32:12:55.9N Longitude 103:48:53.3W NAD: 1927  1983  Surface Owner Federal  State  Private  Indian

Pit	Below-grade tank	
Type: Drilling <input checked="" type="checkbox"/> Production <input type="checkbox"/> Disposal <input type="checkbox"/> Workover <input type="checkbox"/> Emergency <input type="checkbox"/> Lined <input checked="" type="checkbox"/> Unlined <input type="checkbox"/> Liner type: Synthetic <input checked="" type="checkbox"/> Thickness <u>12</u> mil Clay <input type="checkbox"/> Volume <u>8400</u> bbl	Volume: _____ bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes <input type="checkbox"/> 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 50 feet or more, but less than 100 feet 100 feet or more	(20 points) (10 points) ( 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 No	(20 points) ( 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 200 feet or more, but less than 1000 feet 1000 feet or more	(20 points) (10 points) ( 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: 10/27/04

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.

Approved Date: NOV 5 2004  
Printed Name/Title Field Rep ID Signature [Signature]

RECEIVED

OCT 29 2004

OCD-ARTESIA

Water Resources

Data Category:

Site Information

Geographic Area:

New Mexico

# Site Map for New Mexico

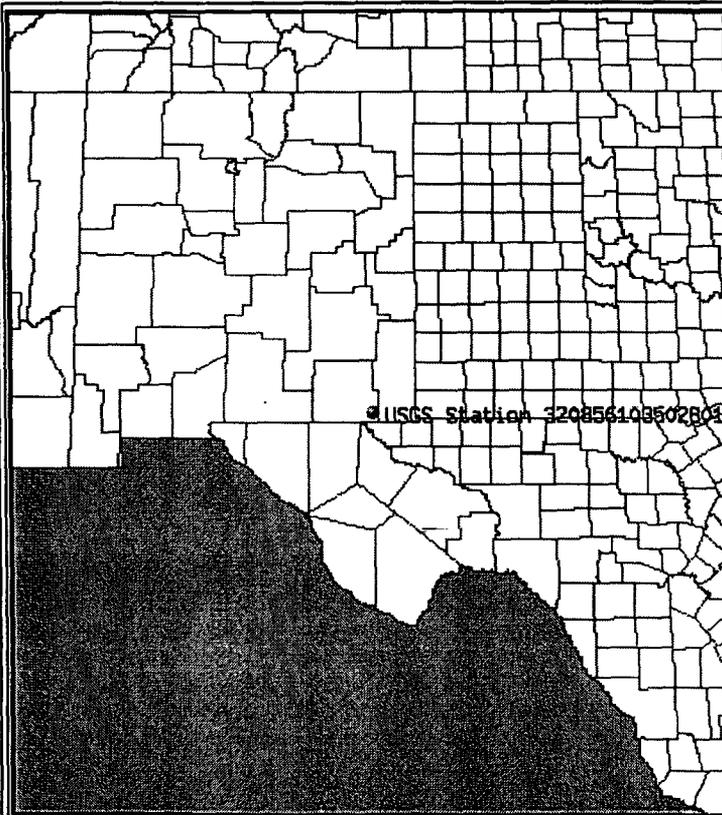
USGS 320856103502801 25S.30E.12.113211

Available data for this site

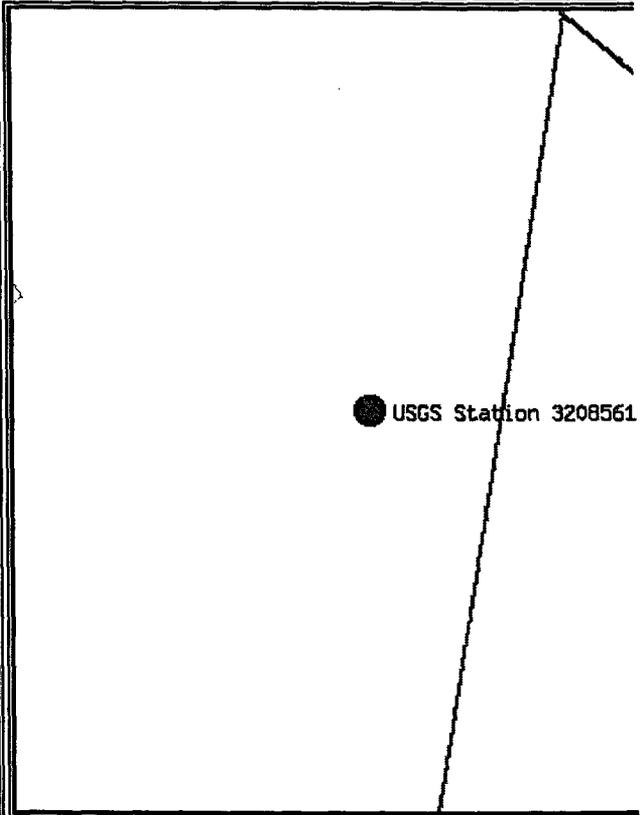
Station site map

Eddy County, New Mexico  
Hydrologic Unit Code  
Latitude 32°08'56", Longitude 103°50'28" NAD27  
Gage datum 3,359.10 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](#)

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 = • 320856103502801

Save file of selected sites to local disk for future upload

USGS 320856103502801 25S.30E.12.113211

Available data for this site

Ground-water: Levels

GO

Eddy County, New Mexico

Hydrologic Unit Code

Latitude 32°08'56", Longitude 103°50'28" NAD27

Gage datum 3,359.10 feet above sea level NGVD29

The depth of the well is 482 feet below land surface.

This well is completed in ALLUVIUM, BOLSON DEPOSITS AND OTHER SURFACE DEPOSITS (110AVMB)

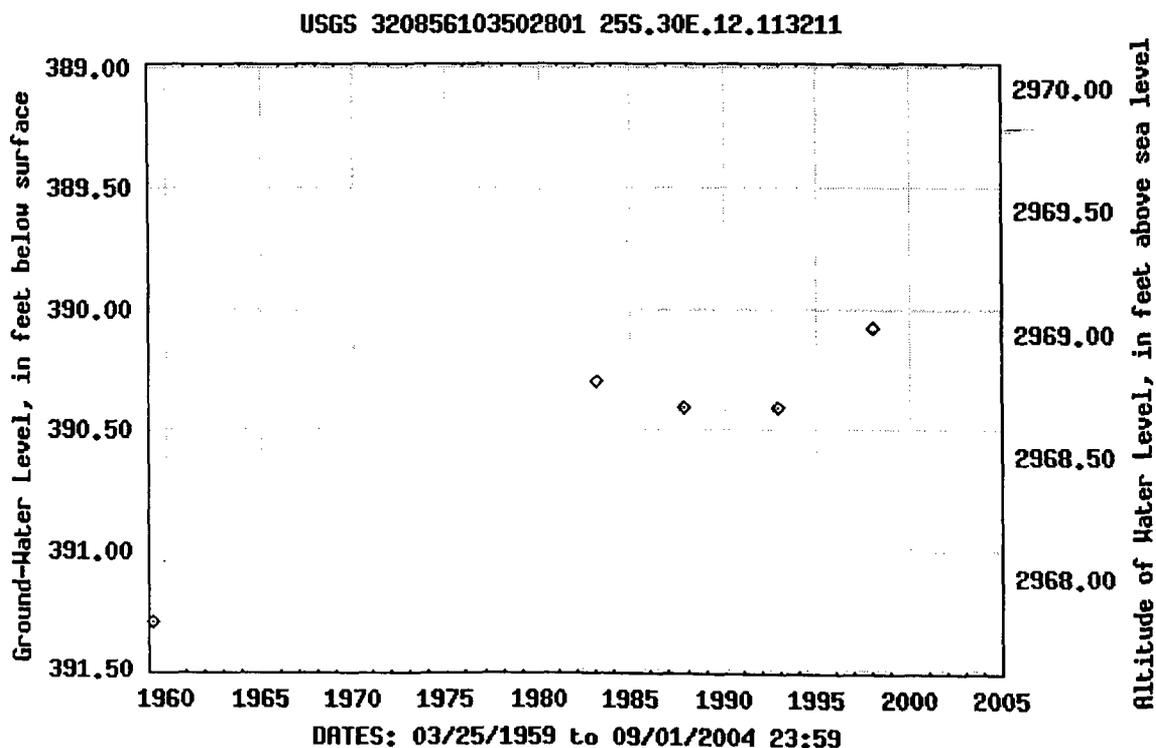
Output formats

Table of data

Tab-separated data

Graph of data

Reselect period



Breaks in the plot represent a gap of at least one calendar year between two consecutive points.

# 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	
32:08:56	N	103:50:28	W
Lat2		Lon2	
32:12:55.9	N	103:48:53.3	W

Output

Course 1-2	Course 2-1	Distance
18.467377	198.48138	4.21558142

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	

DISTRICT I  
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II  
811 South First, Artesia, NM 88210

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

DISTRICT IV  
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico  
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

OIL CONSERVATION DIVISION

2040 South Pacheco  
Santa Fe, New Mexico 87504-2088

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
	96046	POKER LAKE-DELAWARE NORTH WEST
Property Code	Property Name	Well Number
30489	PATTON "18" FEDERAL	4
OGRID No.	Operator Name	Elevation
17891	POGO PRODUCING COMPANY	3514'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	18	24 S	31 E		1980	SOUTH	1980	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	Joint or Infill	Consolidation Code	Order No.
40			

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>LOT 1 - 41.87 AC.</p> <p>LOT 2 - 41.94 AC.</p> <p>LOT 3 - 42.00 AC.</p> <p>LOT 4 - 42.07 AC.</p> <p>EXHIBIT "A"</p>	<p>Lot.: N32°12'55.9" Long.: W103°48'53.3"</p>		<p>3520.9'</p> <p>3516.0'</p> <p>3514.4'</p> <p>3512.1'</p> <p>1980'</p> <p>1980'</p>	<p>OPERATOR CERTIFICATION</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 Title</p> <p>04/09/04 Date</p>
				<p>SURVEYOR CERTIFICATION</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>APRIL 5, 2004 Date Surveyed</p> <p>Signature &amp; Seal of Professional Surveyor</p> <p><i>Gary L. Jones</i></p> <p>WFO No. 4155</p> <p>Certificate No. 2002 Gary L. Jones 1977</p> <p>BASIN SURVEYS</p>

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

Patton #1  
 Tank Batt.

985'

Prop. Lease Rd.

3520.9'

600'

3516.0'

150' NORTH  
 OFF SET  
 3514.9'

POGO PRODUCING COMPANY  
 PATTON "18" FED. #4  
 ELEV. - 3514'

150' WEST  
 OFF SET  
 3514.4'

Lat.-N 32°12'55.9"  
 Long-W 103°48'53.3"

150' EAST  
 OFF SET  
 3513.9'

150' SOUTH  
 OFF SET  
 3513.1'

600'

600'

3514.4'

600'

3512.1'



SCALE: 1" = 100'



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.

**POGO PRODUCING CO.**

REF: PATTON "18" FED. #4 / Well Pad Topo

THE PATTON "18" FED. No. 4 LOCATED 1980' FROM  
 THE SOUTH LINE AND 1980' FROM THE EAST 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: 4155

Drawn By: K. GOAD

Date: 04-06-2004

Disk: KJG CD#4 - 4155A.DWG

Survey Date: 04-05-2004

Sheet 1 of 1 Sheets



APPLICATION TO DRILL

POGO PRODUCING COMPANY  
 PATTON "18" FEDERAL #4  
 UNIT "J" 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: 1980' FSL & 1980' FEL SECTION 18 T24S-R31E EDDY CO. NM
2. Elevation above Sea Level: 3514' 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
-------------	-----
8. Casing program:

Hole size	Interval	OD of casing	Weight	Thread	Collar	Grade
25"	0-40	20"	NA	NA	NA	Conductor
17½"	0-800' <i>Q30</i>	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 #4  
 UNIT "J" 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, + 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 perssure 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>A30</sup>	8.4-8.7	29-34	NC	Fresh water spud mud add paper to control seepage.
<sup>A30</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 #4  
UNIT "J" 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<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 PRODUCTION COMPANY  
PATTON"18" FEDERAL # 4  
UNIT "J" SECTION 18  
T24S-R31E EDDY CO. NM

1. EXISTING ROADS & PROPOSED ROADS: Area maps; Exhibit "B" is a reproduction of a County General Hi-way Map. Exhibit "C" is a reproduction of a USGS Topographic Map, showing existing and proposed roads. All existing roads will be maintained in a condition equal to or better than current conditions. Any new roads will be constructed to BLM specifications.
  - A. Exhibit "A" shows the proposed well site as staked.
  - B. From Hobbs New Mexico take U.S. Hi-way 62-180 West toward Carlsbad New Mexico go approximately 40 miles to the WIPP road, turn Left on to the WIPP road go South 13 miles to CR-802, turn Right go go 4.2 miles to State Hi-way 128, turn Left go 2.4 miles to CR-787 ( Twin Wells Road) turn Right go 5.6 miles, bear Right (West) go .4 miles to well # 1 turn Left (South) go 1000' to location on the East side of road.
  - C. Exhibit "F" shows the routes of new roads, existing roads, proposed powerline, and proposed flowlines.
2. PLANNED ACCESS ROADS: Approximately 1000' of new road will be constructed.
  - A. The access roads will be crowned and ditched to a 12' wide travel surface with a 40' Right-of-Way.
  - B. Gradient of all roads will be less than 5.00%.
  - C. If turn-outs are necessary they will be constructed.
  - D. If needed roads will be surfaced with a minimum of 4" of caliche. This material will be obtained from a local source.
  - E. Center-line for new roads will be flagged. Earth-work will be will be done as field conditions require.
  - F. Culverts will be placed in the access road if they are necessary. The roads will be constructed to utilize low water crossings for drainage as required by topography.
3. LOCATIONS OF EXISTING WELLS IN A ONE MILE RADIUS. EXHIBIT "A-1"
  - A. Water wells - One approximately .6 miles Northeast of location
  - 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"

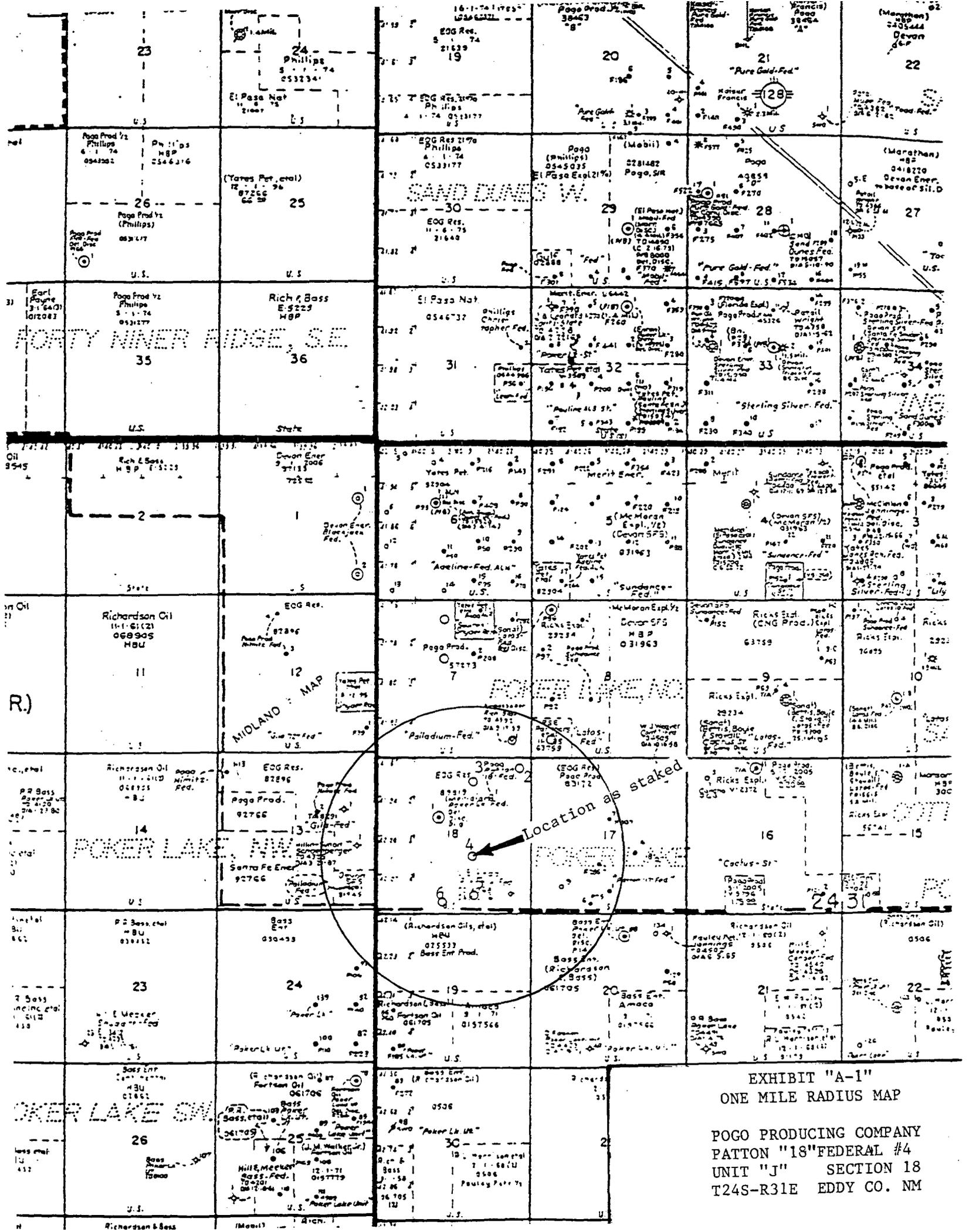
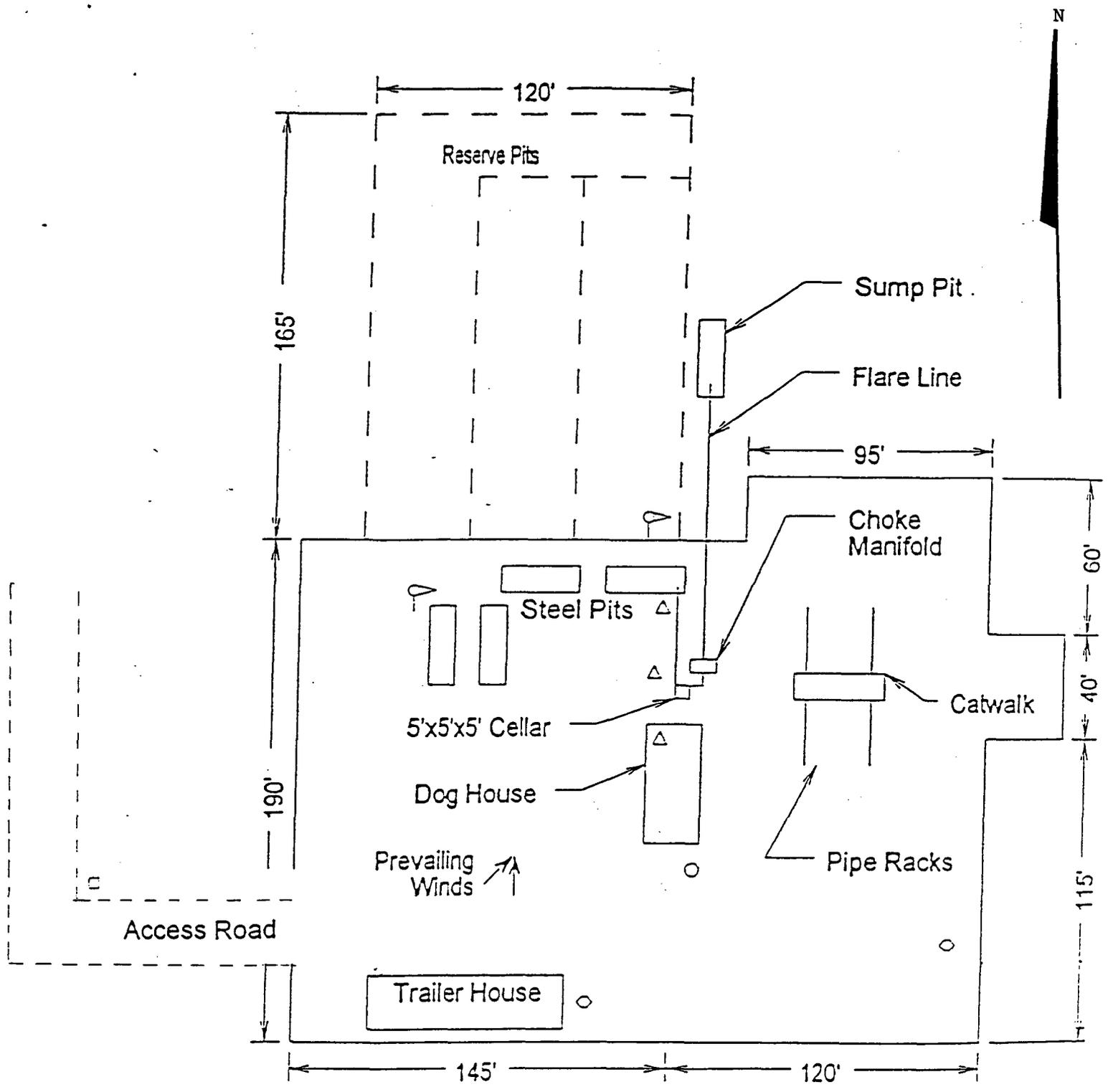


EXHIBIT "A-1"  
ONE MILE RADIUS MAP

POGO PRODUCING COMPANY  
PATON "18" FEDERAL #4  
UNIT "J" SECTION 18  
T24S-R31E EDDY CO. NM

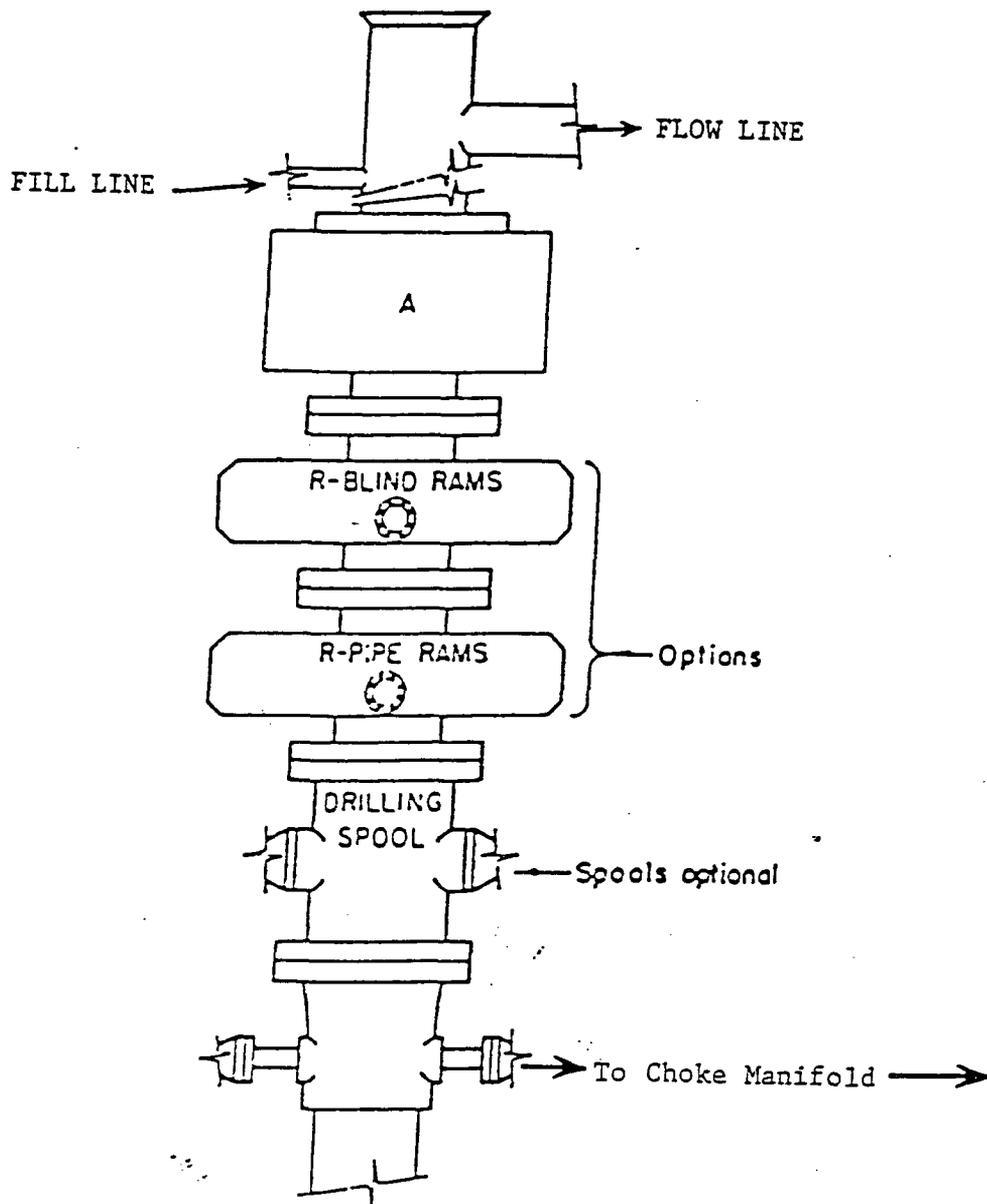




- ⊙ Wind Direction Indicators (wind sock or streamers)
- △ H2S Monitors (alarms at bell nipple and shale shaker)
- Briefing Areas
- Remote BOP Closing Unit
- Sign and Condition Flags

EXHIBIT "D"  
RIG LAY OUT PLAT

POGO PRODUCING COMPANY  
PATTON "18" FEDERAL #4  
UNIT "J" SECTION 18  
T24S-R31E EDDY CO. NM

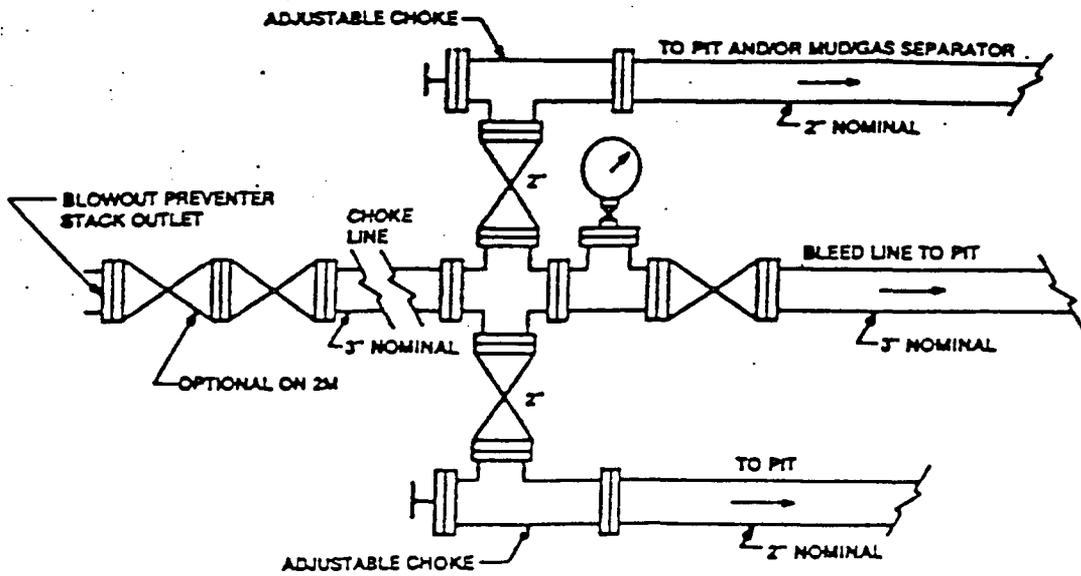


**ARRANGEMENT SRRA**

900 Series  
3000 PSI WP

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

POGO PRODUCING COMPANY  
PATTON "18" FEDERAL #4  
UNIT "J" SECTION 18  
T24S-R31E EDDY CO. NM



Typical choke manifold assembly for 3M WP system

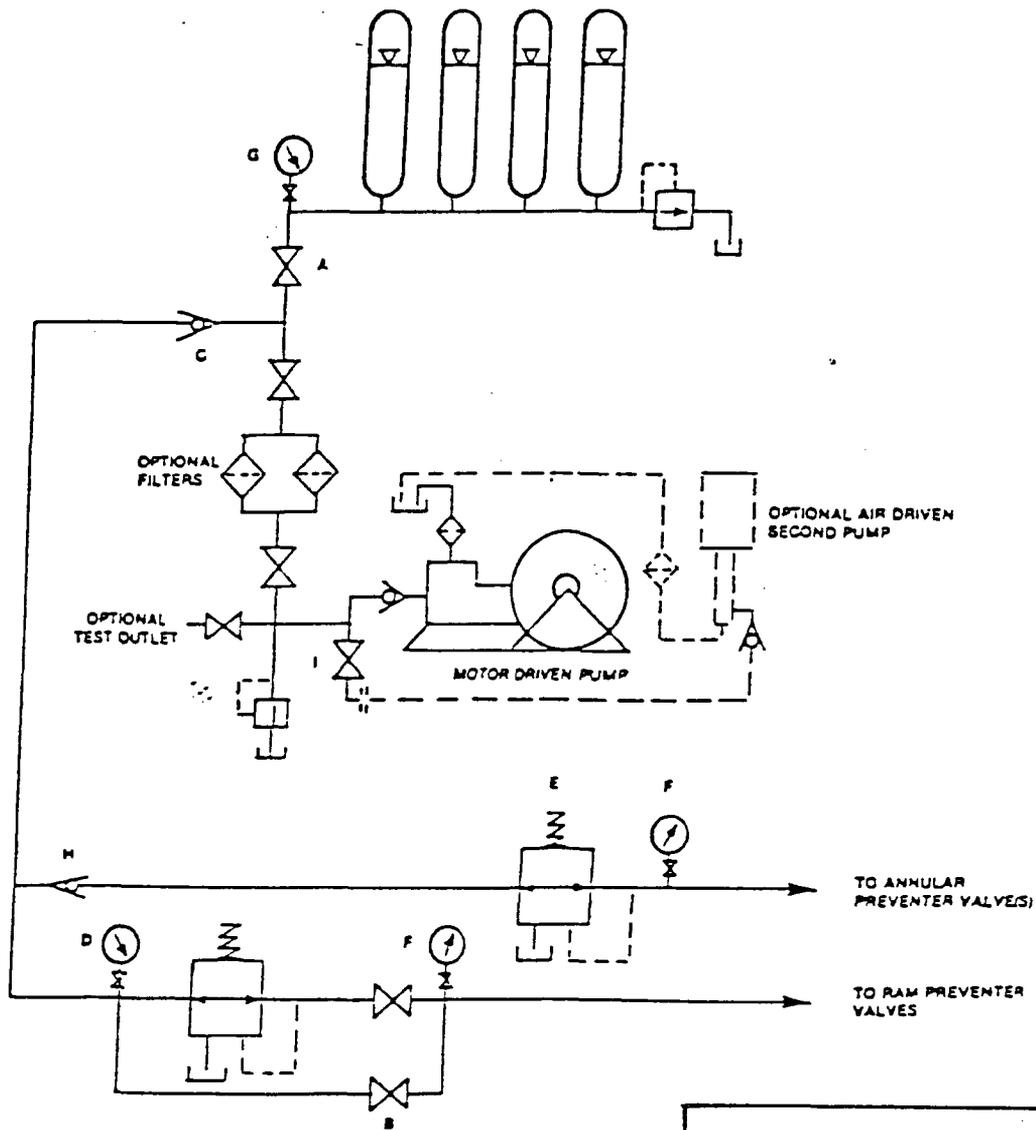


EXHIBIT "E-1"  
 CHOKE MANIFOLD & CLOSING UNIT

POGO PRODUCING COMPANY  
 PATTON "18" FEDERAL #4  
 UNIT "J" SECTION 18  
 T24S-R31E EDDY CO. NM