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PROVED BY	Mary J. Rugwell	FI FI	ELD M		ER	AUG	2-9-2002	Q.M)
		*See Instruction	s On Rev	erse Side				<u> </u>

18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the

State of New Mexico DISTRICT I Form C-102 P.O. Box 1980, Hobbs, NM 88241-1980 Energy, Minerals and Natural Resources Department. Revised February 10, 1994 DISTRICT II Submit to Appropriate District Office OIL CONSERVATION DIVISION State Lease - 4 Copies P.O. Drawer DD, Artesia, NM 88211-0719 Fee Lease - 3 Copies P.O. Box 2088 DISTRICT III Santa Fe, New Mexico 87504-2088 1000 Rio Brazos Rd., Aztec, NM 87410 DISTRICT IV WELL LOCATION AND ACREAGE DEDICATION PLAT P.O. BOX 2088, SANTA FE, N.M. 87504-2088 □ AMENDED REPORT API Number Pool Code Pool Name 59470 25~ TONTO-SEVEN RIVERS Property Code Property Name Well Number 314 BUFFALO FEDERAL 2 OGRID No. **Operator** Name Elevation 17891 POGO PRODUCING COMPANY 3691 Surface Location UL or lot No. Section Township Range Lot Idn Feet from the North/South line Feet from the East/West line County M 11 19-S 33-E 330 SOUTH 330 WEST 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 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 OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. una 0 ienature Joe T // Jsnica Printed Name GEODETIC COORDINATES NAD 27 NME AGent Title 06/22/02 Y = 607515.9X = 713130.1LAT. 32'40'05.70"N Date LONG. 103'38'26.67"W 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 supervison, and that the same is true and correct to the best of my belief. JUNE 12, 2002 Date Surveyed A.W.B. Signature & Seal of Professional Surveyor 3689.9' 3692.0 0 13/02 3697.3' **L J** 3687.6 SEE DETAIL DETAIL RONALD 12 EHDSON 3239 GABY EIDSON 12641

VICINITY MAP



SCALE: 1'' = 2 MILES

 SEC.
 11
 TWP.
 19-S
 RGE.
 33-E

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

 COUNTY\_\_\_\_\_\_
 LEA

DESCRIPTION <u>330' FSL & 330' FWL</u> ELEVATION <u>3691'</u>

OPERATOR <u>POGO PRODUCING COMPANY</u> LEASE <u>BUFFALO FEDERAL</u> JOHN WEST SURVEYING HOBBS, NEW MEXICO (505) 393-3117 LOCATION VERIFICATION MAP



HOBBS, NEW MEXICO (505) 393-3117

U.S.G.S. TOPOGRAPHIC MAP LAGUNA GATUNA NW. N.M.

LEASE\_\_\_\_\_BUFFALO FEDERAL

DESCRIPTION 330' FSL & 330' FWL

OPERATOR POGO PRODUCING COMPANY

## APPLICATION TO DRILL

POGO PRODUCING COMPAMY BUFFALO FEDERAL # 2 UNIT "M" SECTION 11 T19S-R33E LEA CO. NM

In response to questions asked under Section II of Bulletin NTL-6 the following information on the above well is provided for your consideration.

1. Location: 330' FSL & 330' FWL SEC. 11 T19S-R33E LEA CO. NM

2. Elevation above Sea Level: 3691' GR.

3. Geologic name of surface formation: Quaternery 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: 3900'

6. Estimated tops of geological markers:

Rustler Anhydrite	1 / 5 6 1		
	1450'	Yates	3250'
Salado Salt	1620'	Seven Dimen	
Tansill	22221	Seven Rivers	3550'
	3030'	· · · ·	

7. Possible mineral bearing formations:

Yates	0i1
Seven Rivers	0i1

8. Casing program:

Hole size	Interval	OD of casing	Weight	Thread	Collar	Grade
25"	0-40	20"	NA	NA	37.4	
124"	0-1500'	8 5/8"	32	8-R	NA	Conductor
7 7/8"	0-3900'	4 <sup>1</sup> 2''	11.6	8-R	ST&C	J-55
					ST&C	J-55

POGO PRODUCING COMPAMY BUFFALO FEDERAL # 2 UNIT "M" SECTION 11 T19S-R33E LEA CO. NM

9. <u>CEMENTING & SETTING DEPTH:</u>

20"	Conductor	Set 40' of 20" conductor pipe and cement to surface with Redi-mix.
8 5/8"	Surface	Set 1500' of 8 5/8" 32# J-55 ST&C casing. Cement with 800 Sx. of Class "C" cement + 2% CaCl + ½# Flocele/Sx. Circulate cement to surface.
4 <sup>1</sup> <sub>2</sub> ''	Production	Set 3900' of $4\frac{1}{2}$ " 11.6# J-55 ST&C casing. Cement with 900 Sx. of Class "C" cement + 2% CaCl + $\frac{1}{2}$ # Flocele/Sx. estimate top of cement 1000' from surface.

- 10. <u>PRESSURE CONTROL EQUIPMENT:</u> 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 nippled up on the 8 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 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.
- 11. PROPOSED MUD CIRCULATING SYSTEM:

. . . . . . . . . . . . . . . . .

DEPTH	MUD WT.	VISC.	FLUID LOSS	TYPE SYSTEM
40-1500'	8.4-8.7	29-34	NC	Fresh water mud system use paper to control seepage and high viscosity sweeps to clean hole.
1500-3900'	8.4-8.7	29-38	NC	Fresh water mud system, use paper to control seepage & high viscosity sweeps to clean hole.

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 COMPAMY BUFFALO FEDERAL # 2 UNIT "M" SECTION 11 T19S-R33E LEA CO. NM

# 12. LOGGING, CORING, AND TESTING PROGRAM:

A. Open hole logs: Dual Induction SNP, LDT, Gamma Ray, Caliper from TD to 1500' B. Run Gamma Ray Neutron from 1500' to surface.

C. No cores or DST's are planned at this time.

D. No mud logger is planned.

## 13. POTENTIAL HAZARDS:

No abnormal pressures or temperatures are expected. There is no known presence of  $H^2S$  in this area. If  $H^2S$  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 1800 PSI, and Estimated BHT 125°.  $H^2S$  monitoring equipment will be placed on hole below surface casing.

# 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 <u>15</u> days. If production casing is run then an additional <u>30</u> 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 <u>Seven Rivers</u> formation will be perforated and stimulated in order to establish production. The well will be swab tested and potentialed 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 hazzards
  - C. Proper use of safety equipment and life support systems.
  - D. Principle and operation of H2S 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.  $H_2S$  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, H2S 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. 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.

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C. 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  $H_2S$  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 seperator will be brought into service along with H<sub>2</sub>S scavengers if necessary.

#### SURFACE USE PLAN

POGO PRODUCING COMPANY BUFFALO FEDERAL # 2 UNIT "M" SECTION 11 T19S-R33E LEA CO. NM

- EXISTING 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 location of the proposed well site as staked.

B. From Hobbs take U.S. Hi-way 62-180 West 15 miles to junction with State Hi-way 529, bear Right on 529 go 13.5 miles to Milepost 17 turn South go .4 mi turn West go .9 mi bear Left follow road 2.8 mi bear Left go 1.1 mi turn Right go .6 mi turn Left go .5 mi bear Left go .6+ mi turn Right (South) go 1.7 mi turn Left and follow new road 800' to location.

- C. Construct powerlines along road R-O-W to wells, see Exhibit "F".
- 2. PLANNED ACCESS ROADS: Approximately 800' of new road will be constructed.
  - 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 the roads will be surfaced to the BLM requirements with material obtained from from a local source.
  - E. Center line for the new access road will be flagged.
  - F. The road will be constructed to utilize low water crossings where drainage currently exist, and Culverts will be installed where necessary.
- 3. EXHIBIT "A-1" SHOWS WELLS AND DRY HOLES WITHIN A 1 MILE RAIDUS.

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"

POGO PRODUCING COMPANY BUFFALO FEDERAL # 2 UNIT "M" SECTION 11 T19S-R33E LEA CO. NM

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 "F".

# 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 quaters 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 furthed 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 pips 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.

POGO PRODUCING COMPANY BUFFALO FEDERAL # 2 UNIT "M" SECTION 11 T19S-R33E 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 & 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

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.

POGO PRODUCING COMPANY BUFFALO FEDERAL # 2 UNIT "M" SECTION 11 T19S-R33E LEA CO. NM

- 11. OTHER INFORMATION:
  - A. Topography consists of sand dunes with a slight dip to the West. Deep sandy soil supports shinnery oak, native grasses, and an occasional mesquite tree.
  - 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. <u>CERTIFICATION</u>: I hereby certify that I, or persons under my direct supervision have inspected the proposed drill site and access roads, and that I am fimiliar 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 <sup>2</sup> with the operations proposed herein will be performed by POGO PRODUCING COMPANY it's contractors/subcontractors is in compformity 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.

anera NAME 06/22/02 DATE Agent TITLE

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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 BUFFALO FEDERAL # 2 UNIT "M" SECTION 11 T1-S-R33E LEA CO. NM









FIGURE K6-1. The schematic sketch of an accumulator system shows required and optional components.

> EXHIBIT "E-1" CHOKE MANIFOLD & CLOSING UNIT POGO PRODUCING COMPANY BUFFALO FEDERAL # 2

BUFFALO FEDERAL # 2 UNIT "M" SECTION 11 T19S-R33E LEA CO. NM

