·Form 3160-3 (July 1992)

<u>7 7/8"</u>

N.M. Oil Copper, py Varbis

UNITED STATES 301 W. Grand A

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

0872	DEPARTMEN BUREAU OF	T OF THE I	GEME	resia, na	1 88	210	5. LEASE DESIGNAT NM-69369	ION AND BERIAL NO.
APPL	ICATION FOR P	ERMIT TO	DRIL	L OR DEE	PEN		6. IF INDIAN, ALLO:	THE OR TRIBE NAME
b. TYPE OF WELL	ALL 🖎	DEEPEN					7. UNIT AGREEMEN	
OIL COMELL CONTRACTOR	AETT OTHER	·		ONE	M ULTIP Zone		8. FARM OR LEASE HAVE SUNDANCE "1"	FEDERAL # 9
POGO PRODUCIN	IG COMPANY	(RICHARD	WRI	GHT 915-685	5-8140)	9. AF WELLNO.	
P.O. BOX 1034	0 MIDLAND, TEX	AS 79702-73	40	(915-695-8	100)		30- 015-	33033
L LOCATION OF WELL (I	deport location clearly and	in accordance wi	th any	State requiremen	ts.")		MESA VERDE-B	ONE SPRING
660' FSL & 19	980' FWL SECTION • SAME					eu.	SECTION 1 T	
4. DISTANCE IN MILES	AND DIRECTION FROM NEA			ETARY'S I	POTA.	311	12. COUNTY OR PART	SE 13. STATE
Approximatel	y 30 miles East	of Carlsbad	New	Mexico			EDDY CO.	NEW MEXICO
5. DISTANCE FROM PROP- LOCATION TO NEARES PROPERTY OR LEASE: (Also to Dearest dri	T LINE, FT.	6601		o. of acres in 1	LEASE		OF ACRES ASSIGNED ELS WELL 40	,
S. DISTANCE FROM PROI TO NUMBERS WELL, E OR APPLIED FOR, ON TH	RILLING, COMPLETED.	320'		ROPOSED DEPTH 8650'			ET OF CABLE TOOLS TARY	
1. ELEVATIONS (Show wh	ether DF, RT, GR, etc.)	3554' GR.				-	WHEN APPR	WORE WILL STARTS
* Notified Pe	go 8125103:	PROPOSED CASI	NG AN	D CEMENTING F	ROGRAM	[•	
SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER F	007	SETTING DE			QUANTITY OF CE	· =
25"	Conductor	NA		40'			to surface w	
17½"	J-55 13 3/8"	54.5			2-1020		. circulate t	
11"	7-55 8 5/8"	32		4450 '	- 1	1200 S	x. " "	TI TELL

- 1. Drill 25" hole to 40'. Set 40' of 20" conductor and cement to surface with Redi-mix.
- 2. Drill $17\frac{1}{2}$ " hole to 850'. Run and set 850' of 13 3/8" J-55 54.5# ST&C casing. Cement with 900 Sx. of Class "C" cement + 2% CaCl, + 1/4# Flocele/Sx. circulate cement to surface.

86501

- 3. Drill 11" hole to 4450'. Run and set 4450' 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 8650'. Run and set $5\frac{1}{2}$ " casing as follows: 2650' of $5\frac{1}{2}$ " 17# J-55 LT&C, 5000' of $5\frac{1}{2}$ " 15.5# J-55 LT&C, 1000' of $5\frac{1}{2}$ " 17# J-55 LT&C. Cement in 3 stages. DV Tools at 5800' & 3800' ±. Cement 1st stage with 500 Sx. of Class "H" Premium cement + additives, ment 2nd stage with 300 Sx of Class "C" cement + additives, Cement 3rd stage with 450 Sx. of Class "C" cement + additives. Circulate cement to APPROVAL SUBJECT TO Surface.

CARLSBAD CONTROLLED WATER BASIN

GENERAL REQUIREMENTS

Last Comer	Agent 345678970	08/19/03
This space for Federal or Spate office use)	TITLE A S	
RIVIT NO	APPENDATE DATE DE 2003	74

*See Instructions On Reverse Side

"DISTRICT I P.O. Box 1980, Hobbs, NM 88341-1980

State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102 Revised February 10, 1994

DISTRICT II P.O. Drawer DD, Artonia, NM 68811-0719

OIL CONSERVATION DIVISION

Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

DISTRICT III 1000 Rio Brazos Rd., Astec, NM 87410 P.O. Box 2088
Santa Fe, New Mexico 87504-2088

DISTRICT IV

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number Pool Code		Pool Name		
	96229	MESA VERDE - BONE SPRNG		
Property Code	Prop SUNDANCI	Well Number 9		
OGRID No. 17891	POGO PRODUC	Elevation 3554		

Surface Location

ſ	UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
İ	N	1	24-S	31-E		660'	SOUTH	1980'	WEST	EDDY

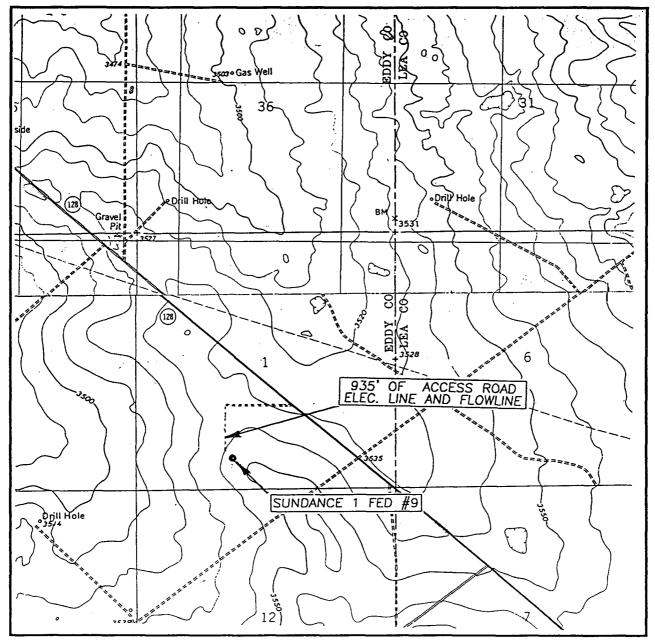
Bottom Hole Location If Different From Surface

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 o	r Infill Co	nsolidation	Code Or	der 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 4	LOT 3	LOT 2	LOT 1	OPERATOR CERTIFICATION
		-		I hereby certify the the information contained herein is true and complete to the
	1 1			best of my knowledge and belief.
		1		
		1		Chat Clayer
39.95 AC	39.96 AC	39.98 AC	39.99 AC	Signature
				Joe T. Janica
	1	1		Printed Name
	1	1		Agent
				08/19/03
	1	1		Date
				SURVEYOR CERTIFICATION
	OFFICE COORDINATES	-	·	I hereby certify that the well location shown
	NAD 27 NME	•		on this plat was plotted from field notes of
	Y = 451858.6 N X = 685560.6 E			actual surveys made by me or under my supervison, and that the same is true and
	LAT. 32'14'27.06"N LONG. 103'43'59.42"W			correct to the best of my belief.
	LONG. 103 43 59.42 W			July 29, 2003
				Date Surveyed G. E/D. A.W.B. Signature & Seal of Solution Professional Surveyor
-				Signature Sand of Solding
	3547.1'3554.1'	1		The state of the s
	3547.1' 3554.1'			hare 6 Ecom #31/03
1980' —	o	1		6. 03.11.0802 至
	3550.4' 8 3561.7'	1		Certificate No. BONATO 1 EDSON 3239
	3550.4'			him ROFEART RIDSON 12641
				.adhiwane.

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

SEC. 1 TWP. 24-S RGE. 31-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 660' FSL & 1980' FWL

ELEVATION_____3554'

OPERATOR POGO PRODUCING COMPANY

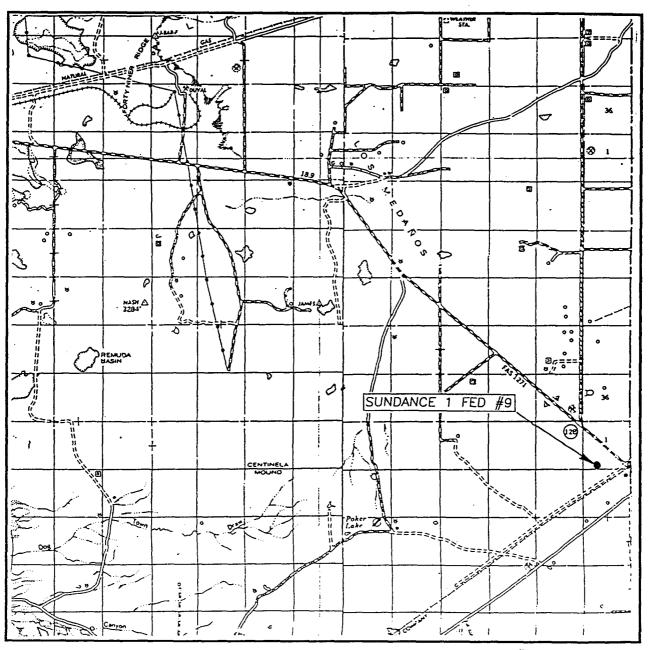
LEASE SUNDANCE 1 FEDERAL

U.S.G.S. TOPOGRAPHIC MAP PADUCA BREAKS NW, BOOTLEG RIDGE, N.M. CONTOUR INTERVAL: 10' PADUCA BREAKS NW, N.M. BOOTLEG RIDGE, N.M.

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



VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 1 TWP. 24-S RGE. 31-E
SURVEYN.M.P.M.
COUNTYEDDY
DESCRIPTION 660' FSL & 1980' FWL
ELEVATION 3554'
OPERATOR POGO PRODUCING COMPANY
LEASE SUNDANCE 1 FEDERAL

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

APPLICATION TO DRILL

POGO PRODUCING COMPANY
SUNDANCE "1" FEDERAL # 9
UNIT "N" SECTION 1
T24S-R31E EDDY CO. NM

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

- 1. Location of well: 660' FSL & 1980' FWL SECTION 1 T24S-R31E EDDY CO. NM
- 2. Ground Elevation above Sea Level: 3554
- 3. Geological age of surface formation: Quaternary Deposits:
- 4. <u>Drilling tools and associated equipment:</u> Conventional rotary drilling rig using drilling mud as a circulating medium to remove solids from hole.
- 5. Proposed drilling depth: 8650'
- 6. Estimated tops of geological markers:

Basal Anhydrite	4340	Cherry Canyon	5443
Delaware Lime	4580 †	Brushy Canyon	6680'
Bell Canyon	4600	Bone Spring	8410'

7. Possible mineral bearing formations:

Bone Spring

0il

8. Casing Program:

Hole Size	Interval '	OD of Casing	Weight	Thread	Collar	Grade
25"	0-40	20"	NA	NA	NA	Conductor
17½"	0-850'	13 3/8"	48#	8-R	ST&C	H-40
11"	0-4450	8 5/8"	32#	8-R	ST&C'	J-55
7 7/8"	0-8650'	5½"	17 & 15.5	8-R	LT&C	J-55

APPLICATION TO DRILL

POGO PRODUCING COMPANY
SUNDANCE "1" FEDERAL # 9
UNIT "N" SECTION 1
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 850' of 13 3/8" 48# H-40 ST&C casing. cement with 900 Sx. of Class "C" cement + additives, circulate cement to surface.
8 5/8"	Intermediate	Set 4450' of 8 5/8" 32# J-55 ST&C casing. Cement with 1200 Sx. of Class "C" cement + additives, circulate cement to surface.
5½"	Production	Set 8650' of 5½" casing as follows: 2650' of 5½" 17# J-55 LT&C, 5000' of 5½" 15.5# J-55 LT&C, 1000' of 5½" 17# J-55 LT&C casing. Cement in 3 stages DV Tools at 5800' & 3800'±. lst stage cement with 500 Sx. of Class "H" + additives, 2nd stage cement with 300 Sx. of Class "C" + additives, 3rd stage cement with 450 Sx. of Class "C" + additives. Circulate cement to 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 nippled 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 LOS	S TYPE MUD SYSTEM
40-850'	8.4-8.7	29-32	NC	Fresh water spud mud add paper to control seepage.
850-4450 '	10.0-10.2	29-38	NC	Brine water addpaper to control seepage, use high viscosity sweeps to clean hole.
4450-8650'	8.4-8.7	29-40	*	Fresh water system add Polymer to mud system if water loss control is desired. Use high vis- cosity sweeps to clean
* If water lo	ss control is re	equired in order	to log	hole.

* If water loss control is required in order to log well, run DST's and run casing reduce water with a Polymer 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 SUNDANCE "1" FEDERAL # 9 UNIT "N" SECTION 1 T24S-R31E EDDY CO. NM

12. LOGGING, CORING, AND TESTING PROGRAM:

- A. Open hole logs: Run Dual Induction, SNP, LDT, CNL, Gamma Ray Caliper from TD back to 8 5/8" casing shoe. Run Cased Hole Gamma Ray, Neutron from 8 5/8" casing shoe back to surface.
- B. Mud logger may be rigged up on hole at 4450' and remain on hole to TD.
- C. No DST's or cores are planned at this time.

13. POTENTIAL HAZARDS:

No abnormal pressures or temperatures are expected. There is no known presence of $\rm H^2S$ in this area. If $\rm H^2S$ 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 $\underline{}$ PSI, and Estimated BHT $\underline{}$ PSI, and

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 30 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 <u>Bone Springs</u> formation will be perforated and stimulated in order to establish production. The well will be swab tested and potentialed as an oil well.

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

- 1. All Company and Contract personnel admitted on location must be trained by a qualified H₂S safety instructor to the following:
 - A. Characteristics of H₂S
 - 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. H₂S Detection and Alarm Systems
 - A. H₂S 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" & "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.

- 8. Drilling contractor supervisor will be required to be familiar with the effects H2S has on tubular goods and other mechanical equipment.
- 9. If H_2S 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_2S scavengers if necessary.

- 1. 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 New Mexico take U.S. Fi-way West toward Carlsbad New Mexico go 38 miles to CO-29, turn South go 21.5 miles:to State Hi-way 128 turn Left (South-East) on State Hi-way 128, go .8 miles, turn Right (South) follow lease road 900'± to Pogo well # 2 turn Left (South) go 1250' to location.
 - C. Exhibit "F" shows where flowlines and powerlines may be constructed to produce this lease.
- 2. PLANNED ACCESS ROADS: Approximately 1250' 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 Mone known
 - D. Producing wells As shown on Exhibit "A-1"
 - E. Abandoned wells As shown on Exhibit "A-1"

POGO PRODUCING COMPANY
SUNDANCE "1" FEDERAL # 9
UNIT "N" SECTION 1
T24S-R31E EDDY 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
SUNDANCE "1" FEDERAL # 9
UNIT "N" SECTION 1
T24S-R31E EDDY CO. NM

J. WELL SILE 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.

POGO PRODUCING COMPANY
SUNDANCE "1" FEDERAL # 9
UNIT "N" SECTION 1
T24S-R31E EDDY CO. NM

11. OTHER INFORMATION:

- A. Topography consists of low lying sand dunes with a slight dip to the West. The deep sandy soil supports shinnery oak, native grasses, and an occasional mesquite tree.
- B. The surface is owned by The U.S. Department of Interior and is administered by The Bureau of Land Management. The surface is used for the grazing of livestock and the production of Oil & Gas.
- C. An archaeological survey has been done and is on file in the Carlsbad Field Office of The Bureau of Land Management.
- D. There are no dwellings in the near vicinity of this location.

12. OPERATIOR'S REPRESENTIVES:

Before Construction:

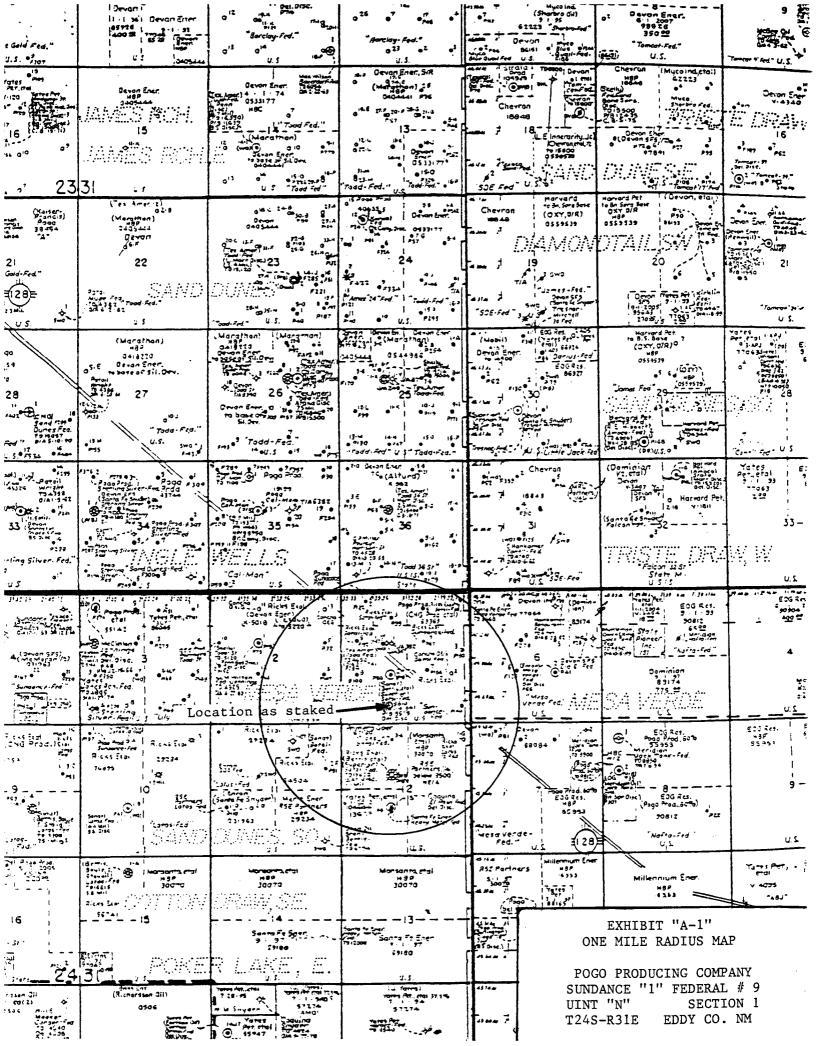
TIERRA EXPLORATION, INC. P.O. BOX 2188
HOBBS, NEW MEXICO 88241
OFFICE Ph. 505-391-8503
JOE T. JANICA

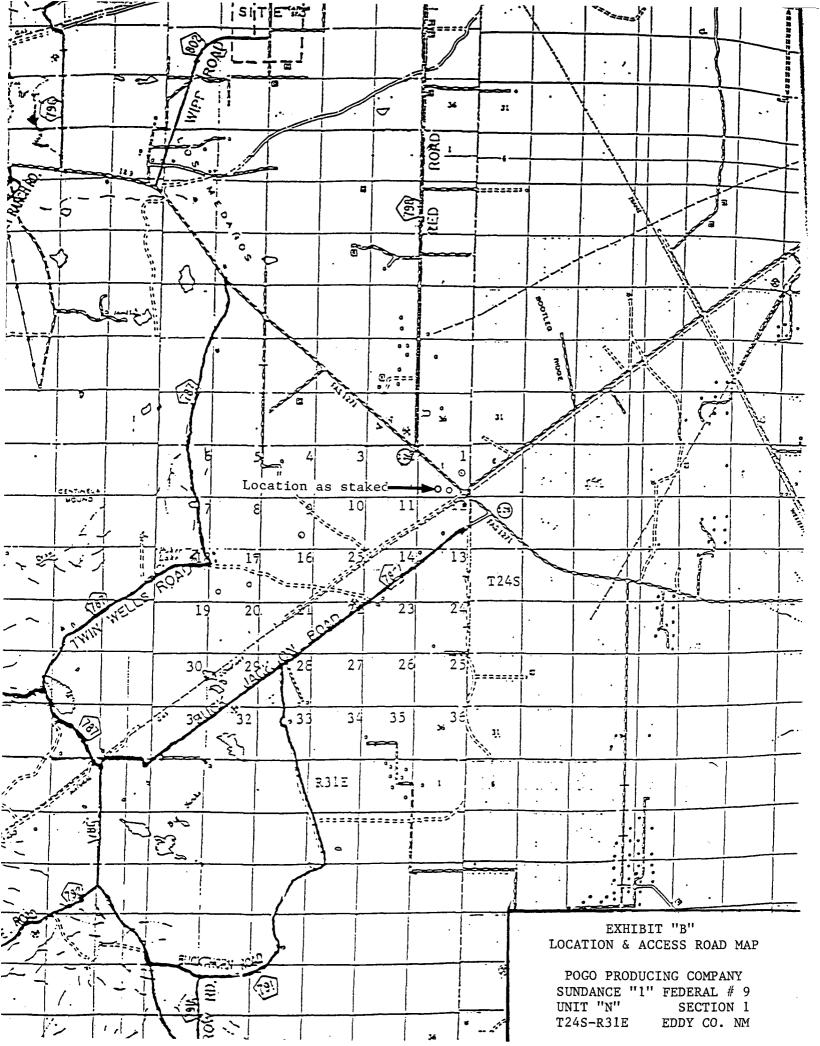
During and after Construction:

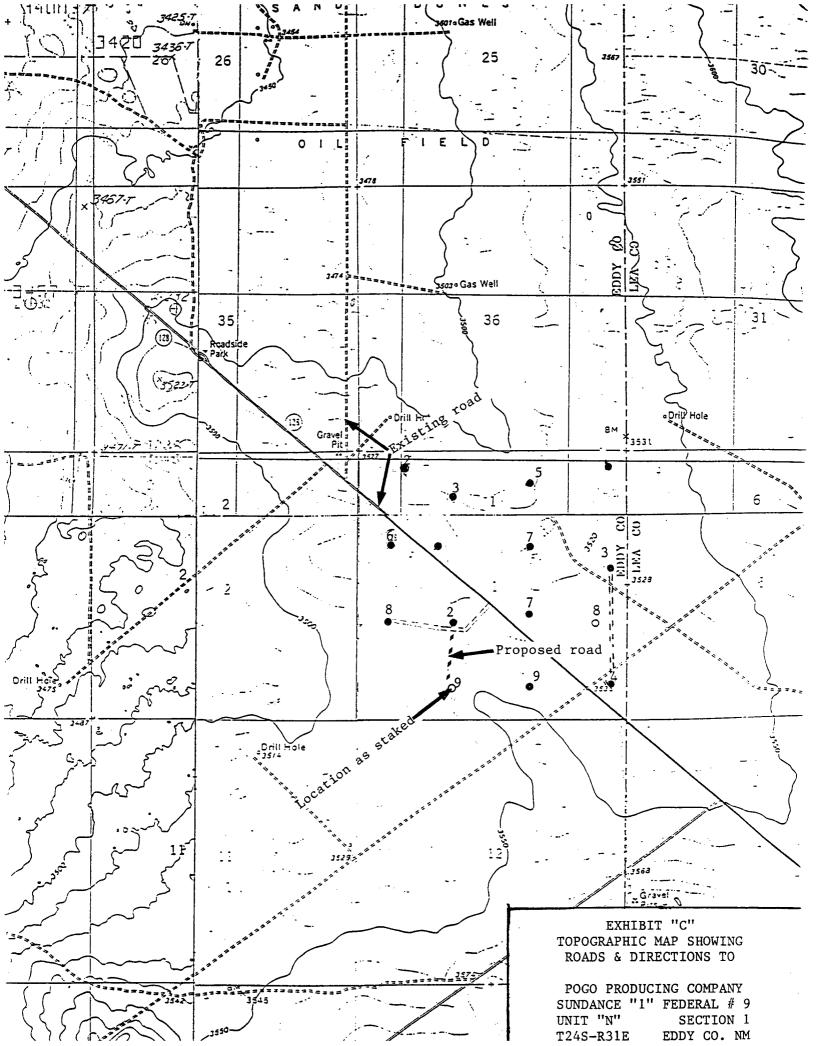
POGO PRODUCING COMPANY P.O. BOX 10340 MIDLAND, TEXAS 79702-7340 RICHARD WRIGHT OFFICE Ph. 432-685-8140

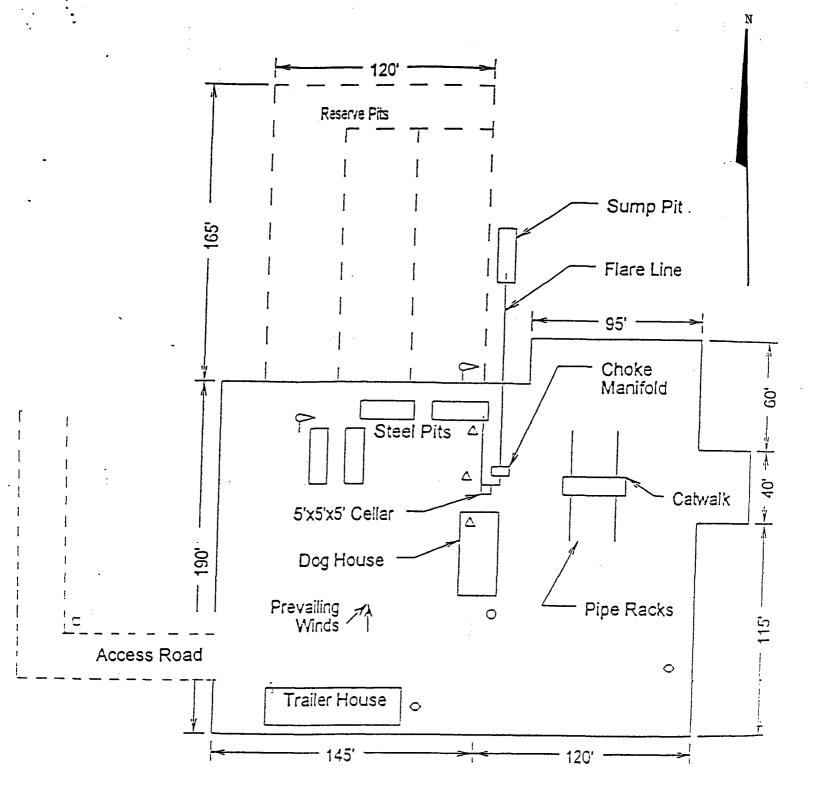
13. CERTIFICATION: I hereby certify that I, or persons under my direct supervision have inspected the proposed drill site and the access roads, and that I am familiar with the conditions which currently exist, that the statements made in this plan are to the best of my knowledge are true and correct,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

NAME : O8/19/03 DATE : O8/19/03 Agent



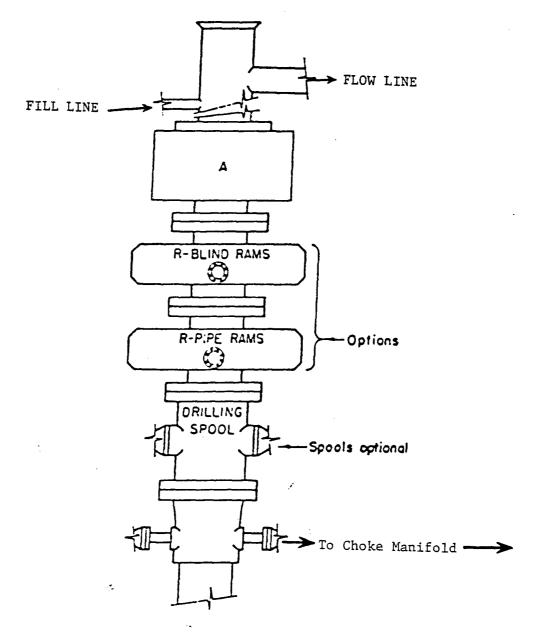






- Wind Direction Indicators (wind sock or streamers)
- A H2S Monitors
 (alarms at bell nipple and shale shaker)
- Briefing Areas
- Remote EOP Closing Unit
- Sign and Condition Flags

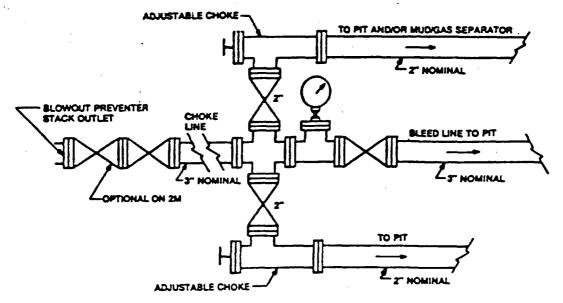
EXHIBIT "D"
RIG LAY OUT PLAT



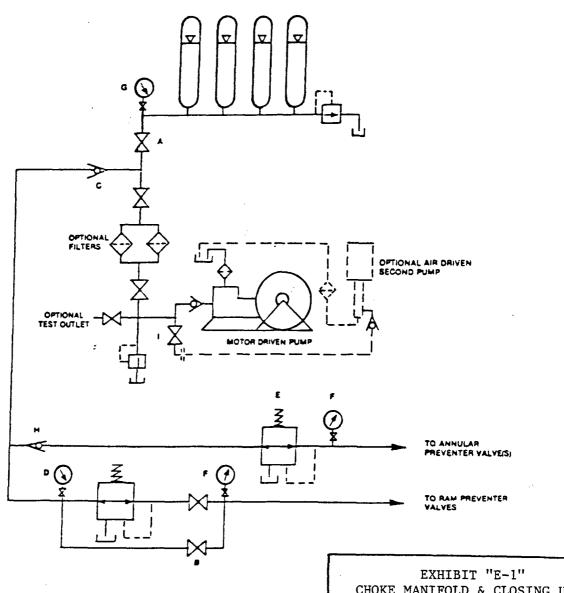
ARRANGEMENT SRRA

900 Series 3000 PSI WP

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

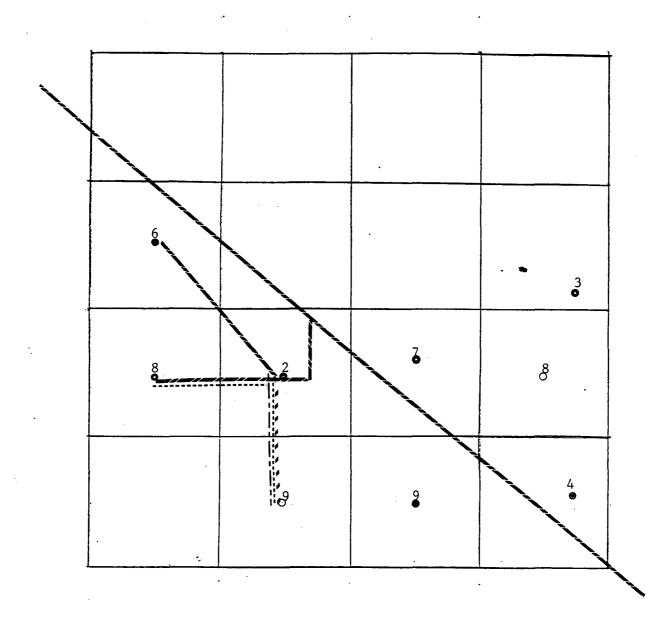


Typical choke manifold assembly for 3M WP system



CHOKE MANIFOLD & CLOSING UNIT

POGO PRODUCING COMPANY
SUNDANCE "1" FEDERAL LEASE
SECTION 1 T24S-R31 E
EDDY CO. NM



EXISTING	ROAD	
PROPOSED	ROAD	
PROPOSED	FLOWLINE	
PROPOSED	POWERLINE	

EXHIBIT "F"
ROUTE OF PROPOSED
FLOWLINE & POWERLINE