

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N.M. O'Connell Division
425 N. French Dr.
Hobbs NM 88240

SUBMIT IN TRIPPLICATE
with all attachments on
reverse side)

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

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK
 DRILL ☒ DEEPEN ☐

b. TYPE OF WELL
 OIL WELL ☒ GAS WELL ☐ OTHER ☐ SINGLE ZONE ☒ MULTIPLE ZONE ☐

2. NAME OF OPERATOR
 POGO PRODUCING COMPANY (RICHARD WRIGHT 915-685-8140)

3. ADDRESS AND TELEPHONE NO.
 P.O. BOX 10340 MIDLAND, TEXAS 79702-7340 (915-695-8100)

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)
 At surface
 1850' FNL & 1650' FWL SECTION 19 T22S-R32E LEA CO. NM
 At proposed prod. zone SAME

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE
 Approximately 20 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) 330'

16. NO. OF ACRES IN LEASE 280

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. 1820'

19. PROPOSED DEPTH 8700'

20. ROTARY OR CABLE TOOL LOGGING ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
 3602' GR. **Carlsbad Controlled Water Basin**

5. LEASE DESIGNATION AND SERIAL NO.
 NM-90537

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. LEASE NAME AND SERIAL NO.
 LIVINGSTON RIDGE "19"
 FEDERAL # 6

9. APWELL NO.
 30-025-36341

10. FIELD AND POOL OR WILDCAT
 LIVINGSTON RIDGE DELAWARE EAST

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
 SECTION 19m T22S-R32E

12. COUNTY OR PARISH LEA CO.

13. STATE NEW MEXICO

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 with Redi-mix.
17 1/2"	H-40 13 3/8"	48	800'	800 Sx. circulate to surface.
11"	J-55 8 5/8"	32	4400'	1500 Sx. " " "
7 7/8"	J-55 5 1/2"	15.5 & 17	8700'	1750 Sx. " " "

1. Drill 25" hole to 40'. Set 40' of 20" conductor 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 600 Sx. of 65/35/6 Class "C" POZ/Gel, tail in with 200 Sx. of Class "C" cement + 2% CaCl, + 1/4# Flocele/Sx. Circulate cement to surface.
3. Drill 11" hole to 4400'. Run and set 4400' of 8 5/8" 32# J-55 ST&C casing. Cement with 1300 Sx. of 65/35/6 Class "C" POZ-Gel + 5% Salt, tail in with 200 Sx. of Class "C" cement + 2% CaCl, + 1/4# Flocele/Sx., circulate cement to surface.
4. Drill 7 7/8" hole to 8700'. Run and set 8700' of 5 1/2" casing as follows: 2700' 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. Cement in three stages with DV Tools at 5800' & 3700'±. Cement 1st stage with 650 Sx. of Class "H" cement cement 2nd stage with 600 Sx. of Class "C" cement + 8# of Gilsonite/Sx, cement 3rd stage with 400 Sx. of 65/35/6 Class "C" POZ-Gel, tail in with 100 Sx. of Class "C" cement + 1% CaCl, circulate cement to surface.

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 open directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

SIGNED Joe T. Garcia TITLE Agent

DATE 03/23/03

(This space for Federal or State office use)

**APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED**

OPER. OGRID NO. 17891
 PROPERTY NO. 15706
 POOL CODE 39366
 EFF. DATE 7-23-03
 API NO. 30-025-36341

PERMIT NO. _____
 Application approval does not warrant or certify that the proposed drilling or completion operations will not interfere with the rights in the subject lease which w
 CONDITIONS OF APPROVAL IF ANY:

APPROVED BY /S/ JOE G. LARA FIELD MANAGER

DATE JUL 21 2003

*See Instructions On Reverse Side

APPROVAL FOR 1 YEAR

DISTRICT I
1825 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 87506

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 30-025-36341	Pool Code 39366	Pool Name LIVINGSTON RIDGE DELAWARE-EAST
Property Code 15706	Property Name LIVINGSTON RIDGE "19" FEDERAL	Well Number 6
OGRID No. 17891	Operator Name POGO PRODUCING COMPANY	Elevation 3602'

Surface Location

UL or lot No. F	Section 19	Township 22 S	Range 32 E	Lot Idn	Feet from the 1850	North/South line NORTH	Feet from the 1650	East/West line WEST	County LEA
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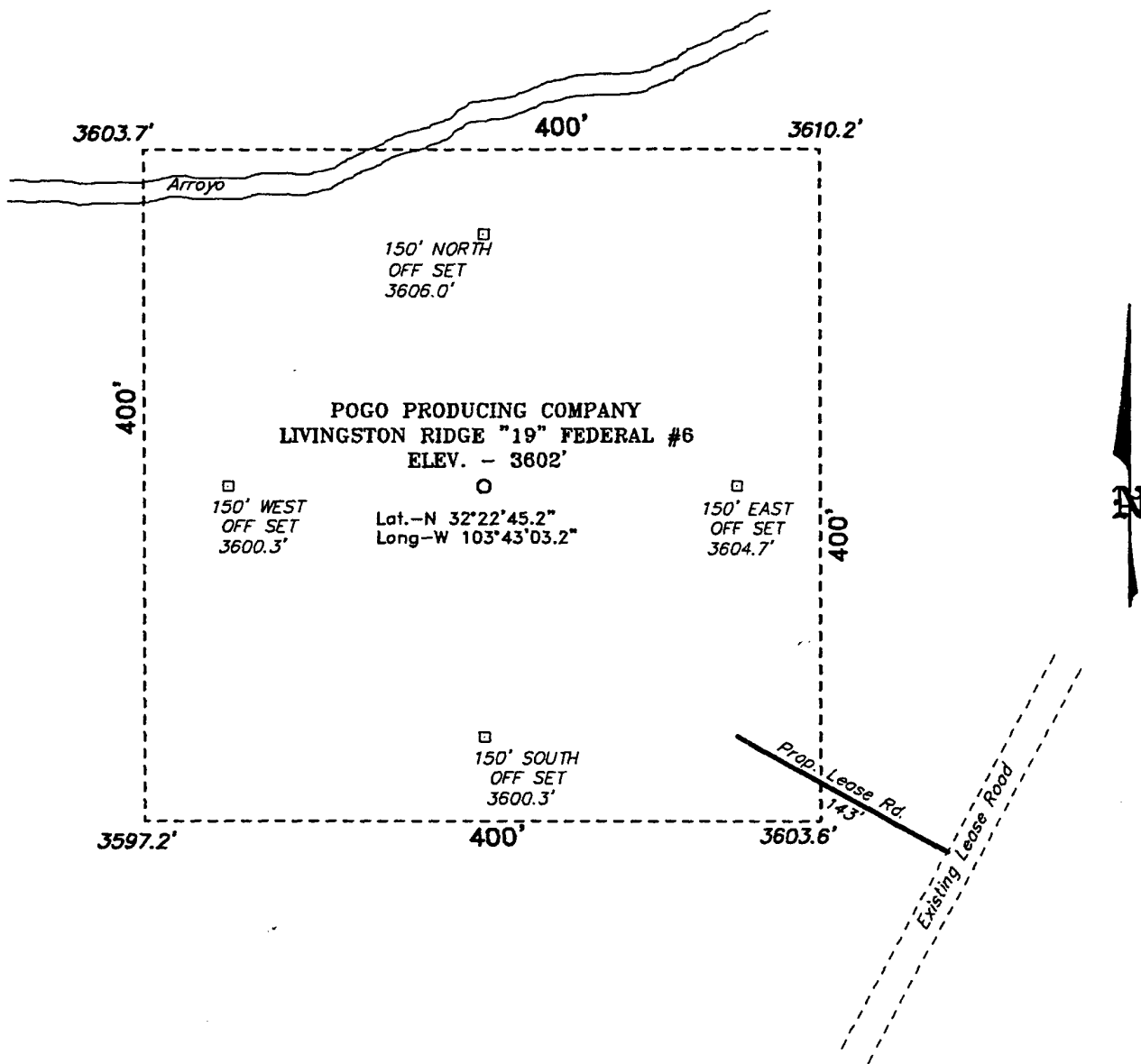
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
					Dedicated Acres 40	Joint or Infill	Consolidation Code	Order No.	

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	<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 Joe T Janica Printed Name Agent Title 03/23/03 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>MARCH 4, 2003 Date Surveyed</p> <p><i>W.O. Jones</i> Signature & Seal of Professional Surveyor</p> <p>W.O. No. 3071 Certificate No. Gary L. Jones, 7977 BASIN-SURVEYS</p>
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SECTION 19, TOWNSHIP 22 SOUTH, RANGE 32 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.



POGO PRODUCING CO.

REF: LIVINGSTON RIDGE "19" FEDERAL #6 / Well Pad Topo

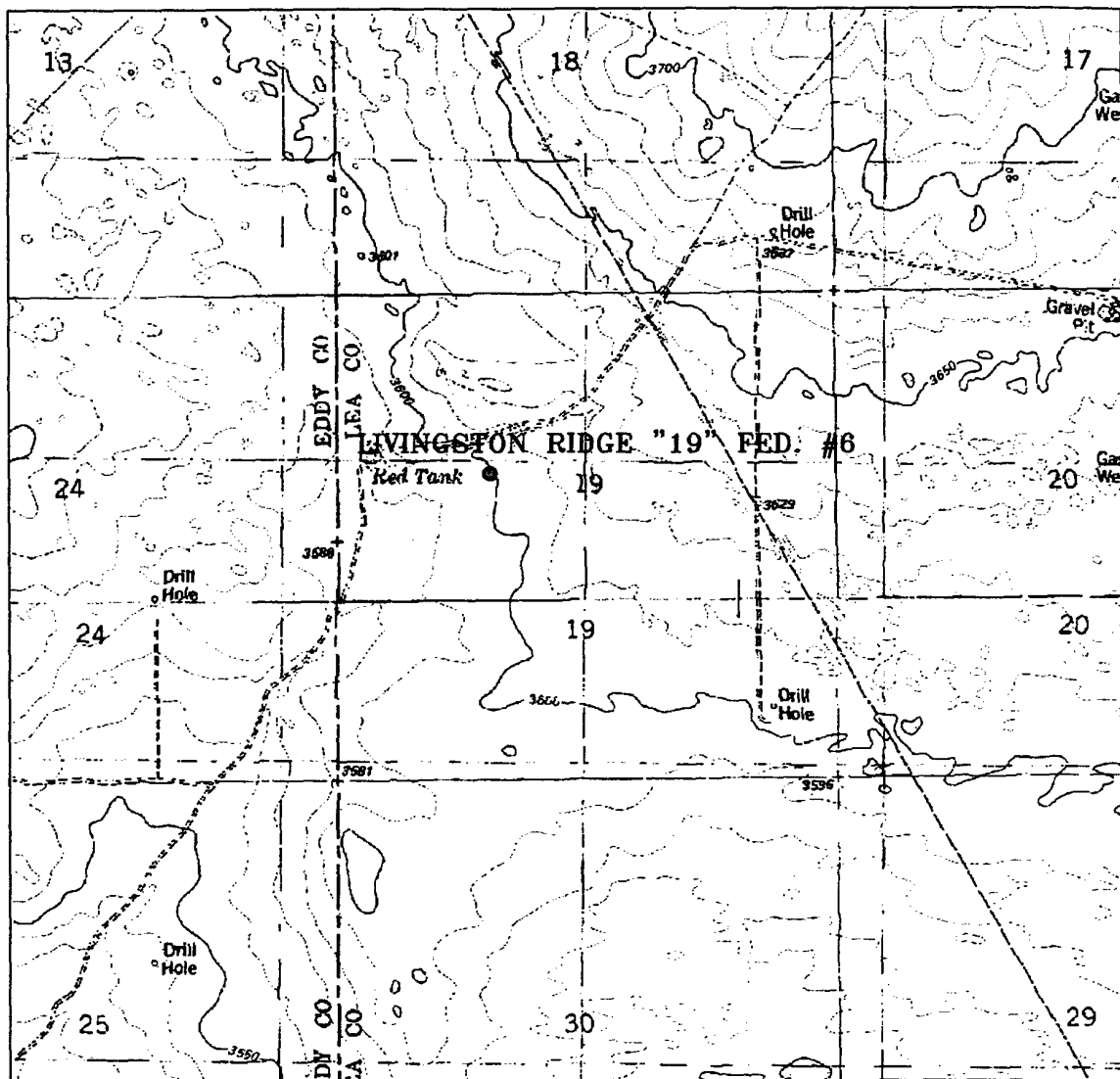
THE LIVINGSTON RIDGE "19" FED. No. 6 LOCATED 1850' FROM
THE NORTH LINE AND 1650' FROM THE WEST LINE OF
SECTION 19, TOWNSHIP 22 SOUTH, RANGE 32 EAST,
N.M.P.M., LEA COUNTY, NEW MEXICO.

BASIN SURVEYS P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 3071 Drawn By: K. GOAD

Date: 03-07-2003 Disk: KJG CD#4 - 3071A.DWG

Survey Date: 03-04-2003 Sheet 1 of 1 Sheets



LIVINGSTON RIDGE "19" FEDERAL #6
 Located at 1850' FNL and 1650' FWL
 Section 19, Township 22 South, Range 32 East,
 N.M.P.M., Lea County, New Mexico.

basin
surveys
 focused on excellence
 in the oilfield

P.O. Box 1786
 1120 N. West County Rd.
 Hobbs, New Mexico 88241
 (505) 393-7316 - Office
 (505) 392-3074 - Fax
 basinsurveys.com

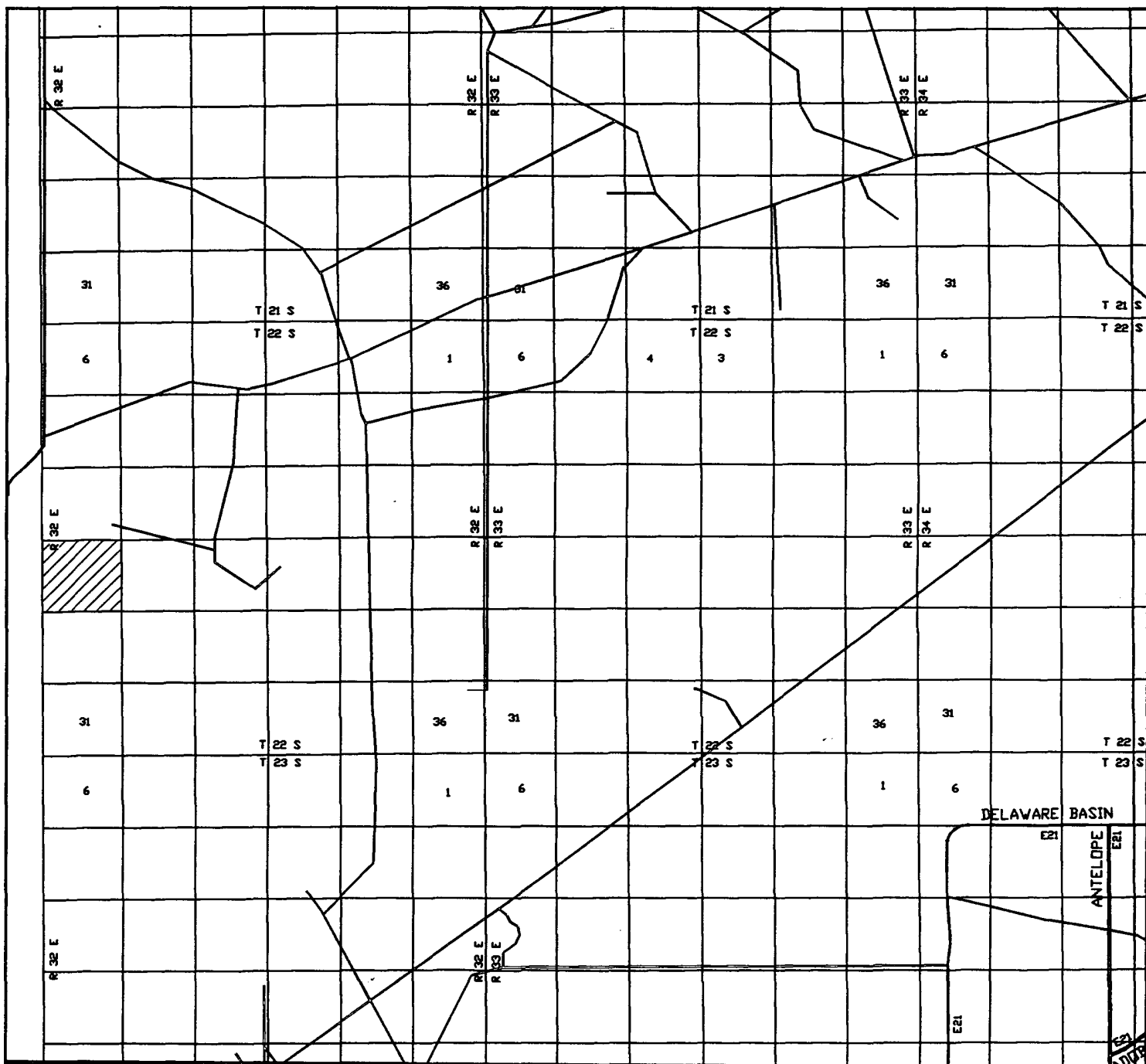
W.O. Number: 3071AA - KJG CD#5

Survey Date: 03-04-2003

Scale: 1" = 2000'

Date: 03-07-2003

POGO
PRODUCING
COMPANY



LIVINGSTON RIDGE "19" FEDERAL #6
 Located at 1850' FNL and 1650' FWL
 Section 19, Township 22 South, Range 32 East,
 N.M.P.M., Lea County, New Mexico.

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P.O. Box 1786
 1120 N. West County Rd.
 Hobbs, New Mexico 88241
 (505) 393-7316 - Office
 (505) 392-3074 - Fax
 basinsurveys.com

W.O. Number: 3071AA - KJG CD#5

Survey Date: 03-04-2003

Scale: 1" = 2 miles

Date: 03-07-2003

POGO
PRODUCING
COMPANY

APPLICATION TO DRILL

POGO PRODUCING COMPANY
 LIVINGSTON RIDGE "19" FEDERAL # 6
 UNIT "F" SECTION 19
 T22S-R32E 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 information.

1. Location of well: 1850' FNL & 1650' FWL SECTION 19 T22S-R32E LEA CO. NM

2. Ground Elevation above Sea Level: 3602' GR.

3. Geological age of surface formation: Quaternary

4. Drilling tools and associated equipment: Conventional rotary drilling rig using drilling mud as a circulating medium to remove solids from hole.

5. Proposed drilling depth: 8700'

6. Estimated tops of geological markers:

Rustler Anhydrite	750'	Cherry Canyon	5400'
Basal Anhydrite	4238'	Brushy Canyon	6630'
Delaware Lime	4512'	Bone Spring	8380'
Bell Canyon	4570'		

7. Possible mineral bearing formations:

Brushy Canyon	Oil
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'	13 3/8"	48#	8-R	ST&C	H-40
11"	0-4400'	8 5/8"	32#	8-R	ST&C	J-55
7 7/8"	0-8700'	5½"	17 & 15.5	8-R	LT&C	J-55

APPLICATION TO DRILL

POGO PRODUCING COMPANY
LIVINGSTON RIDGE "19" FEDERAL # 6
UNIT "F" SECTION 19
T22S-R32E LEA CO. NM

9. CASING CEMENTING & SETTING DEPTHS:

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 600 Sx. of 65/35/6 Class "C" POZ-Gel, tail in with 200 Sx. of Class "C" cement + 2% CaCl, + 1/4# Flocele/Sx. Circulate cement.
8 5/8" Intermediate Set 4400' of 8 5/8" 32# J-55 ST&C casing, Cement with 1300 Sx. of 65/35/6 Class "C" POZ-Gel, + 5% NaCl, tail in with 200 Sx. of Class "C" cement + 2% CaCl, + 1/4# Flocele/Sx. Circulate cement to surface.
5 1/2" Production Set 8700' of 5 1/2" casing as follows: 2700' of 5 1/2" 17# J-55 LT&C, 5000' of 5 1/2" 15.5# LT&C, 1000' of 5 1/2" 17# J-55 LT&C. Cement in 3 stages, place DV Tools at 5800' & 3700'±. Cement 1st stage with 650 Sx. of Class "H" cement + additives, cement 2nd stage with 600 Sx. of Class "C" cement + 8# of Gilsonite/Sx., cement 3rd stage with 400 Sx. of 65/35/6 Class "C" POZ-Gel, tail in with 100 Sx. of Class "C" cement + 1% CaCl, circulate cement to surface.

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 13 3/8" 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 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.

11. PROPOSED MUD CIRCULATING SYSTEM:

DEPTH	MUD WT.	VISC.	FLUID LOSS	TYPE MUD SYSTEM
40-800'	8.4-8.7	29-32	NC	Fresh water Spud Mud add paper to control seepage.
800-4400'	10.0-10.2	29-38	NC	Brine water add paper to control seepage and use high viscosity sweeps to clean hole.
4400-8700'	8.4-8.7	29-40	NC*	Fresh water mud system use high viscosity sweeps to clean hole.

* If water loss control is required in order to take DST's, run logs, or run casing add Dris-Pac to system 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, and casing viscosity and/or water loss may have to be adjusted to meet these needs.

APPLICATION TO DRILL

POGO PRODUCING COMPANY
LIVINGSTON RIDGE "19" FEDERAL # 6
UNIT "F" SECTION 19
T22S-R32E LEA CO. NM

12. LOGGING, CORING, AND TESTING PROGRAM:

- A. Open hole logs: Run Dual Induction, SNP, LDT, Gamma Ray, Caliper logs from TD back to 8 5/8" casing shoe.
- B. Run Gamma Ray, Neutron logs from 8 5/8" casing shoe back to surface.
- C. Mud logger may be placed on hole at 4400'±.
- D. 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 H²S in this area. If H²S 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 4300 PSI, and Estimated BHT 165°.

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 28 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 Delaware(BS) formation will be perforated and stimulated in order to establish production. The well will be swab tested and potentialized 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 hazards
 - 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"
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 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_2S 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_2S scavengers if necessary.

SURFACE USE PLAN

POGO PRODUCING COMPANY
LIVINGSTON RIDGE "19" FEDERAL # 6
UNIT "F" SECTION 19
T22S-R32E LEA CO. NM

1. EXISTING ROADS: Area roads, Exhibit "B" is a reproduction of a County General Hiway Map. Exhibit "C" is a reproduction of a USGS Topographic Map, showing existing roads 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 location as staked.
 - B. From Hobbs, New Mexico take U.S. Hi-way 62-180 toward Carlsbad New Mexico go 38± miles to CR-29, turn Left (SOUTH) go 14 miles to Mills Ranch Road, turn Left and follow road 1.8± miles cross cattle guard and continue on road .5± miles to location on the West side of road.
 - C. See Exhibit "F" for routes of powerlines and flowlines.
2. PLANNED ACCESS ROADS: Approximately 150' of new road will be constructed.
 - A. The access road will be crowned and ditched to a 12' wide travel surface with a 40' Right-of-Way.
 - B. Gradient on all roads will be less than 5%.
 - C. Turnouts will be constructed as required or as directed by the BLM.
 - 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 the new access road has been staked and flagged. Earthwork will be done as required by field and topographic conditions.
 - F. Culverts in the access road will be used where necessary. The road will be constructed to utilize low water crossings for drainage as dictated by the topography.
3. LOCATION OF EXISTING WELLS WITHIN A ONE-MILE RADIUS SHOWN ON EXHIBIT "A-1".

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"
F. Injection wells	None known

SURFACE USE PLAN

POGO PRODUCING COMPANY
LIVINGSTON RIDGE "19" FEDERAL # 6
UNIT "F" SECTION 19
T22S-R32E 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 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 furthred 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.

SURFACE USE PLAN

POGO PRODUCING COMPANY
LIVINGSTON RIDGE "19" FEDERAL # 6
UNIT "F" SECTION 19
T22S-R32E LEA CO. NM

9. WELL SITE LAYOUT

- A. Exhibit "D" shows the proposed well site layout.
- B. This exhibit indicated proposed location of reserve and sump pits and living facilities.
- C. Mud pits in the active circulating system will be steel pits & 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
LIVINGSTON RIDGE "19" FEDERAL # 6
UNIT "F" SECTION 19
T22S-R32E 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 near 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 associated² 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.

NAME :

DATE :

TITLE :

03/23/03

Agent

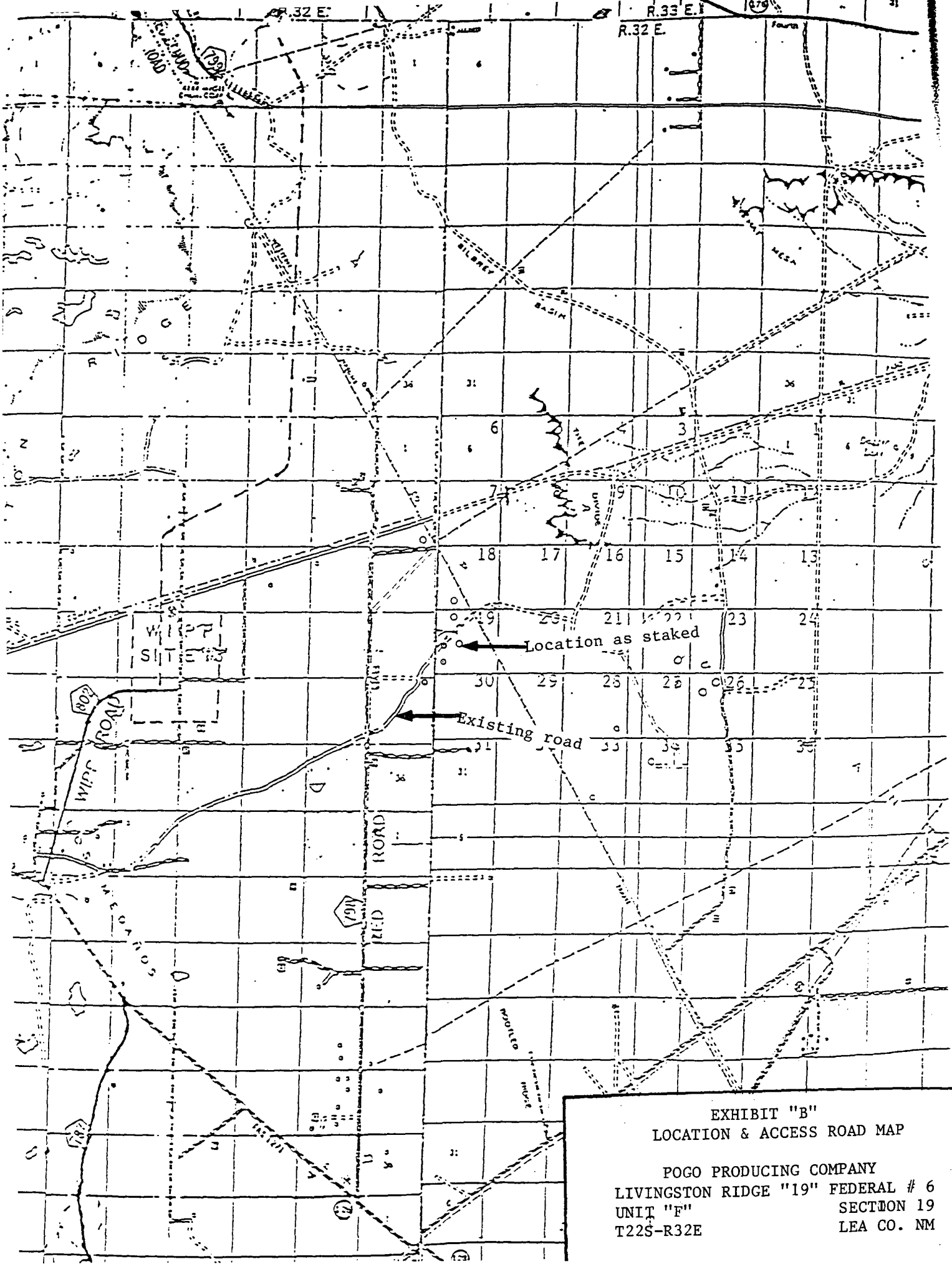
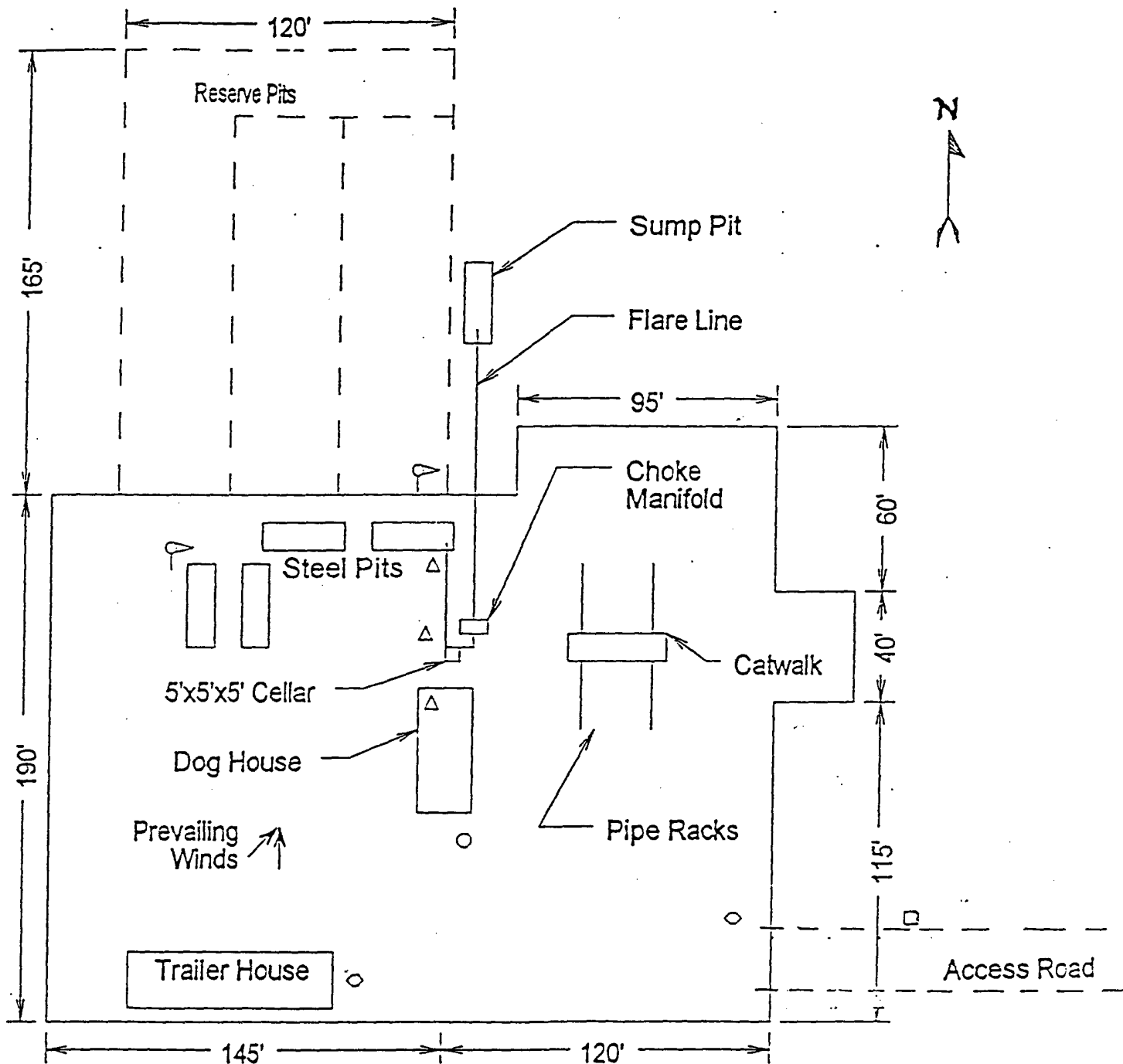


EXHIBIT "B"
LOCATION & ACCESS ROAD MAP

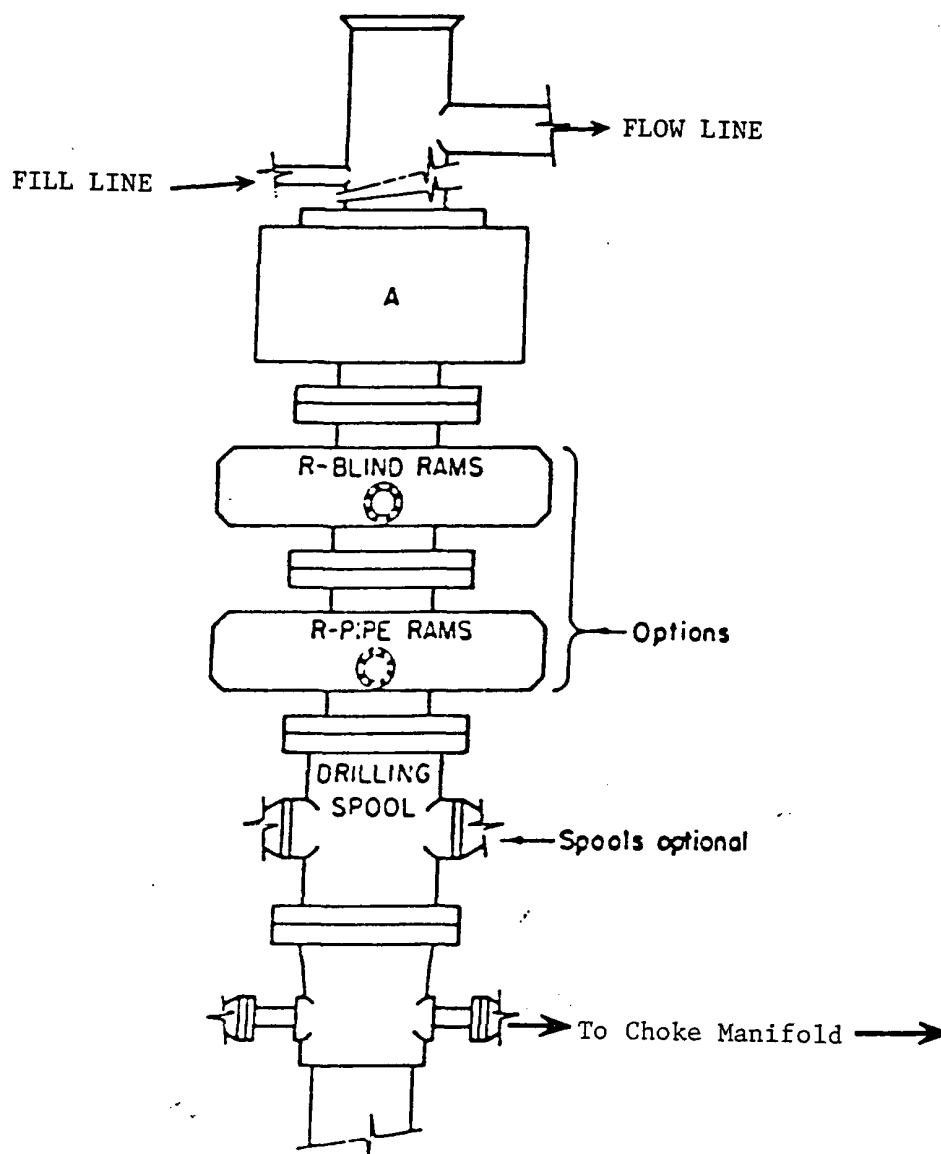
POGO PRODUCING COMPANY
LIVINGSTON RIDGE "19" FEDERAL # 6
UNIT "F" SECTION 19
T22S-R32E LEA CO. NM



- Wind Direction Indicators
(wind sock or streamers)
- △ 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

POGO PRODUCING COMPANY
LIVINGSTON RIDGE "19" FEDERAL # 6
UNIT "F" SECTION 19
T22S-R32E LEA CO. NM



ARRANGEMENT SRRA

900 Series
3000 PSI WP

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

POGO PRODUCING COMPANY
LIVINGSTON RIDGE "19" FEDERAL # 6
UNIT "F" SECTION 19
T22S-R32E LEA CO. NM

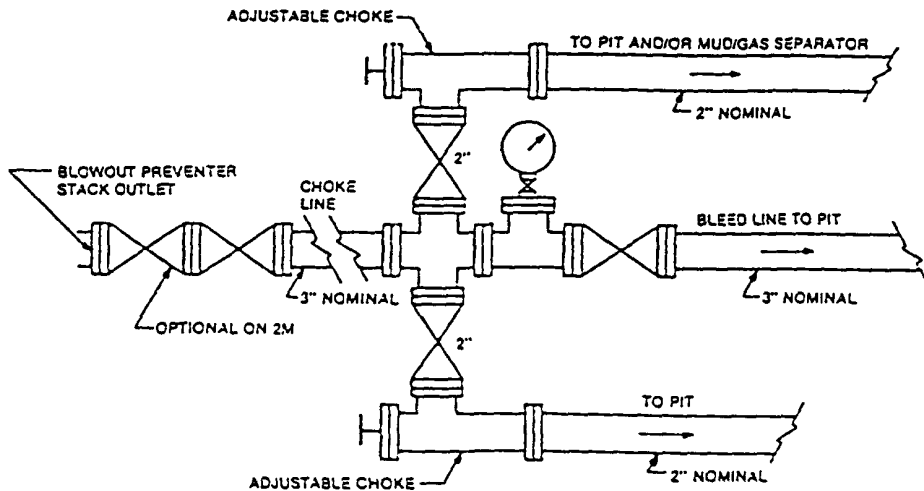


FIGURE K4-1. Typical choke manifold assembly for 2M and 3M rated working pressure service — surface installation.

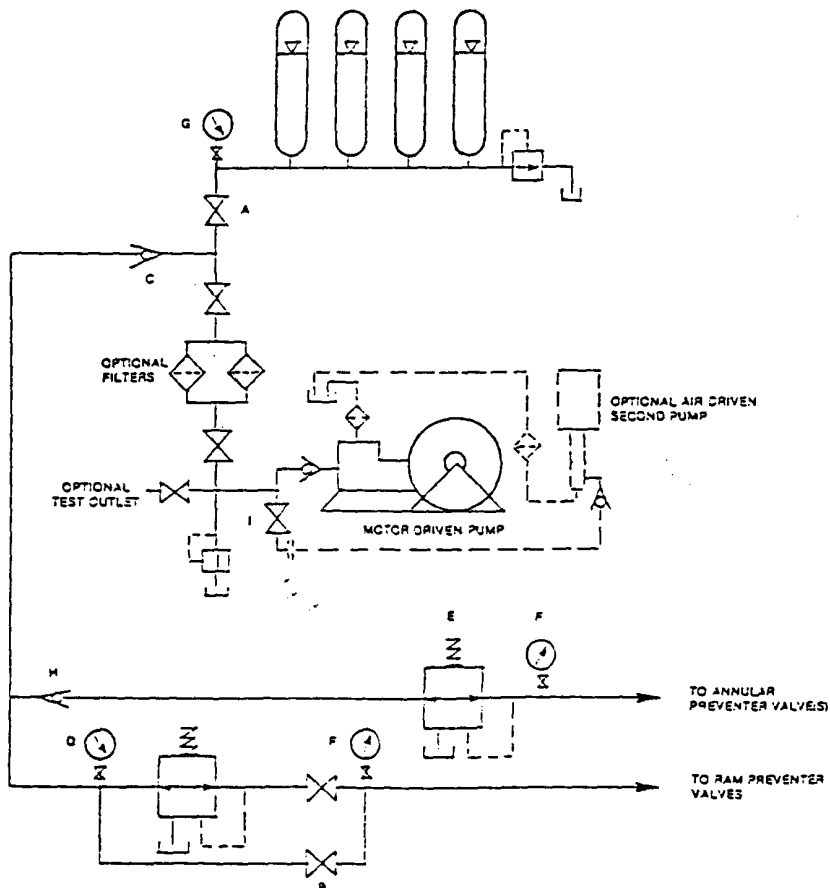


FIGURE K6-1. The schematic sketch of an accumulator system shows required and optional components.

EXHIBIT "E-1"
CHOKE MANIFOLD & CLOSING UNIT

POGO PRODUCING COMPANY
LIVINGSTON RIDGE "19" FEDERAL # 6
UNIT "F" SECTION 19
T22S-R32E LEA CO. NM

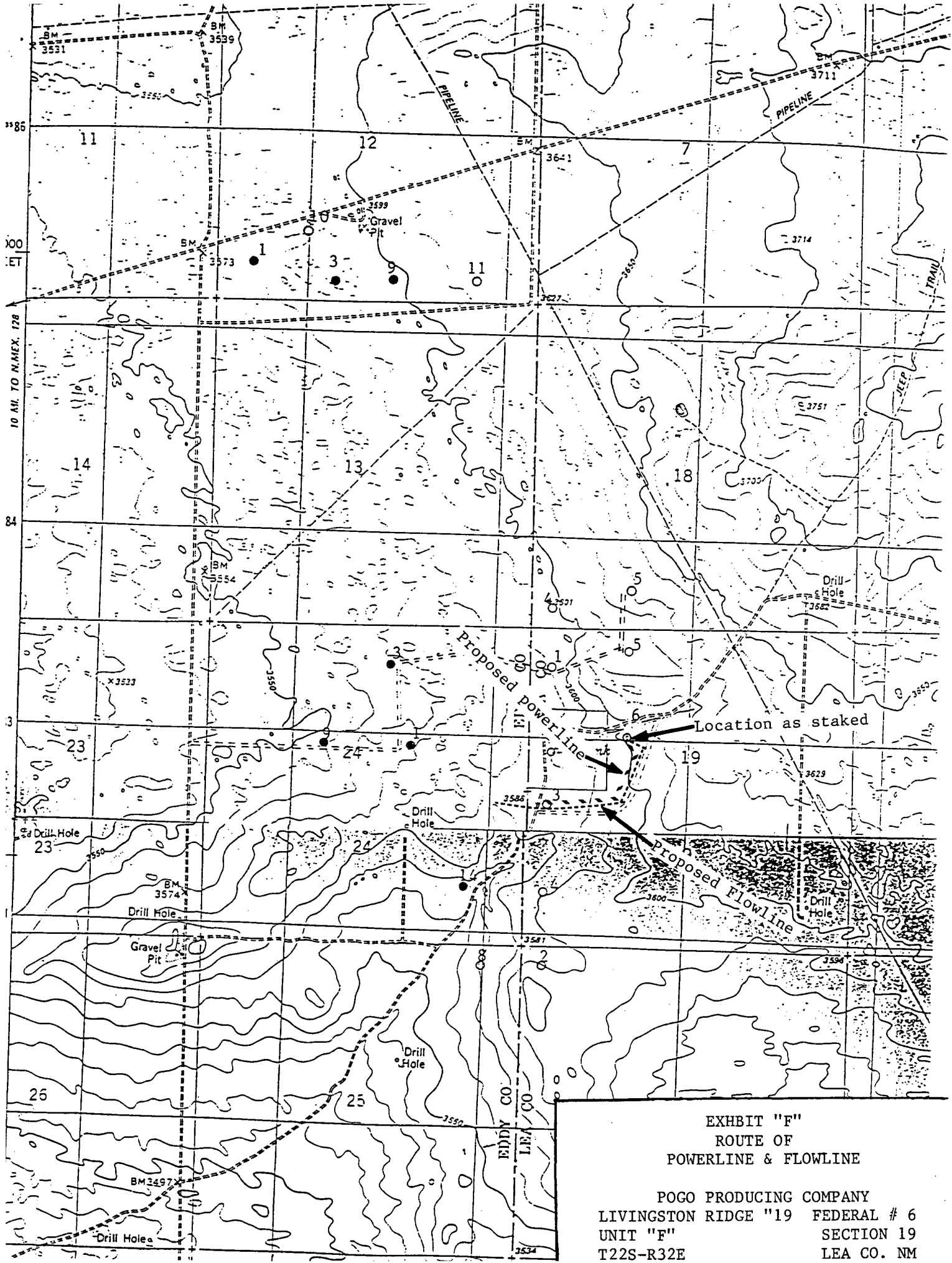


EXHIBIT "F"
ROUTE OF
POWERLINE & FLOWLINE

POGO PRODUCING COMPANY
LIVINGSTON RIDGE "19" FEDERAL # 6
UNIT "F" SECTION 19
T22S-R32E LEA CO. NM

SPECIAL DRILLING STIPULATIONS

THE FOLLOWING DATA IS REQUIRED ON THE WELL SIGN

Operator's Name Pogo Producing Co. Well Name & No. Livingston Ridge 19 Federal #6
Location 1850 FNL & 1650 FWL Sec. 19, T. 22 S, R. 32 E.
Lease No. NM-90537 County Lea State New Mexico

The Special stipulations check marked below are applicable to the above described well and approval of this application to drill is conditioned upon compliance with such stipulations in addition to the General Requirements. The permittee should be familiar with the General Requirements, a copy of which is available from a Bureau of Land Management office. EACH PERMITTEE HAS THE RIGHT OF ADMINISTRATIVE APPEAL TO THESE STIPULATIONS PURSUANT TO TITLE 43 CRF 3165.3 AND 3165.4.

This permit is valid for a period of one year from the date of approval or until lease expiration or termination whichever is shorter.

I. SPECIAL ENVIRONMENT REQUIREMENTS

- (X) Lesser Prairie Chicken (stips attached) () Flood plain (stips attached)
() San Simon Swale (stips attached) () Other

II. ON LEASE - SURFACE REQUIREMENTS PRIOR TO DRILLING

(X) The BLM will monitor construction of this drill site. Notify the (X) Carlsbad Field Office at (505) 234-5972 () Hobbs Office (505) 393-3612, at least 3 working days prior to commencing construction.

(X) Roads and the drill pad for this well must be surfaced with 6 inches of compacted caliche.

() All topsoil and vegetation encountered during the construction of the drill site area will be stockpiled and made available for resurfacing of the disturbed area after completion of the drilling operation. Topsoil on the subject location is approximately _____ inches in depth. Approximately _____ cubic yards of topsoil material will be stockpiled for reclamation.

(X) Other. *Flow lines and Power lines are not authorized under this APB.
(Sundry to be filed at a later date)*

III. WELL COMPLETION REQUIREMENTS

() A Communitization Agreement covering the acreage dedicated to the well must be filed for approval with the BLM. The effective date of the agreement must be prior to any sales.

(X) Surface Restoration: If the well is a producer, the reserve pit(s) will be backfilled when dry, and cut-and-fill slopes will be reduced to a slope of 3:1 or less. All areas of the pad not necessary for production must be re-contoured to resemble the original contours of the surrounding terrain, and topsoil must be re-distributed and re-seeded with a drill equipped with a depth indicator (set at depth of ½ inch) with the following seed mixture, in pounds of Pure Live Seed (PLS), per acre.

- () A. Seed Mixture 1 (Loamy Sites)
Side Oats Grama (*Bouteloua curtipendula*) 5.0
Sand Dropseed (*Sporobolus cryptandrus*) 1.0

- (X) B. Seed Mixture 2 (Sandy Sites)
Sand Dropseed (*Sporobolus crptandrus*) 1.0
Sand Lovegrass (*Eragostis trichodes*) 1.0
Plains Bristlegrass (*Setaria magrostachya*) 2.0

- () C. Seed Mixture 3 (Shallow Sites)
Side oats Grama (*Boute curtipendula*) 1.0

- () D. Seed Mixture 4 (Gypsum Sites)
Alkali Sacaton (*Sporobolus airoides*) 1.0
Four-Wing Saltbush (*Atriplex canescens*) 5.0

Seeding should be done either late in the fall (September 15 - November 15, before freeze up, or early as possible the following spring to take advantage of available ground moisture.

() Other.

RESERVE PIT CONSTRUCTION STANDARDS

The reserve pit shall be constructed entirely in cut material and lined with 6 mil plastic.

Mineral material extracted during construction of the reserve pit may be used for development of the pad and access road as needed. Removal of any additional material on location must be purchased from BLM.

Reclamation: Reclamation of this type of deep pit will consist of pushing the pit walls into the pit when sufficiently dry to support track equipment. The pit liner is NOT TO BE RUPTURED to facilitate drying; a ten month period after completion of the well is allowed for drying of the pit contents.

The pit area must be contoured to the natural terrain with all contaminated drilling mud buried with at least 3 feet of clean soil. The reclaimed area will then be seeded as specified in this permit.

OPTIONAL PIT CONSTRUCTION STANDARDS

The reserve pit may be constructed in predominantly fill material if:

- (1) Lined as specified above and
- (2) A borrow/caliche/gravel pit can be constructed immediately adjacent to the reserve pit and it capable of containing all reserve pit contents. The mineral material removed in the process can be used for pad and access road construction. However, a material sales contract must be purchased from the BLM prior to removal of the material.

Reclamation of the reserve pit consists of bulldozing all reserve pit contents and contaminants into the borrow pit and covering with a minimum of 3 feet of clean soil material. The entire area must be recontoured, all trash removed, and reseeded as specified in this permit.

CULTURAL

Whether or not an archaeological survey has been completed and notwithstanding that operations are being conducted as approved, the lessee/operator/grantee shall notify the BLM immediately if previously unidentified cultural resources are observed during surface disturbing operations. From the time of the observation, the lessee/operator/grantee shall avoid operations that will result in disturbance to these cultural resources until directed to processed by BLM.

TRASH PIT STIPS

All trash, junk, and other waste material shall be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not permitted.

PRAIRIE CHICKENS

No surface use is allowed during the following time periods; unless otherwise specified, this stipulation does not apply to operation and maintenance of production facilities.

On the lands described: All of Section 19 T. 22 S., R. 32 E.

For the purpose of: Protecting Prairie Chickens:

Drilling for oil and gas, and 3-D geophysical exploration operations will not be allowed in Lesser Prairie Chicken Habitat during the period of March 15 through June 15, each year. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 a.m. and 9:00 a.m. The 3:00 a.m. and 9:00 a.m. restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during the period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.



**United States Department of the Interior
BUREAU OF LAND MANAGEMENT**

Carlsbad Field Office

620 E. Greene St.
Carlsbad, New Mexico 88220
Tel. (505) 234-5972
Fax (505) 885-9264

IN REPLY REFER TO: NM (080) 1150, 6840, 3162

Company: Pogo Producing Co.

Action: Oil Well, Road, Flow Line, and Power Line

Well/ROW Name: Livingston Ridge 19 Federal #6

Lease Number: NM-90537

Township: 22 S Range: 32 E Sec: 19 Footage: 1850 FNL & 1650 FWL

This action has been identified as being eligible for the Lesser Prairie Chicken "Blanket" Exception. The action will be excepted from the timing part of the LPC stipulation or COA (restriction of activity in LPC habitat from March 15 to June 15 each year for drilling or 3-D geophysical exploration. During that period, any activity that requires human activity is restricted between 3:00 am and 9:00 am. This does not pertain to activities that do not require a human presence). The other parts of the stipulation or COA will still apply.

This exception is good for at least 2 years starting in 2002 (pending any adjustments made because of new information). If new information is received or if LPC are found within the "Blanketed" areas, a contingency action will apply that deals with new information or the discovery of LPC within the blanketed area. This situation will be evaluated and analyzed by CFO's wildlife biologist or other qualified BLM personnel to determine the appropriate contingency action. One aspect of this contingency requires that a company accept a risk of shutdown of operations for the action granted in the exception (essentially the full stipulation will be enacted and become effective immediately upon discovery of active LPC leks). An example would be if a LPC lek is found within the "blanketed" area, all actions within a certain radius (up to 2 miles) would be subject to shutdown, or other appropriate action deemed necessary to protect the active lek.

This process does not preclude attaching the LPC Stipulation to a lease or as a COA to an action. This exception letter must be completed in full and filed in the official file record. If there are any questions, please contact the wildlife staff in the Carlsbad BLM Office.

Signature: Don Peterson Date: 4/9/03

Name and Position(Printed): Don Peterson Surface Protection Specialist

CONDITIONS OF APPROVAL - DRILLING

Operator's Name: POGO Producing Company
Well Name & No: Livingston Ridge 19 Fed No 06
Location: 1850' FNL & 1650' FWL Sec.19, T.22 S., R.32 E.
Lease: NM 90587 Lea County

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I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Roswell Field Office, 2909 West Second St., Roswell, NM 88201, (505) 627-0272 for wells in Chaves and Roosevelt Counties; the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County; and the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:

A. Spudding

B. Cementing casing: 13 3/8 inch 8 7/8 inch 5 1/2 inch

C. BOP tests

2. A Hydrogen Sulfide (H₂S) Drilling Plan *should be activated prior to drilling into the Delaware.* *is not mandatory on this wellbore.* (52)

3. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

4. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.

5. The API No. assigned to the well by NMOCDC shall be included on the subsequent report of setting the first casing string.

II. CASING:

1. The 13 3/8 inch shall be set at 800 Ft. or in the Top 25 Ft. of the Rustler with cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.

2. The minimum required fill of cement behind the 8 7/8 inch Intermediate casing is to circulate to surface.

3. The minimum required fill of cement behind the 5 1/2 inch Production casing is to circulate to surface.

III. PRESSURE CONTROL:

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 13 3/8 inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 2 M psi.

BLM Serial Number: NM-90537
Company Reference: Pogo Producing Co.
Well No. & Name: Livingston Ridge 19 Federal #6

STANDARD STIPULATIONS FOR PERMANENT RESOURCE ROADS
THE Carlsbad Field Office, BLM

A copy of the grant and attachments, including stipulations and map, will be on location during construction. BLM personnel may request to view a copy of your permit during construction to ensure compliance with all stipulations.

The holder/grantee/permittee shall hereafter be identified as the holder in these stipulations. The Authorized Officer is the person who approves the Application for Permit to Drill (APD) and/or Right-of-Way (ROW).

GENERAL REQUIREMENTS

A. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

B. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, *et. seq.*) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized by this grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.

C. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, *et. seq.* or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et. seq.*) on the right-of-way (unless the release or threatened release is wholly unrelated to the right-of-way holder's activity on the right-of-way). This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

D. If, during any phase of the construction, operation, maintenance, or termination of the road, any oil or other pollutant should be discharged, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages to Federal lands resulting there from, the Authorized Officer may take such measures as deemed necessary to control and cleanup the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any liability or responsibility.

E. The holder shall minimize disturbance to existing fences and other improvements on public domain surface. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times.

The holder will make a documented good-faith effort to contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence.

F. The Holder shall ensure that the entire right-of-way, including the driving surface, ditching and drainage control structures, road verges and any construction sites or zones, will be kept free of the following plant species: Malta starthistle, African rue, Scotch thistle and salt cedar.

Holder agrees to comply with the following stipulations:

1. ROAD WIDTH AND GRADE

The road will have a driving surface of 14 feet (all roads shall have a minimum driving surface of 12 feet, unless local conditions dictate a different width). The maximum grade is 10 percent unless the box below is checked. Maximum width of surface disturbance from construction will be 30 feet.

☐ Those segments of road where grade is in excess of 10% for more than 300 feet shall be designed by a professional engineer.

2. CROWNING AND DITCHING

Crowning with materials on site and ditching on one side of the road on the uphill side will be required. The road cross-section will conform to the cross section diagrams in Figure 1. If conditions dictate, ditching may be required for both sides of the road; if local conditions permit, a flat-bladed road may be considered (if these conditions exist, check the appropriate box below). The crown shall have a grade of approximately 2% (i.e., 1" crown on a 12' wide road).

☒ Ditching will be required on both sides of the roadway as shown on the attached map or as staked in the field.

☐ Flat-blading is authorized on segment(s) delineated on the attached map.

3. DRAINAGE

Drainage control shall be ensured over the entire road through the use of borrow ditches, outsloping, insloping, natural rolling topography, lead-off (turnout) ditches, culverts, and/or drainage dips.

A. All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval for lead-off ditches shall be determined according to the following table, but may be amended depending upon existing soil types and centerline road slope (in %):

SPACING INTERVAL FOR TURNOUT DITCHES

Percent slope	Spacing interval
0% - 4%	400' - 150'
4% - 6%	250' - 125'
6% - 8%	200' - 100'
8% - 10%	150' - 75'

A typical lead-off ditch has a minimum depth of 1 foot below and a berm 6 inches above natural ground level. The berm will be on the down-slope side of the lead-off ditch. The ditch end will tie into vegetation whenever possible.

For this road the spacing interval for lead-off ditches shall be at

☒ 400 foot intervals.

☐ _____ foot intervals.

☐ locations staked in the field as per spacing intervals above.

☐ locations delineated on the attached map.

B. Culvert pipes shall be used for cross drains where drainage dips or low water crossings are not feasible. The minimum culvert diameter must be 18 inches. Any culvert pipe installed shall be of sufficient diameter to pass the anticipated flow of water. Culvert location and required diameter are shown on the attached map (Further details can be obtained from the Roswell District Office or the appropriate Resource Area Office).

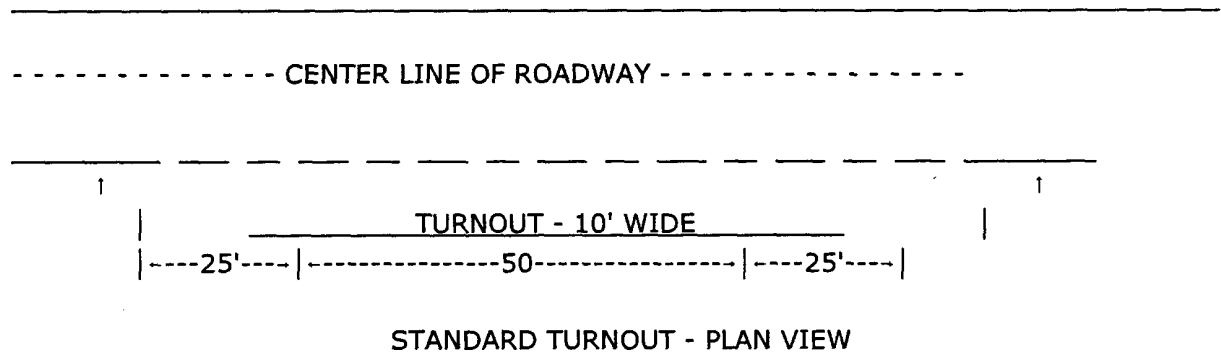
C. On road slopes exceeding 2%, drainage dips shall drain water into an adjacent lead-off ditch. Drainage dip location and spacing shall be determined by the formula:

$$\text{spacing interval} = \frac{400'}{\text{road slope in \%}} + 100'$$

Example: 4% slope: spacing interval = $\frac{400}{4} + 100 = 200$ feet

4. TURNOUTS

Unless otherwise approved by the Authorized Officer, vehicle turnouts will be required. Turnouts will be located at 2000-foot intervals, or the turnouts will be intervisible, whichever is less. Turnouts will conform to the following diagram:



5. SURFACING

Surfacing of the road or those portions identified on the attached map may, at the direction of the Authorized Officer, be required, if necessary, to maintain traffic within the right-of-way with caliche, gravel, or other surfacing material which shall be approved by the Authorized Officer. When surfacing is required, surfacing materials will be compacted to a minimum thickness of six inches with caliche material. The width of surfacing shall be no less than the driving surface. Prior to using any mineral materials from an existing or proposed Federal source, authorization must be obtained from the Authorized Officer.

A sales contract for the removal of mineral materials (caliche, sand, gravel, fill dirt, etc.) from an authorized pit, site, or on location must be obtained from the BLM prior to using any such mineral material from public lands. Contact the BLM solid minerals staff for the various options to purchase mineral material.

6. CATTLEGUARDS

Where used, all cattleguard grids and foundation designs and construction shall meet the American Association of State Highway and Transportation Officials (AASHTO) Load Rating H-20, although AASHTO U-80 rated grids shall be required where heavy loads (exceeding H-20 loading), are anticipated (See BLM standard drawings for cattleguards). Cattleguard grid length shall not be less than 8 feet and width of not less than 14 feet. A wire gate (16-foot minimum width) will be provided on one side of the cattleguard unless requested otherwise by the surface user.

7. MAINTENANCE

The holder shall maintain the road in a safe, usable condition. A maintenance program shall include, but not be limited to blading, ditching, culvert installation, culvert cleaning, drainage installation, cattleguard maintenance, and surfacing.

8. PUBLIC ACCESS

The holder will not restrict public access along this road without specific written approval being granted by the Authorized Officer. Gates or cattleguards on public lands will not be locked or closed to public use unless closure is specifically determined to be necessary and is authorized in writing by the Authorized Officer.

9. CULTURAL RESOURCES

Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the authorized officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the authorized officer after consulting with the holder.

10. SPECIAL STIPULATIONS: