Form 3160
(July 1992)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N.M. Oil Cons. Division
811 S. 1ST ST.
ARTESIA, NM 88210-2834

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ]

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [X] OTHER — SINGLE ZONE [X] MULTIPLE ZONE [ ]

2. NAME OF OPERATOR: CONCHO RESOURCES, INC. (166111) (JIM BLOUNT) 915-683-7443

3. ADDRESS AND TELEPHONE NO.: 110 WEST LOUISIANA SUITE 410 MIDLAND, TEXAS 79702 (915-683-7443)

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 1980' FSL & ~~660'~~ 800' FEL SEC. 22 T18S-R24E EDDY CO. NM
At proposed prod. zone: SAME Ut. I

5. LEASE DESIGNATION AND SERIAL NO.: NM-0558263A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: ----------

7. UNIT AGREEMENT NAME: ---------- 36942

8. FARM OR LEASE NAME, WELL NO.: SOUTHERN CROSS "22" FEDERAL COM. #2

9. API WELL NO.: 30-015-31475

10. FIELD AND POOL, OR WILDCAT: ANTELOPE SINK NORTH-MORROW

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: SECTION 22T18S-R24E

12. COUNTY OR PARISH: EDDY CO. 13. STATE: NEW MEXICO

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: Approximately 15 miles Southwest of Artesia New Mexico

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 990'

16. NO. OF ACRES IN LEASE: 480

17. NO. OF ACRES ASSIGNED TO THIS WELL: 320

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: NA

19. PROPOSED DEPTH: 9000'

20. ROTARY OR CABLE TOOLS: ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 3731' GR.

22. APPROX. DATE WORK WILL START*: When Approved

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
25"	Conductor	NA	40'	Cement to surface with Redi-mix
~~11~~ 12¼"	J-55 8 5/8"	32	~~1200'~~ 850'	600 Sx. circulate to surface
7 7/8"	N-80&J-55 4½"	11.6	9000'	925 Sx. Estimate top of cement 4200'.

1. Drill 25" hole to 40'. Set 40' of 20" conductor and cement to surface with Redi-mix.

2. Drill 11" hole to 1200'. Run and set 1200' of 8 5/8" 32# J-55 ST&C casing. Cement with 400 Sx. of 35/65 Class "C" POZ + 12% Salt + 6% Bentonite + .25 #/Sx. of celoflake + 2% CaCl, tail in with 200 Sx. of Class "C" + 2% CaCl, circulate cement to surface.

3. Drill 7 7/8" hole to 9000'. Run and set 9000' of 4½" casing as follows: 1100' of 4½" 11.6# N-80 LT&C, 7000' of 4½" 11.6# J-55 LT&C, 900' of 4½" 11.6# N-80 LT&C casing. Cement with 300 Sx. of 35/65 Class "H" POZ + 6% Salt + 6% Bentonite + .25#/Sx. Celoflake, tail in with 925 Sx. of 50/50 Class "H" POZ + 6% Salt +2% Bentonite top of cement must be at least 600' above the top of Wolfcamp, estimate top of cement 4200'±.

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.

SIGNED Joe T Janica TITLE Agent DATE 07/06/00

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

Assistant Field Manager,
Lands And Minerals

APPROVED BY _____ TITLE _____ DATE NOV 21 2000

*See Instructions On Reverse Side

APPROVED FOR 1 YEAR

Title 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 United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719

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

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

State of New Mexico
Energy, Minerals and Natural Resources Departm.

Form C-102
Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
	70480	Antelope Sink North Morrow

Property Code	Property Name	Well Number
	SOUTHERN CROSS "22" FED. COM.	2

OGRID No.	Operator Name	Elevation
166111	CONCHO RESOURCES, INC.	3732

Surface Location

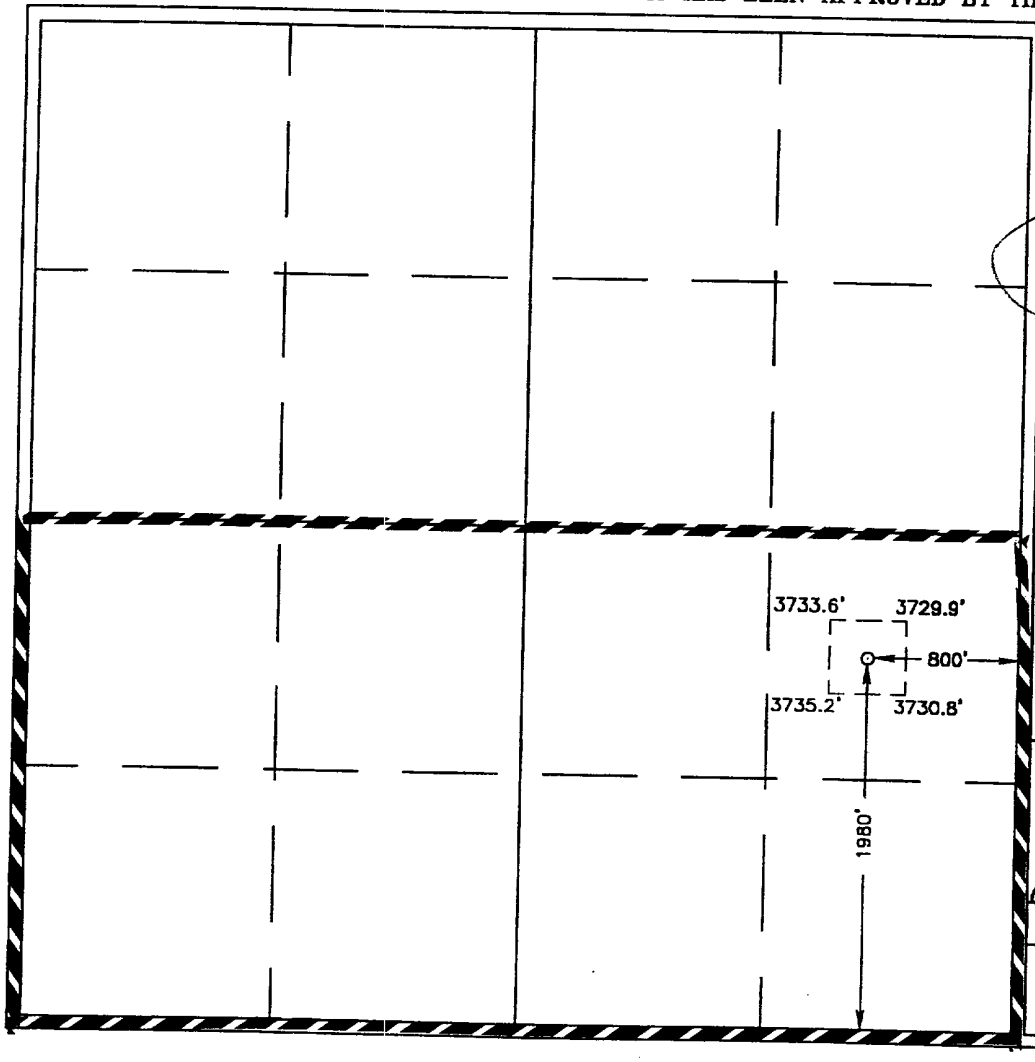
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	22	18 S	24 E		1980	SOUTH	800	EAST	EDDY

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.
320			

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



OPERATOR CERTIFICATION

I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.

Signature
Terri Stathem
Printed Name
Production Analyst
Title
10/10/00
Date

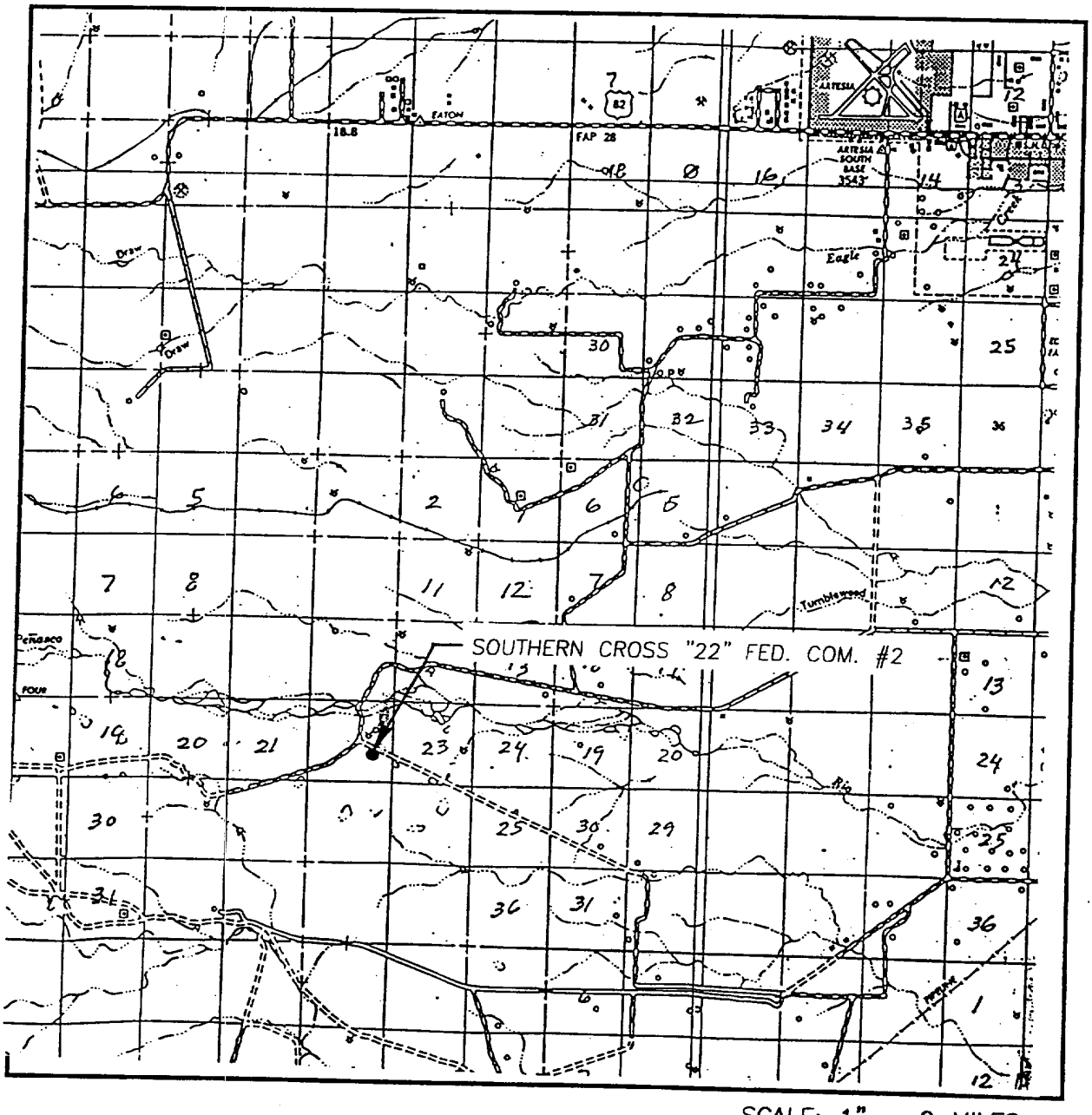
SURVEYOR CERTIFICATION

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.

OCTOBER 5, 2000
Date Surveyed LMP
Signature & Seal of Professional Surveyor
Ronald J. Eidson 10/06/00
00-11-1193

Certificate No. RONALD J. EIDSON 3239
GARY EIDSON 12641
MACON McDONALD 12185

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 22 TWP. 18-S RGE. 24-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 1980' FSL & 800' FEL

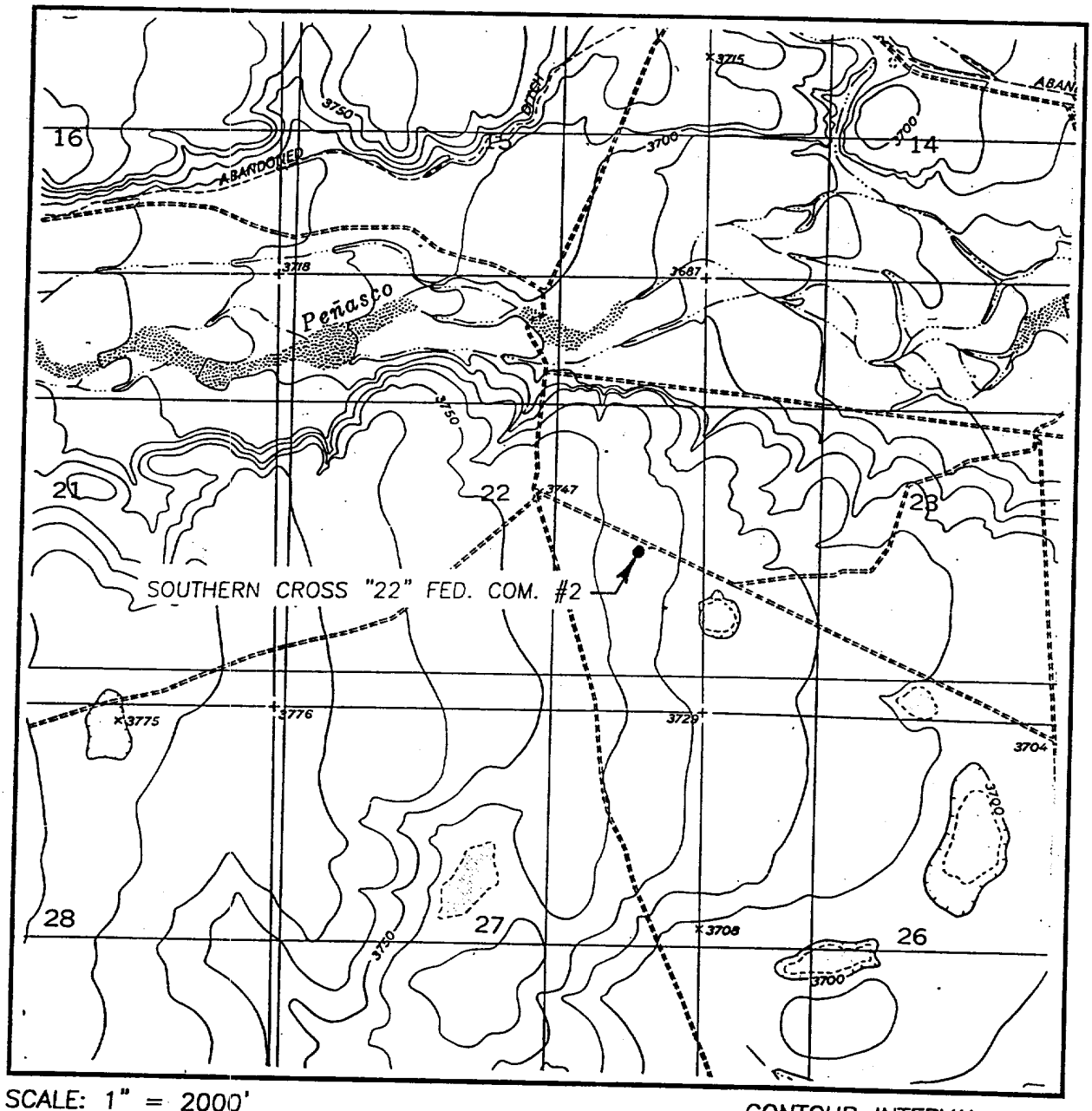
ELEVATION 3732

OPERATOR CONCHO RESOURCES, INC.

LEASE SOUTHERN CROSS "22" FED. COM.

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

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
PARISH RANCH – 10'

SEC. 22 TWP. 18-S RGE. 24-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 1980' FSL & 800' FEL

ELEVATION 3732

OPERATOR CONCHO RESOURCES, INC.

LEASE SOUTHERN CROSS "22" FED. COM.

U.S.G.S. TOPOGRAPHIC MAP
PARISH RANCH, N.M.

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

APPLICATION TO DRILL

CONCHO RESOURCES, INC.
SOUTHERN CROSS "22" FEDERAL COM. # 2
UNIT "I" SECTION 22
T18S-R24E 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 & 660' FEL SEC. 22 T18S-R24E EDDY CO.NM

2. Elevation above Sea Level: 3731' 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: 9000'

6. Estimated tops of geological markers:

Abo	3850'	Atoka	8250'
Wolfcamp	5500'	Morrow	8500'
Cisco	6400'	Mississippian	8980'

7. Possible mineral bearing formations:

Cisco	Gas	Morrow	Gas
Atoka	Gas		

8. Casing program:

Hole size	Interval	OD of casing	Weight	Thread	Collar	Grade
25"	0-40	20"	NA	NA	NA	Conductor
11"	0-1200'	8 5/8"	32	8-R	ST&C	J-55
7 7/8"	0-9000'	4½"	11.6	8-R	LT&C	N-80 J-55

APPLICATION TO DRILL

CONCHO RESOURCES, INC.
SOUTHERN CROSS "22" FEDERAL COM. # 2
UNIT "I" SECTION 22
T18S-R24E EDDY CO. NM

9. Cementing and Setting Depth:

20"	Conductor	Set 40' of 20" conductor pipe and cement to surface with Redi-mix.
8 5/8"	Surface	Set 1200' of 8 5/8" 32# J-55 ST&C casing. Cement with 400 Sx. of Class "C" 35/65 POZ +12% Salt + 6% Bentonite + ¼# Celoflakes/Sx. + 2% CaCl, tail in 200 Sx. of Class "C" + 2% CaCl, circulate cement to surface.
4½"	Production	Set 9000' of 4½" casing as follows: 1100' of 4½" 11.6# N-80 LT&C, 7000' of 4½" 11.6# K-55 LT&C, 900' of 4½" 11.6# N-80 LT&C casing. Cement with 300 Sx. of Class "H" 35/65 POZ + 6% Salt + 6% Bentonite + ¼# Celoflakes /Sx. , tail in with 925 Sx. of Class "H" 50/50 POZ + 6% Salt + 2% Bentonite. Estimate top of cement 4200'±.

10. Pressure Control Equipment: Exhibit "E". A 900 Series 3000 PSI working pressure B.O.P. consisting of a double ram type preventor with a bag type annular preventor. BOP un-t will be hydraulically operated. Exhibit "E-1". Choke manifold and closing unit. BOP will be nipped up on 8 5/8" casing and will be operated at least once each 24 Hr. period while drilling and blind rams will be operated when out of hole during trips. Flow sensor, PVT, full opening stabbing valve and upper kelly cock will be utilized. No abnormal pressure or temperature is expected while drilling.

11. Proposed Mud Circulating System:

Depth	Mud Wt.	Visc,	Fluid Loss	Type Mud
40-1200"	8.4-9.0	28-32	NC	Fresh water add paper to control seepage, add Gel for viscosity - Lime for pH control.
1200-5500'	8.4-8.9	28-32	NC	Fresh water use paper to control seepage Lime for pH control.
5000-7750'	9.2-9.6	30-36	NC	Cut Brine paper to control seepage
7750-8290'	9.2-9.6	32-38	8-15 cc	Cut Brine use Drispac with
8290-9000	9.2-9.6	32-38	8 cc or less	Cut Brine Drispac System.

Sufficient mud materials to maintain mud properties, meet lost circulation and weight increase requirements will be kept at well site at all times. In order to log well and run casing the viscosity may have to be raised and the water loss lowered in order to do so.

APPLICATION TO DRILL

CONCHO RESOURCES, INC.
SOUTHERN CROSS "22" FEDERAL COM. # 2
UNIT "I" SECTION 22
T18S-R24E EDDY CO. NM

12. Testing, Logging and Coring Program:

A. Open Hole logs" Gamma Ray-Neutron-Density, Laterolog-MSFL, Sonic from TD to 1200'. Gamma Ray - Neutron from 1200' to surface.

B. Two man mud logger on hole from 3500' to TD.

C. Possible Sidewall cores as shows dictate.

D. Possible DST's in the Morrow and Cisco.

13. Potential Hazards:

No abnormal pressures or temperatures are expected. Hydrogen Sulfide gas may be encountered, H_2S detectors will be in place to detect any presence. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used. Estimated BHP 4000 PSI, estimated BHT 135° .

14. Anticipated Starting Date and Duration of Operation:

Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved. Drilling expected to take 35 days. If production casing is run an additional 30 days will be required to complete and construct surface facilities.

15. Other Facets of Operations:

After running casing, cased hole gamma ray neutron collar logs will be run from total depth over possible pay intervals. The Morrow pay will be perforated and stimulated. The well will be swab tested and potentialed as a gas well.

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

1. All Company and Contract personnel admitted on location must be trained by a qualified H_2S safety instructor to the following:

   A. Characteristics of H_2S
   B. Physical effects and hazzards
   C. Proper use of safety equipment and life support systems.
   D. Principle and operation of H_2S 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_2S 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, H_2S 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.

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 seperator will be brought into service along with H_2S scavengers if necessary.

SURFACE USE PLAN

CONCHO RESOURCES, INC.
SOUTHERN CROSS "22" FEDERAL COM. # 2
UNIT "I" SECTION 22
T18S-R24E EDDY CO. NM

1. EXISTING ROADS. Area map, Exhibit "B" is a reproduction of the New Mexico General Hi-way Co. Map. Exhibit "C" is a reproduction of a topographic map. Existings roads and proposed roads are shown on each exhibit. All roads will be maintained in a condition equal to or better than of construction.

   A. Exhibit "A" shows the proposed well as staked.

   B. From the junction of U.S. Hi-way 82 & U.S. Hi-way 285 go south on 285 6 miles to Co. road 39 (4 Dinkus Road) turn West go 8 miles to end of black top continue 2.5 miles turn South go 1.2 miles bear left Southeast go .3 miles to location on West side of road.

   C. This well is located on private surface, Exhibit "F" shows approximate route of a gas pipeline to a sales point if this well is successful.

2. PLANNED ACCESS ROADS : No additional new roads will be necessary to location.

   A. The access road will be crowned and ditched to a 12'00" wide travel surface with 40' right-of-way.

   B. Gradient on all roads will be less than 5.00%.

   C. No turnouts will be necessary.

   D. If needed, road will be surfaced with a minimum of 4" of caliche. This material will be obtained from a local source.

   E. Centerline for the new access road has been flagged. Earthwork will be as required by field conditions.

   F. Culverts in the access road will not be used. The road will be constructed to utilize low water crossings for drainage as required by the Lopography.

3. LOCATION OF EXISTING WELLS IN A ONE-MILE RADIUS EXHIBIT "A-1"

   A. Water wells - One approximately 3000' Northwest 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"

4. If, upon completion this well is a producer Concho Resources Inc. will furnish maps and/or plats showing on site facilities or off site facilities if needed. This will be accompanied with a Sundry Notice. Possible pipeline and/or powerline route 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 in flexible lines laid on top of the ground.

6. SOURCE OF CONSTRUCTION MATERIAL:

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

7. METHODS OF HANDLING WASTE MATERIAL:

A. Drill cuttings will be disposed of in the reserve pit.

B. All trash, junk and other waste material will be contained in trash cages or 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 supplier including broken sacks.

D. Sewage from living quarters will drain into holes with a minium depth of 10'. These holes will be covered during drilling and will be back filled upon completion. A Ports-John will be provided for the rig crews. This equipment will be properly maintained during the drilling operations and removed upon completion of the well.

E. Remaining drilling fluids will be allowed to evaporate in the reserve pit until the pit is dry enough for breaking out. In the event that drilling fluids do not evaporate in a reasonable time they will be hauled off by transports and be disposed of at a state approved disposal facility. Later pits will be broken out to speed drying. Water produced during testing will be put in reserve pits. Any oil or condensate produced will be stored in test tanks until sold and hauled from the site.

8. ANCILLARY FACILITIES:

A. No camps or airstrips to be constructed.

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.

11. Other Information:

A. Topography consists of relatively flat with a slight dip to the North Northeast with drainage into The Rio Penasco. Vegetation consists of Creosote horsebush, acacia, cholla, cactus and native grasses.

B. The surface is owned by The Yates Company, the ranch foreman is Mr. Daryl Brown who resides on the ranch.

C. An Archaeological survey has been conducted and the report has been filed with the BUREAU OF LAND MANAGEMENT in Carlsbad, New Mexico.

D. There are no dwellings within three miles of this location.

12. Operator's Representative:

Field representative for contact regarding compliance with the surface use plan is:

Before Construction.

TIERRA EXPLORATION INC.
P.O. BOX 2188
HOBBS, NEW MEXICO 88241
OFFICE PHONE
JOE T. JANICA

After and during construction.

CONCHO RESOURCES, INC.
110 WEST LOUISIANA SUITE 410
MIDLAND, TEXAS 79702
OFFICE PHONE 915-683-7443
JIM BLOUNT

13. Certification: I hereby certify that I, or persons under my direct supervision, have inspected the proposed drilling site and access route, and that I an familiar with the conditions which currently exist; that the statements made in this plan are to the best of my knowledge, true and correct. The work associated with the operations proposed herein will be performed by Concho Resources, Inc., its contractors/subcontractors & will be in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provision of 18 U.S.C. 1001 for the filing of a false statement.

NAME : Joe T Janica

DATE : 07/06/00

TITLE : Agent

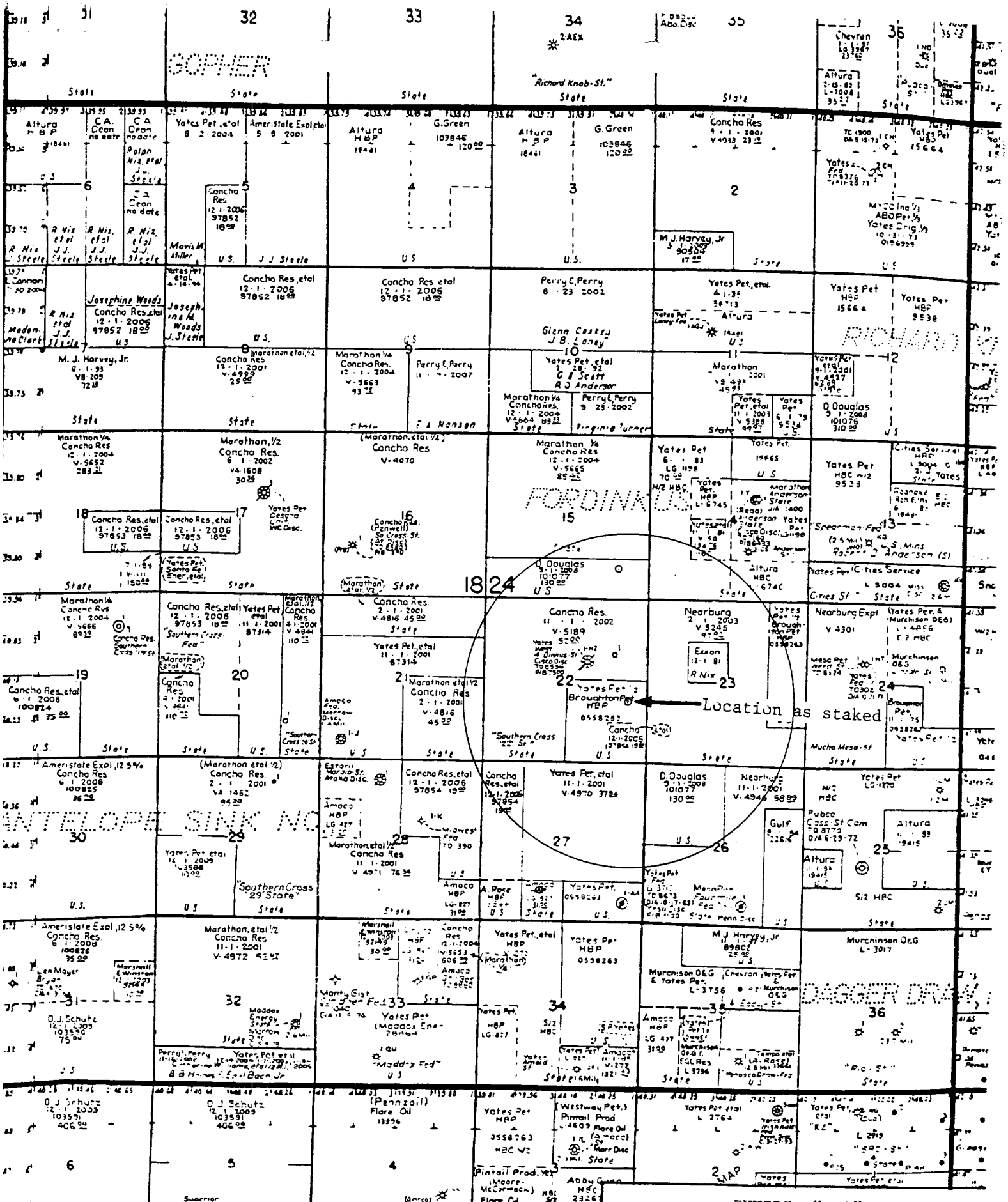


EXHIBIT "A-1"
ONE MILE RADIUS MAP

CONCHO RESOURCES, INC.
SOUTHERN CROSS "22" FEDERAL COM. # 2
UNIT "I" SECTION 22

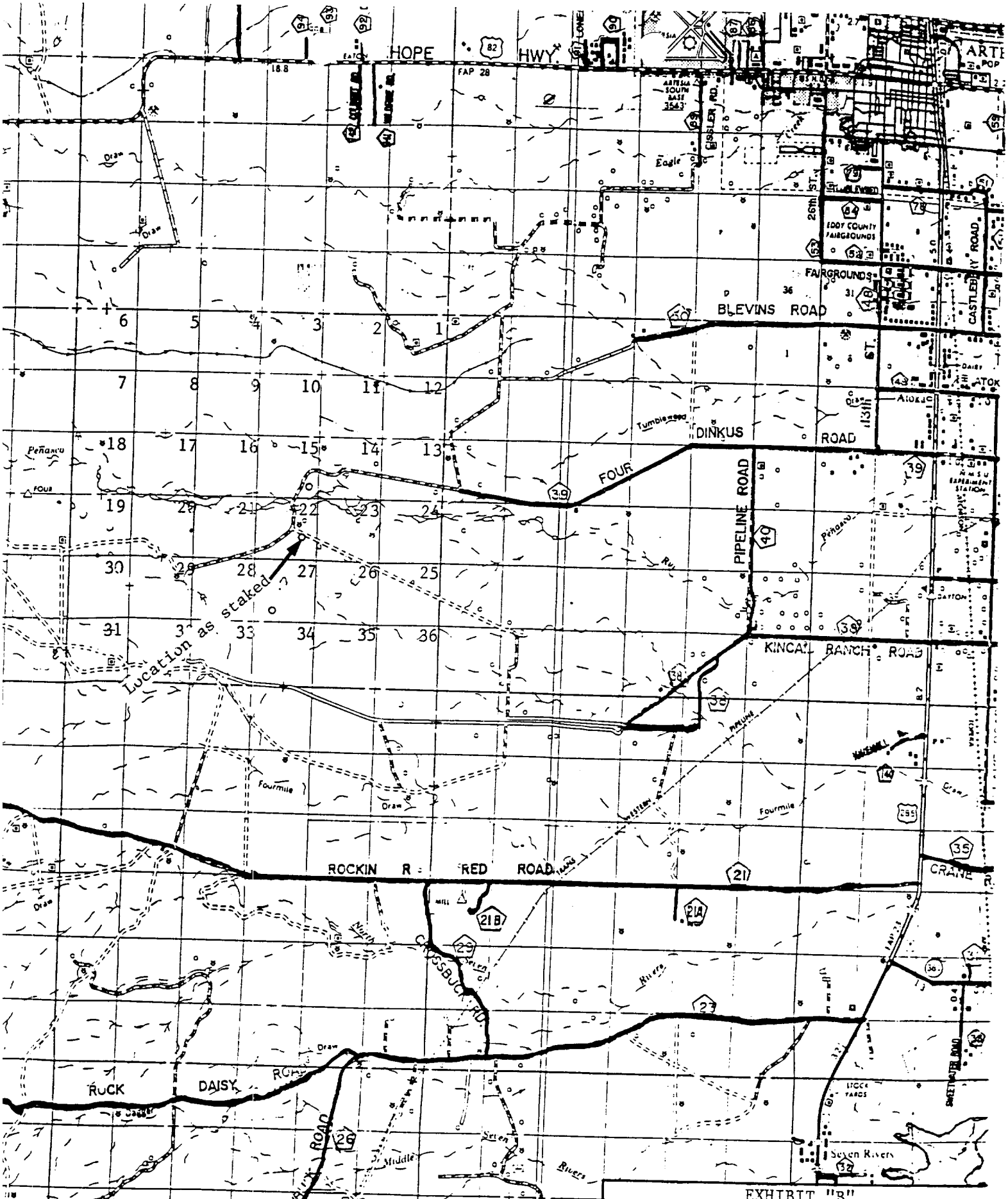


EXHIBIT "B"
LOCATION & ACCESS ROAD MAP

CONCHO RESOURCES, INC.
SOUTHERN CROSS "22" FEDERAL COM. # 2
UNIT "I" SECTION 22
T18S-R24E EDDY CO. NM

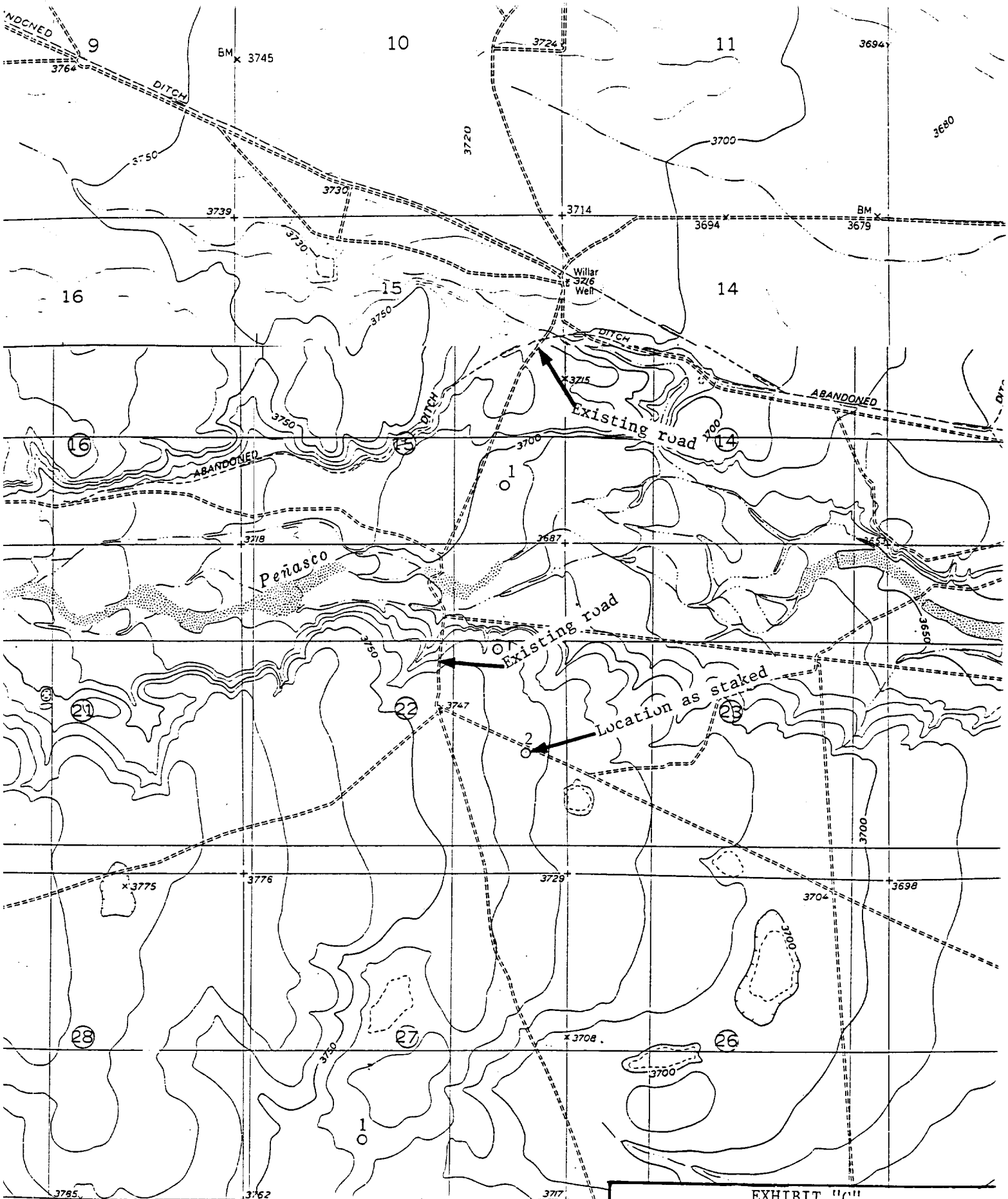
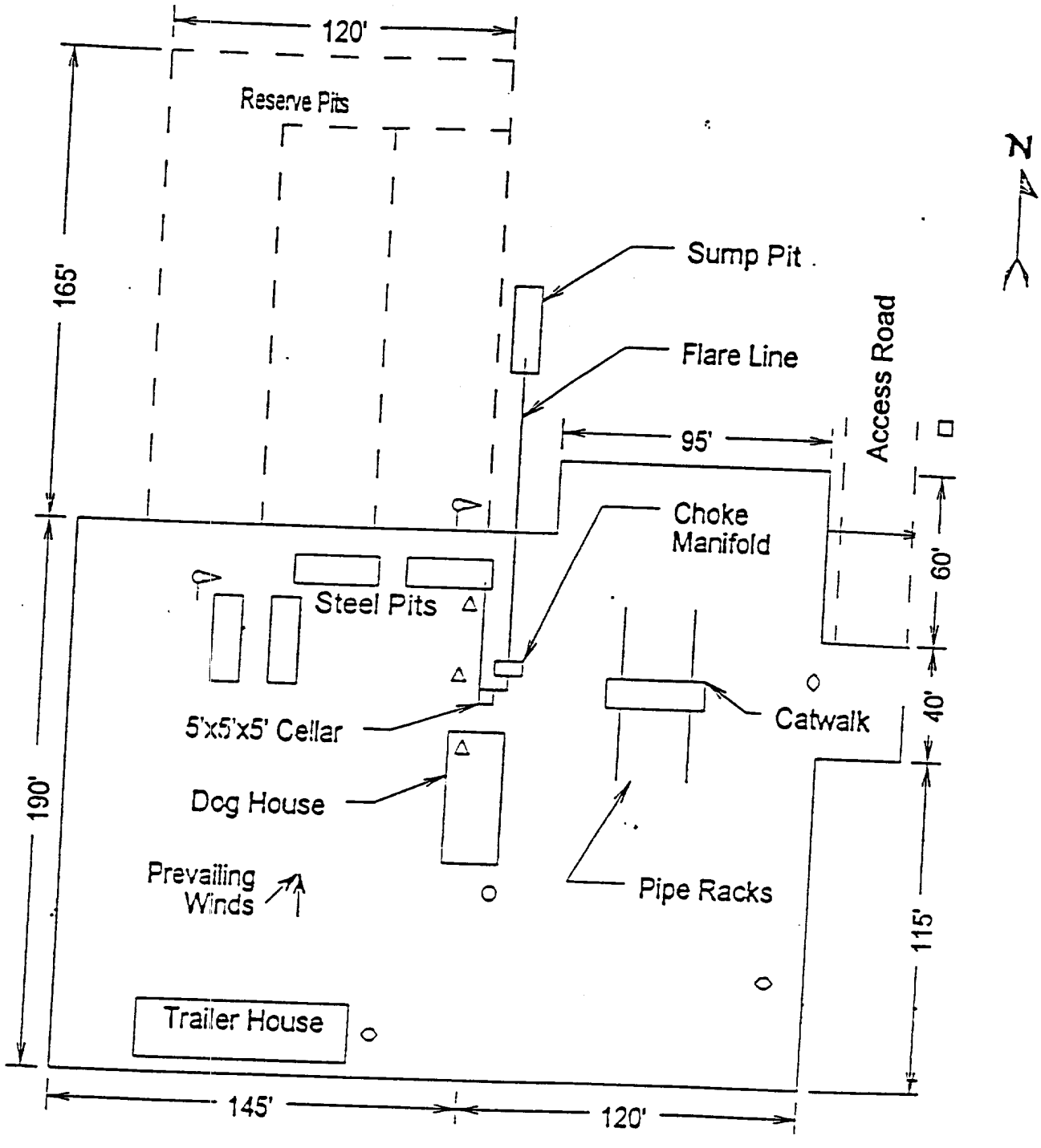


EXHIBIT "C"
TOPOGRAPHIC MAP SHOWING
ROADS & DIRECTIONS TO

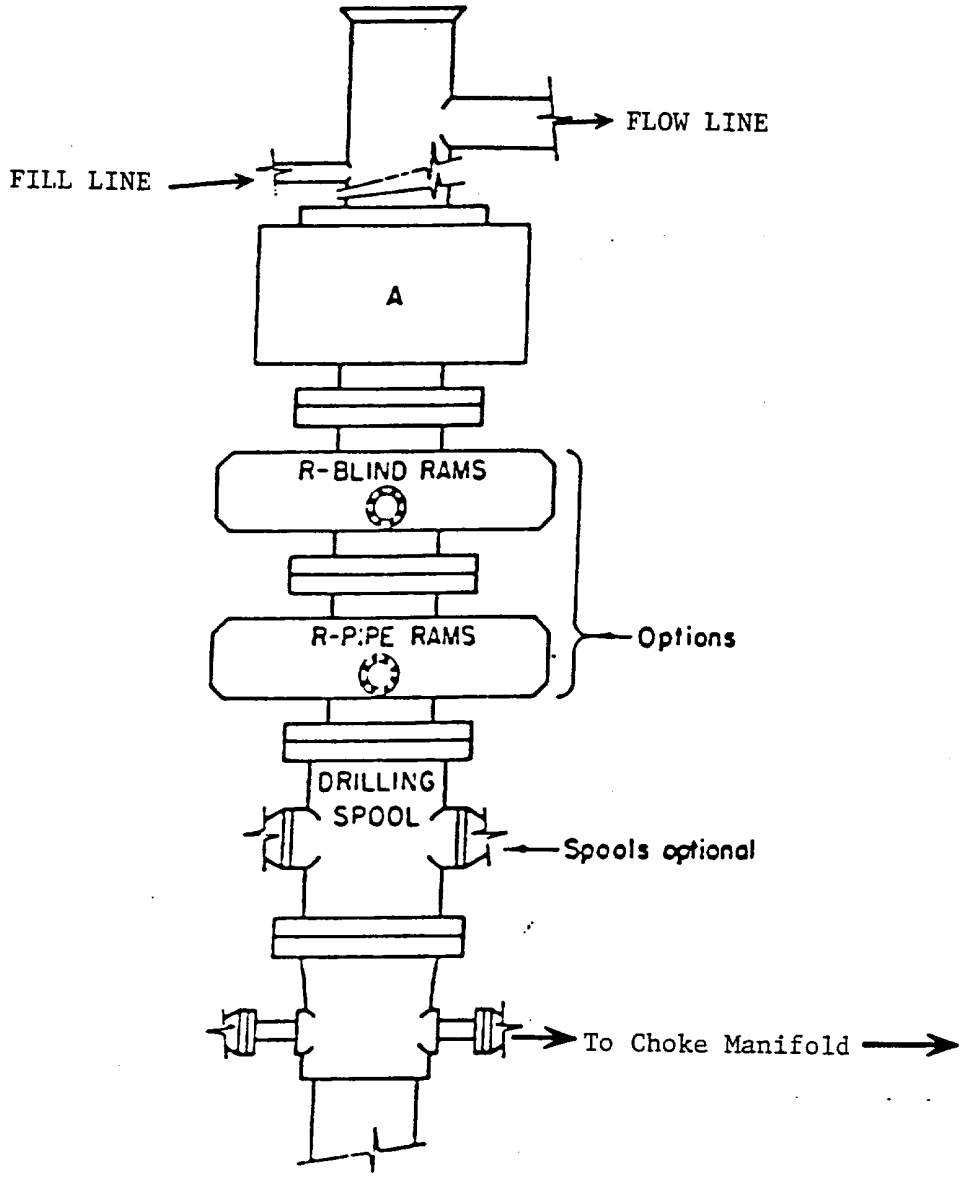
CONCHO RESOURCES, INC.
SOUTHERN CROSS "22" FEDERAL COM. # 2
UNIT "I" SECTION 22



- 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 LAYOUT PLAT

CONCHO RESOURCES, INC.
SOUTHERN CROSS "22" FEDERAL COM. # 2
UNIT "I" SECTION 22
T18S-R24E EDDY CO. NM

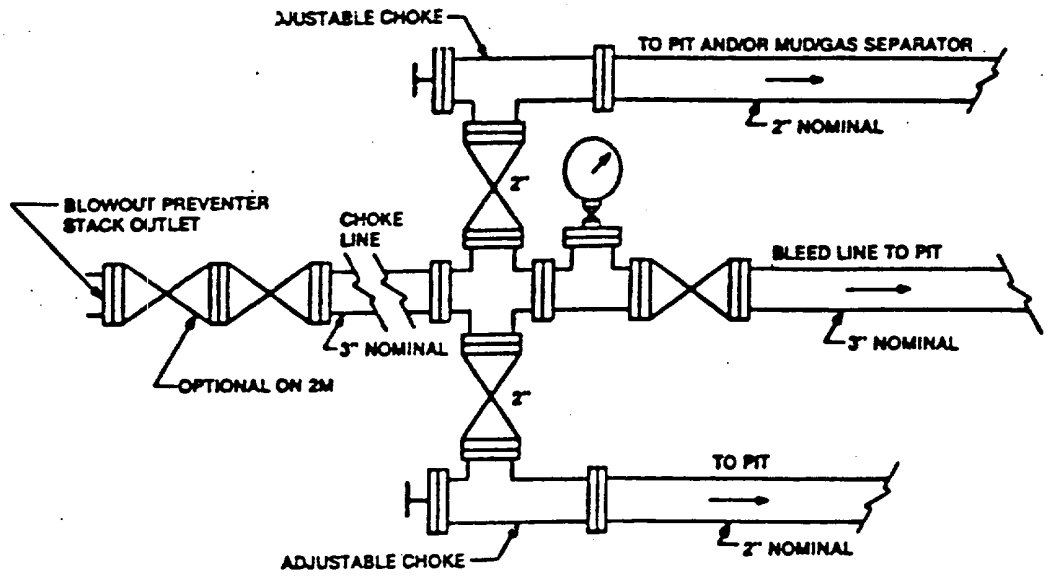


ARRANGEMENT SRRA

900 Series
3000 PSI WP

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

CONCHO RESOURCES, INC.
SOUTHERN CROSS "22" FEDERAL COM. # 2
UNIT "I" SECTION 22
T18S-R24E EDDY CO. NM



Typical choke manifold assembly for 3M WP system

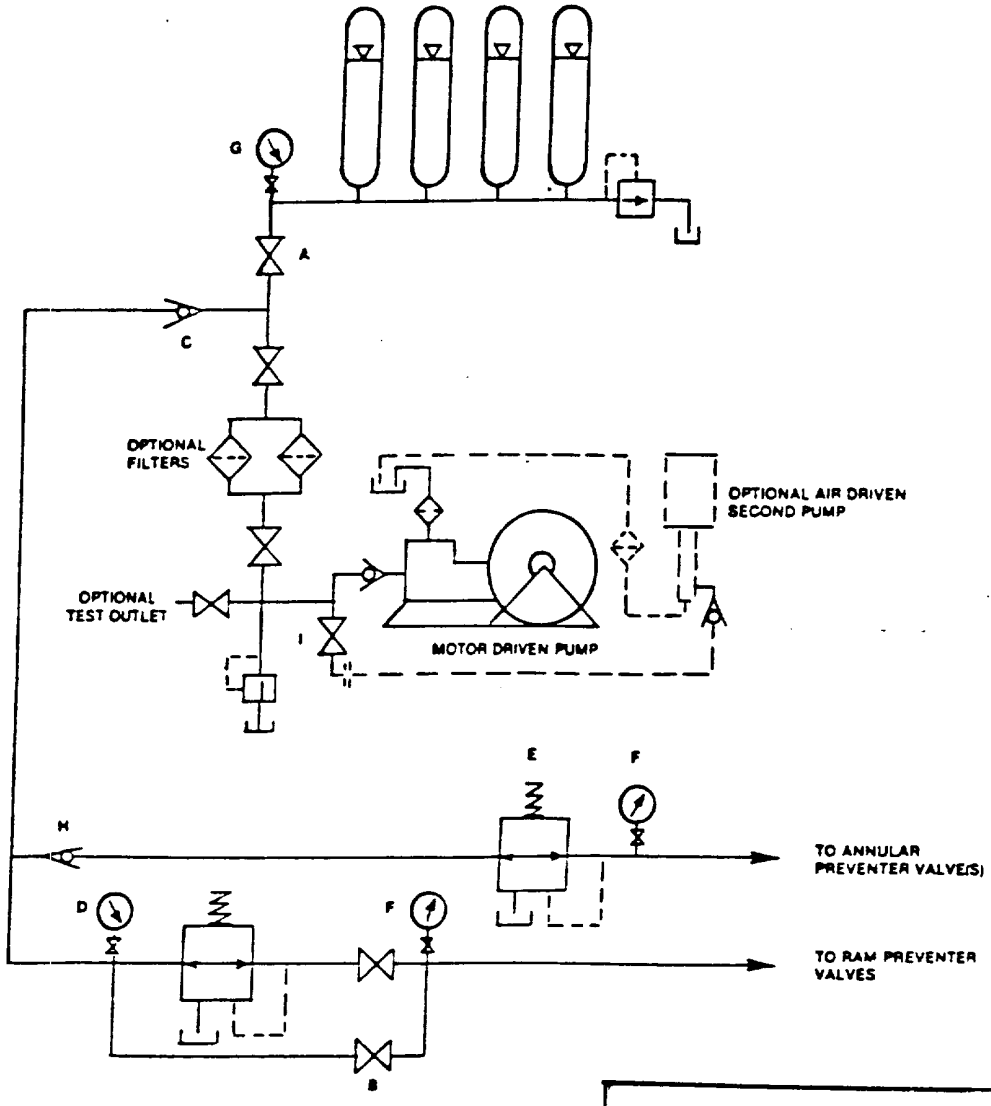


EXHIBIT "E-1"
SKETCH OF B.O.P. TO BE USED ON

CONCHO RESOURCES, INC.
SOUTHERN CROSS "22" FEDERAL COM. # 2
UNIT "I" SECTION 22
T18S-R24E EDDY CO. NM

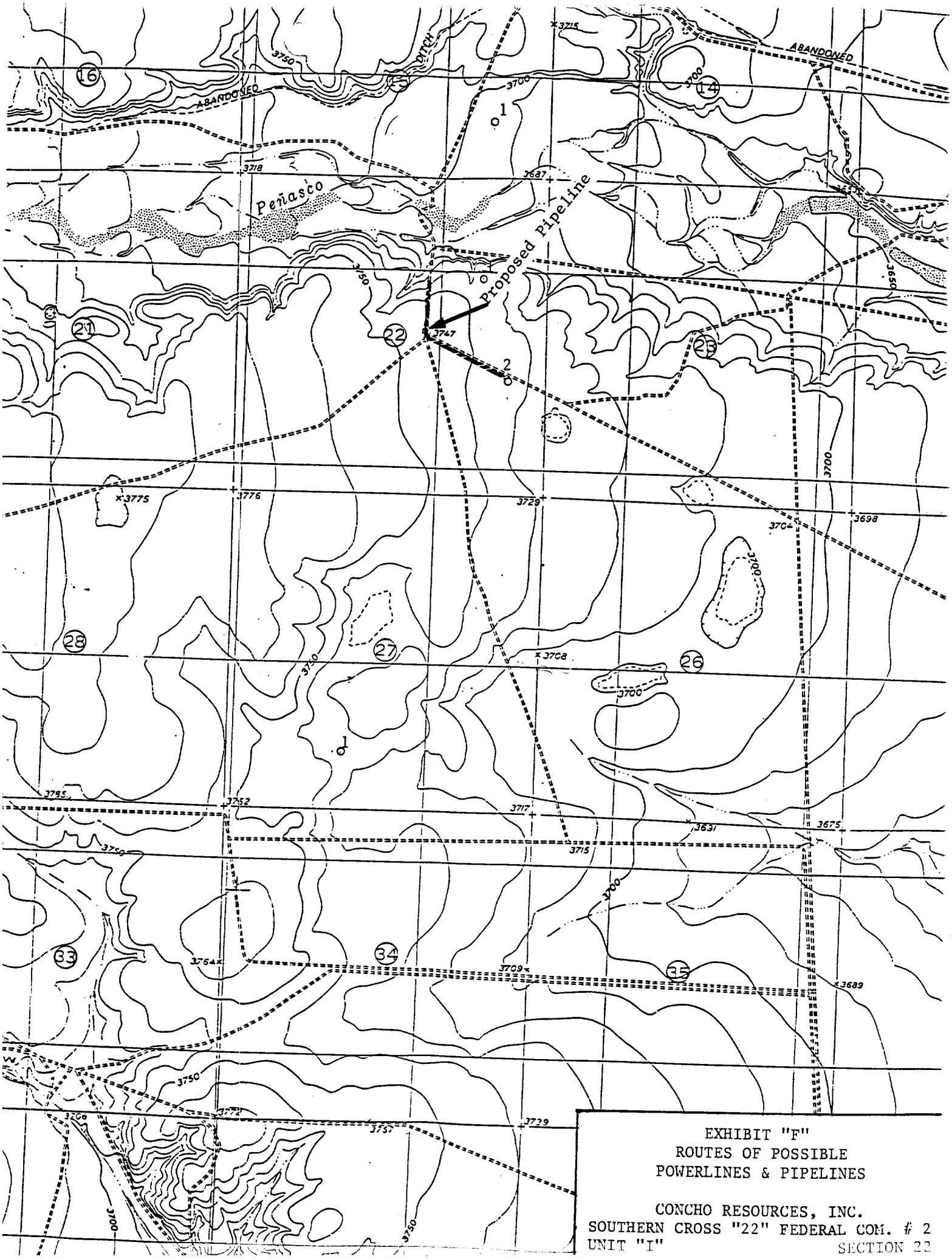


EXHIBIT "F"
ROUTES OF POSSIBLE
POWERLINES & PIPELINES

CONCHO RESOURCES, INC.
SOUTHERN CROSS "22" FEDERAL COM. # 2
UNIT "I" SECTION 22