

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

## 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

CONCHO RESOURCES, INC.

(ERICK NELSON) 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

990' FNL &amp; 330' FWL SEC. 17 T18S-R31E EDDY CO. NM

At proposed prod. zone SAME

## 14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*

Approximately 9 miles Southeast of Loco Hills New Mexico

## 15. DISTANCE FROM PROPOSED\*

LOCATION TO NEAREST  
PROPERTY OR LEASE LINE, FT.  
(Also to nearest drig. unit line, if any)

330'

13. DISTANCE FROM PROPOSED LOCATION\*  
TO NEAREST WELL, DRILLING, COMPLETED,  
OR APPLIED FOR, ON THIS LEASE, FT.

1000'

## 16. NO. OF ACRES IN LEASE

80

## 19. PROPOSED DEPTH

8500'

17. NO. OF ACRES ASSIGNED  
TO THIS WELL

40

20. ROTARY OR CABLE TOOLS  
ROTARY

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

3647' 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
17½"	H-40 13 3/8"	48	775' <i>2</i>	650 Sx. circulate to surface
12¼"	J-55 8 5/8"	32	2800'	710 Sx. " " "
7 7/8"	J-55 5½"	17	8500'	850 Sx. estimate top cem. 2500'

1. Drill 25" hole to 40'. Set 40' of 20" conductor pipe and cement to surface with Redi-mix.
2. Drill 17½" hole to 775'. Run and set 775' of 13 3/8" 48# H-40 ST&C casing. Cement with 650 Sx. of Class "C" cement + 2% CaCl + ½# Flocele/ Sx. circulate cement to surface.
3. Drill 12¼" hole to 2800'. Run and set 2800' of 8 5/8" 32# J-55 ST&C casing. Cement with 510 Sx of Class "C" Light + additives, tail in with 200 Sx. of Class "C" cement + 2% CaCl + ½# Flocele/Sx. circulate cement to surface.
4. Drill 7 7/8" hole to 8500'. Run and set 8500' of 5½" 17# J-55 LT&C casing. Cement with 600 Sx. of Class "H" Light + additives, tail in with 250 Sx. of Class "H" Premium Plus + additives. Estimate top of cement 2500' from surface.

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 prevention program, if any.

24.

SIGNED

TITLE Agent

DATE 02/09/01

(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:

/s/ LESLIE A. THEISS

APPROVED BY

TITLE

DATE

\*See Instructions On Reverse Side

APPROVED

YEAR

## 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., Artec, NM 87410

## DISTRICT IV

P.O. Box 2088, Santa Fe, N.M. 87504-2088

## State of New Mexico

Energy, Minerals and Natural Resources Department

## OIL CONSERVATION DIVISION

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

Form C-102

Revised February 10, 1994

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

## WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
	56405	SHUGART NORTH - BONE SPRING
Property Code	Property Name	Well Number
	WEST SHUGART "17" FEDERAL	2
OGRID No.	Operator Name	Elevation
166111	CONCHO RESOURCES, INC.	3647'

## Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	17	18-S	31-E		990	NORTH	330	WEST	EDDY

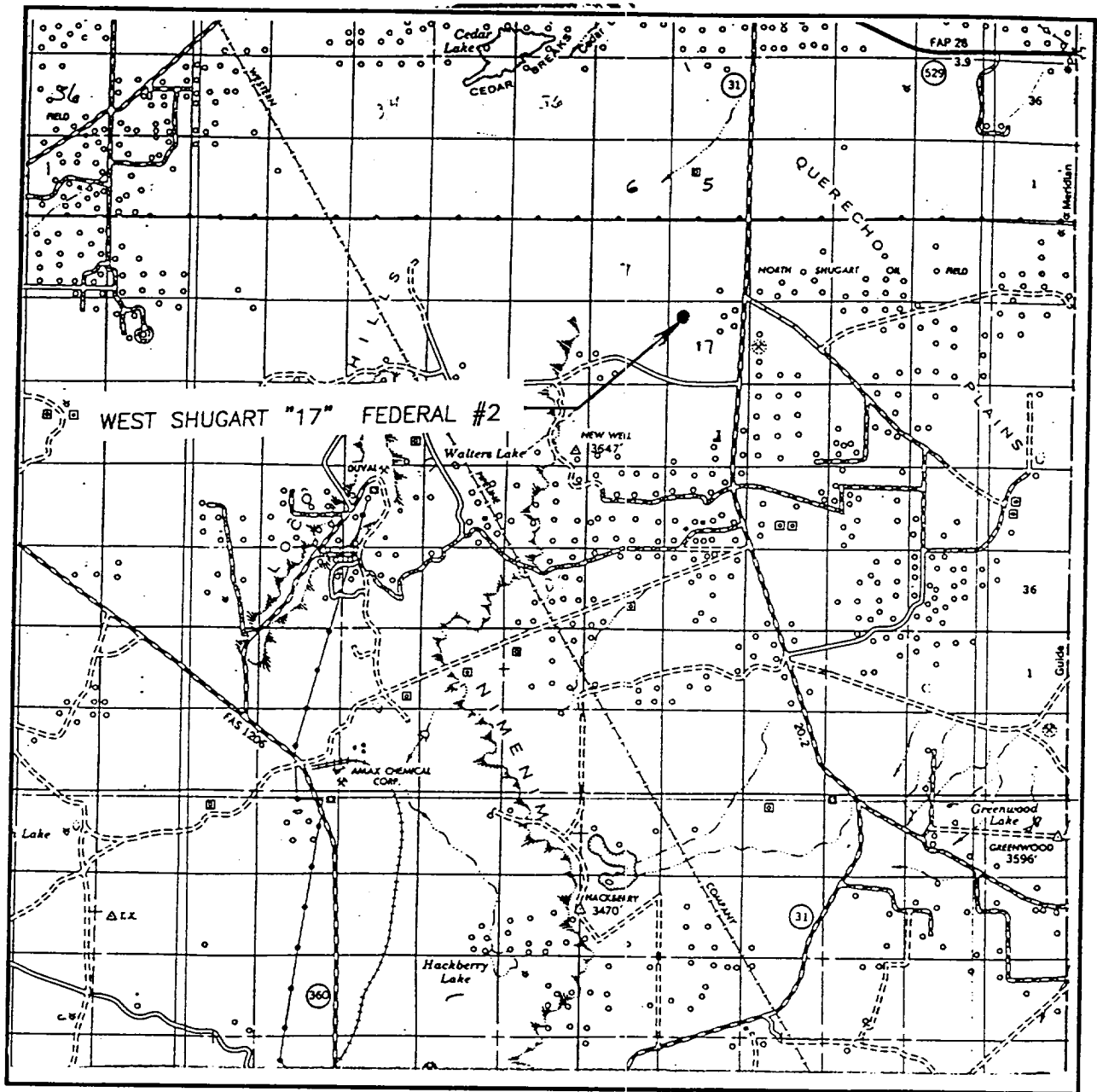
## Bottom Hole Location If Different From Surface

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 or Infill	Consolidation Code	Order No.						
40									

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

				<b>OPERATOR CERTIFICATION</b>  I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.   Signature Joe T. Janica Printed Name Agent Title 02/09-01 Date	
				<b>SURVEYOR CERTIFICATION</b>  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.  JANUARY 19, 2001 Date Surveyed Signature & Seal of Professional Surveyor  01-11-0032 Certificate No. RONALD J. EIDSON 3239 GARY EIDSON 12641	

# VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 17 TWP. 18-S RGE. 31-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 990'FNL & 330'FWL

ELEVATION 3647'

OPERATOR CONCHO RESOURCES, INC.

LEASE WEST SHUGART "17" FEDERAL

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

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'

LOCO HILLS, HACKBERRY LAKE N.M.

SEC. 17 TWP. 18-S RGE. 31-E

SURVEY N.M.P.M.

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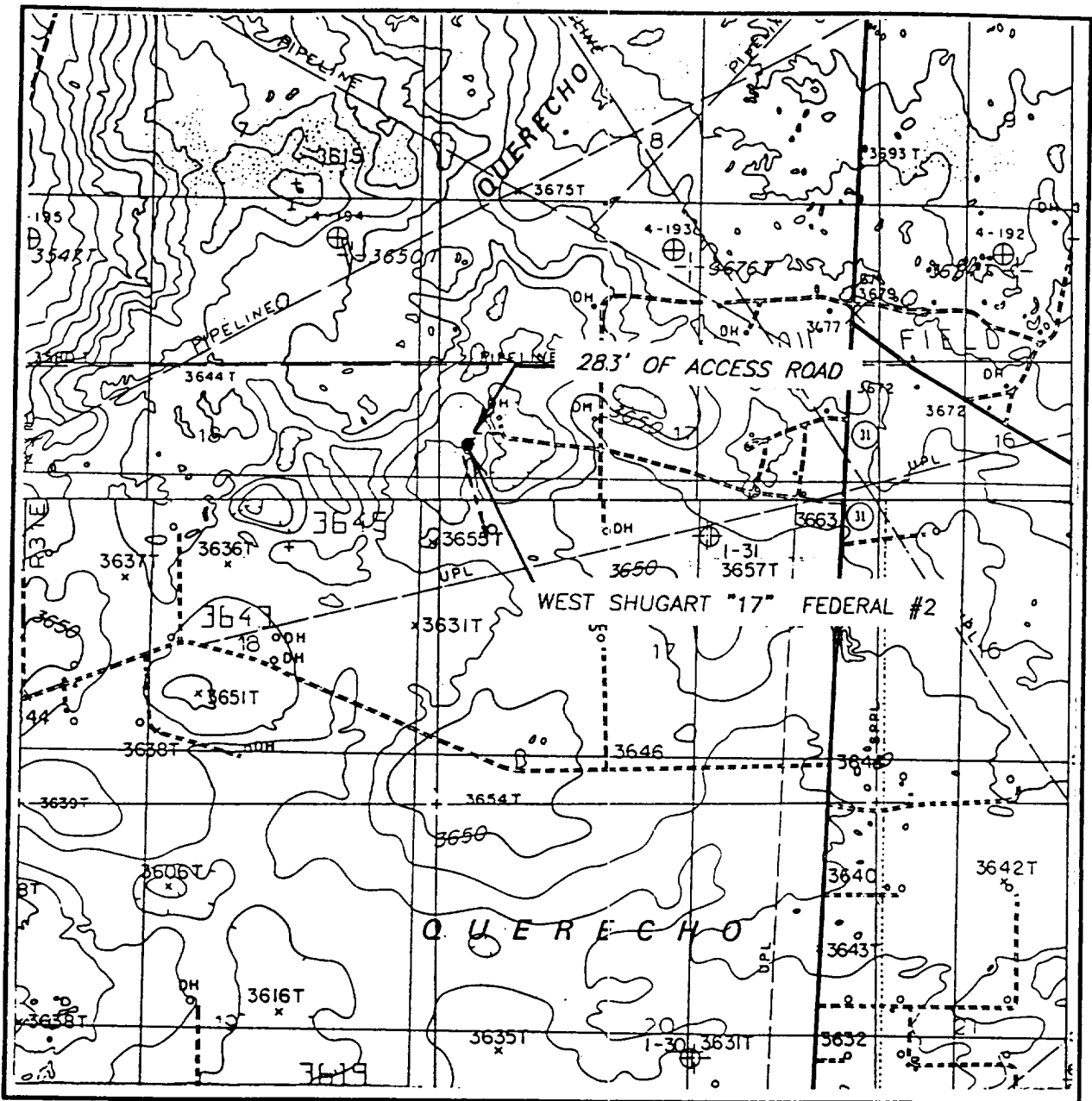
LEASE WEST SHUGART "17" FEDERAL

U.S.G.S. TOPOGRAPHIC MAP

LOCO HILLS, HACKBERRY LAKE N.M.

JOHN WEST SURVEYING  
HOBBS, NEW MEXICO  
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HOBBS, NEW MEXICO  
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# APPLICATION TO DRILL

CONCHO RESOURCES, INC.  
WEST SHUGART "17" FEDERAL # 2  
UNIT "D" SECTION 17  
T18S-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: 990' FNL & 330' FWL SEC. 17 T18S-R31E EDDY CO. NM
2. Elevation above Sea Level: 3647' GR.
3. Geologic name of surface formation: Quaternary Aeolian Deposits.
4. Drilling tools and associated equipment: Conventional rotary drilling rig using drilling mud as a circulating medium for solids removal from hole.
5. Proposed drilling depth: 8500'
6. Estimated tops of geological markers:

Rustler Anhydrite	575'	San Andres	3800'
Yates	1950'	Delaware	5775'
Queen	3150'	Bone Spring	8150'

7. Possible mineral bearing formations:

San Andres	Oil	Bone Spring	Oil
Delaware	Oil		

8. Casing program:

Hole size	Interval	OD of casing	Weight	Thread	Collar	Grade
25"	0-40	20"	NA	NA	NA	Conductor
17½"	0-775'	13 3/8"	48#	8-R	ST&C	H-40
12½"	0-2800'	8 5/8"	32#	8-R	ST&C	J-55
7 7/8"	0-8500'	5½"	17#	8-R	LT&C	J-55

*12-20-44 to 12-20-44*  
*12-20-44 to 12-20-44*

# APPLICATION TO DRILL

CONCHO RESOURCES, INC.  
WEST SHUGART "17" FEDERAL # 2  
UNIT "D" SECTION 17  
T18S-R31E EDDY CO. NM

## 9. Cementing and Setting Depth:

20"	Conductor	Set 40' of 20' conductor and cement to surface with Redi-mix.
13 3/8"	Surface	Set 775' of 13 3/8" 48# H-40 ST&C casing. Cement with 650 Sx. of Class "C" cement + 2% CaCl + 1/2# Flocele/Sx. Circulate cement to surface.
8 5/8"	Intermediate	Set 2800' of 8 5/8" 32# J-55 ST&C casing. Cement with 510 Sx. of Class "C" Light + additives, tail in with 200 Sx. of Class "C" cement + 2% CaCl + 1/2# Flocele/Sx. Circulate cement to surface.
5 1/2"	Production	Set 8500' of 5 1/2" 17# J-55 LT&C casing. Cement with 600 Sx. of Class "H" Light + additives, tail in with 250 Sx. of Class "H" Premium Plus + additives, estimate top of cement 2500' from surface.

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 nipples up on 13 3/8" 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
40-775'	8.4-8.7	29-34	NC	Fresh water Spud mud add paper to control seepage, use high viscosity sweeps to clean hole.
775-2800'	10-10.4	29-36	NC	Brine water use paper to control seepage and high viscosity sweeps to clean hole.
2800-8000'	8.9-9.5	32-38	NC	Cut Brine using high viscosity sweeps to clean hole.
8000-8500	8.8-9.5	32-38	10cc or less	Cut brine with a Gel/Pac system for water loss control.

Sufficient mud materials will be kept on location at all times in order to combat lost circulation, & unexpected kicks. In order to run DST's, open hole logs and casing viscosity and water loss may have to be controlled.

APPLICATION TO DRILL

CONCHO RESOURCES, INC.  
WEST SHUGART "17" FEDERAL # 2  
UNIT "D" SECTION 17  
T18S-R31E EDDY CO. NM

12. Testing, Logging and Coring Program:

- A. Open hole logs: Gamma Ray, Neutron Density with caliper, Laterolog MSFL from TD to 2800'. Gamma Ray Neutron from 2800' to surface.
- B. Two man mud logging unit on hole from 4500' to TD.
- C. Side wall cores may be taken over possible productive intervals.
- D. DST's may be run if shows dictate.

13. Potential Hazards:

No abnormal pressures or temperatures are expected. Hydrogen Sulfide gas may be encountered, H<sub>2</sub>S 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 4500 PSI, estimated BHT 168°.

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 28 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 BONE SPRING pay will be perforated and stimulated. 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 H<sub>2</sub>S safety instructor to the following:
  - A. Characteristics of H<sub>2</sub>S
  - B. Physical effects and hazards
  - C. Proper use of safety equipment and life support systems.
  - D. Principle and operation of H<sub>2</sub>S detectors, warning system and briefing areas.
  - E. Evacuation procedure, routes and first aid.
  - F. Proper use of 30 minute pressure demand air pack.
2. H<sub>2</sub>S Detection and Alarm Systems
  - A. H<sub>2</sub>S detectors and audio alarm system to be located at bell nipple, end of blooie line (mud pit) and on derrick floor or doghouse.
3. Windsock and/or wind streamers
  - A. Windsock at mudpit area should be high enough to be visible.
  - B. Windsock at briefing area should be high enough to be visible.
  - C. There should be a windsock at entrance to location.
4. Condition Flags and Signs
  - A. Warning sign on access road to location.
  - B. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow flag indicates potential pressure and danger. Red flag, danger, H<sub>2</sub>S present in dangerous concentration. Only emergency personnel admitted to location.
5. Well control equipment
  - A. See exhibit "E"
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

CONCHO RESOURCES, INC.  
WEST SHUGART "17" FEDERAL # 2  
UNIT "D" SECTION 17  
T18S-R31E 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. Existing 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 Loco Hills New Mexico take U.S. Hi-way 82, 5.5 miles East to CR-222, turn South go 4.4 miles turn West follow lease road .6 miles, turn South go .2 miles turn West go .25 miles to well # 1 location turn North go 990' to location of well # 2.
  - C. Construct powerlines and lay flowlines along access roads and existing R-O-W's that will allow this well to produce oil & gas. See Exhibit "F" attached.
2. PLANNED ACCESS ROADS : Approximately 990' of new road will be constructed.
  - 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 Topography.
3. LOCATION OF EXISTING WELLS IN A ONE-MILE RADIUS 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"

## SURFACE USE PLAN

CONCHO RESOURCES, INC.  
WEST SHUGART "17" FEDERAL # 2  
UNIT "D" SECTION 17  
T18S-R31E EDDY CO. NM

4. If on completion this well is a producer Concho Resources, Inc. will furnish maps and/or plats showing on site facilities or off site facilities if required. R-O-W's for pipelines and powerlines along existing R-O-W's or existing roads as 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 Porta-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.

## SURFACE USE PLAN

CONCHO RESOURCES, INC.  
WEST SHUGART "17" FEDERAL # 2  
UNIT "D" SECTION 17  
T18S-R31E EDDY 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 7.3 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

CONCHO RESOURCES, INC.  
WEST SHUGART "17" FEDERAL # 2  
UNIT "D" SECTION 17  
T18S-R31E EDDY CO. NM

11. OTHER INFORMATION:

- A. Topography consists of sand dunes, sandy soils with native grasses consisting of Sand Sage, Scrub Oak, Snakeweed and Mesquite. Drainage is Westerly toward the Querecho Plains.
- B. The surface is owned by The Bureau of Land Management, U.S. Dept. of Interior.
- C. An Archaeological survey will be conducted and the results will be submitted to the Bureau of Land Management, Carlsbad, New Mexico.
- D. No dwellings within one mile of location.

12. OPERATORS REPRESENTATIVE:

Field representative to contact regarding compliance with Application to Drill and Surface Use Plan is:

Before APD is approved.

Tierra Exploration Inc.  
P.O. Box 2188  
Hobbs, N.M. 88241  
Joe T. Janica  
Office Phone: 505-392-2112

After APD is approved.

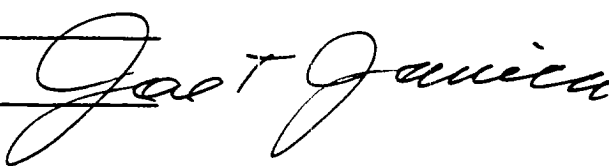
Concho Resources, Inc.  
110 West Louisiana  
Suite 410  
Midland, Texas 79702  
Jim Blount 915-683-7442

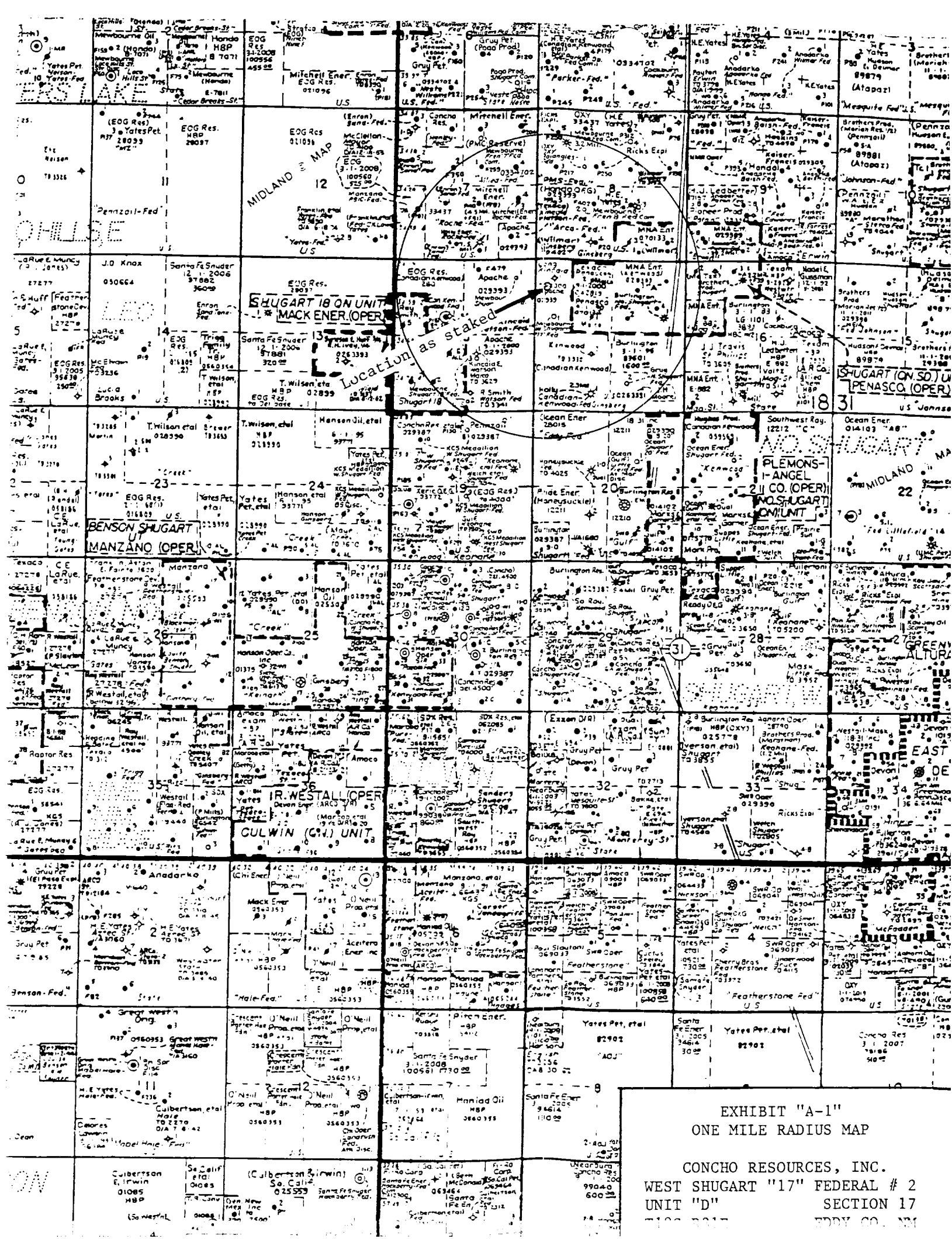
13. CERTIFICATION: I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and that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

DATE: 02/09/01

NAME: JOE T. JANICA

TITLE: AGENT





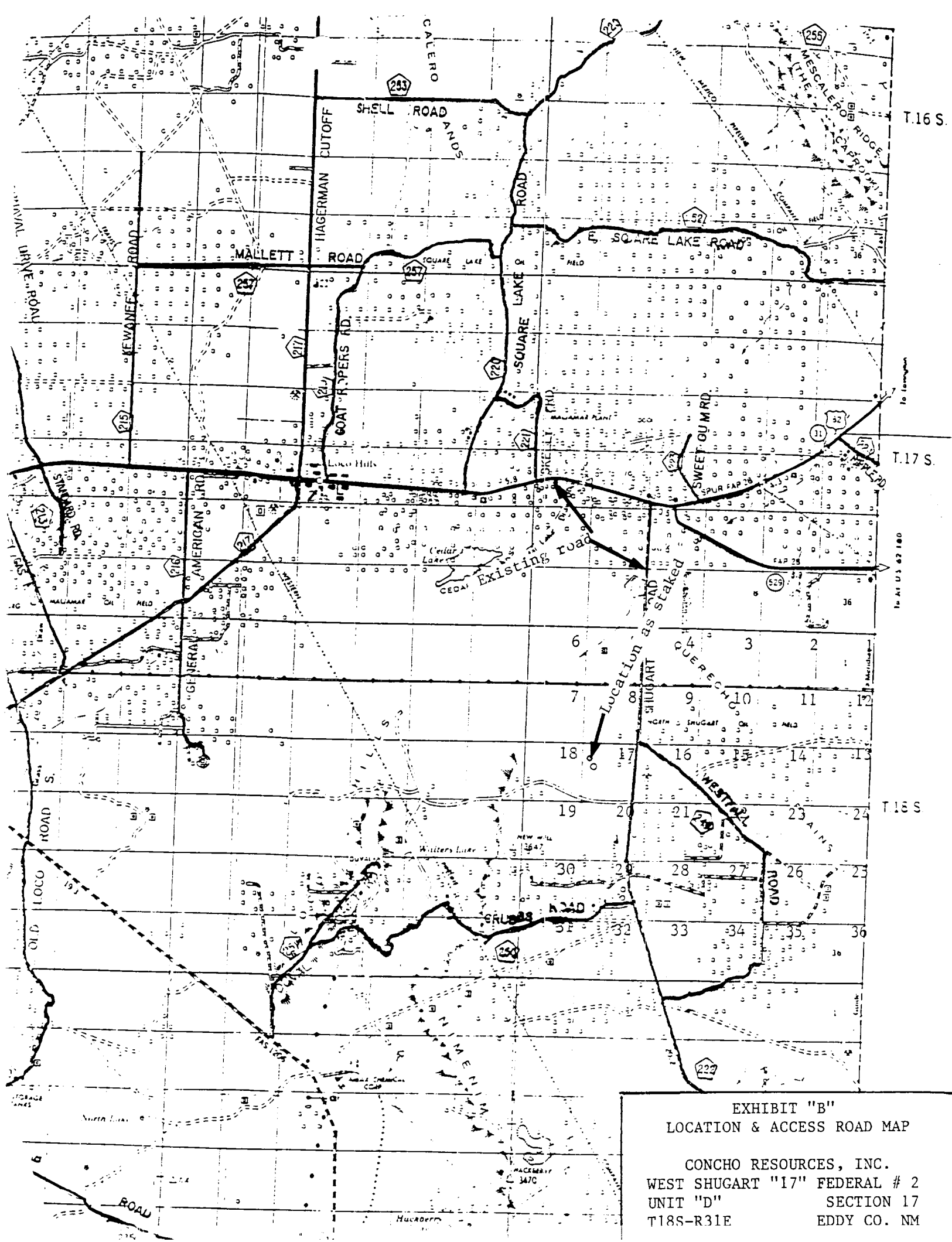


EXHIBIT "B"  
LOCATION & ACCESS ROAD MAP

CONCHO RESOURCES, INC.  
WEST SHUGART "17" FEDERAL # 2  
UNIT "D" SECTION 17  
T18S-R31E EDDY CO. NM



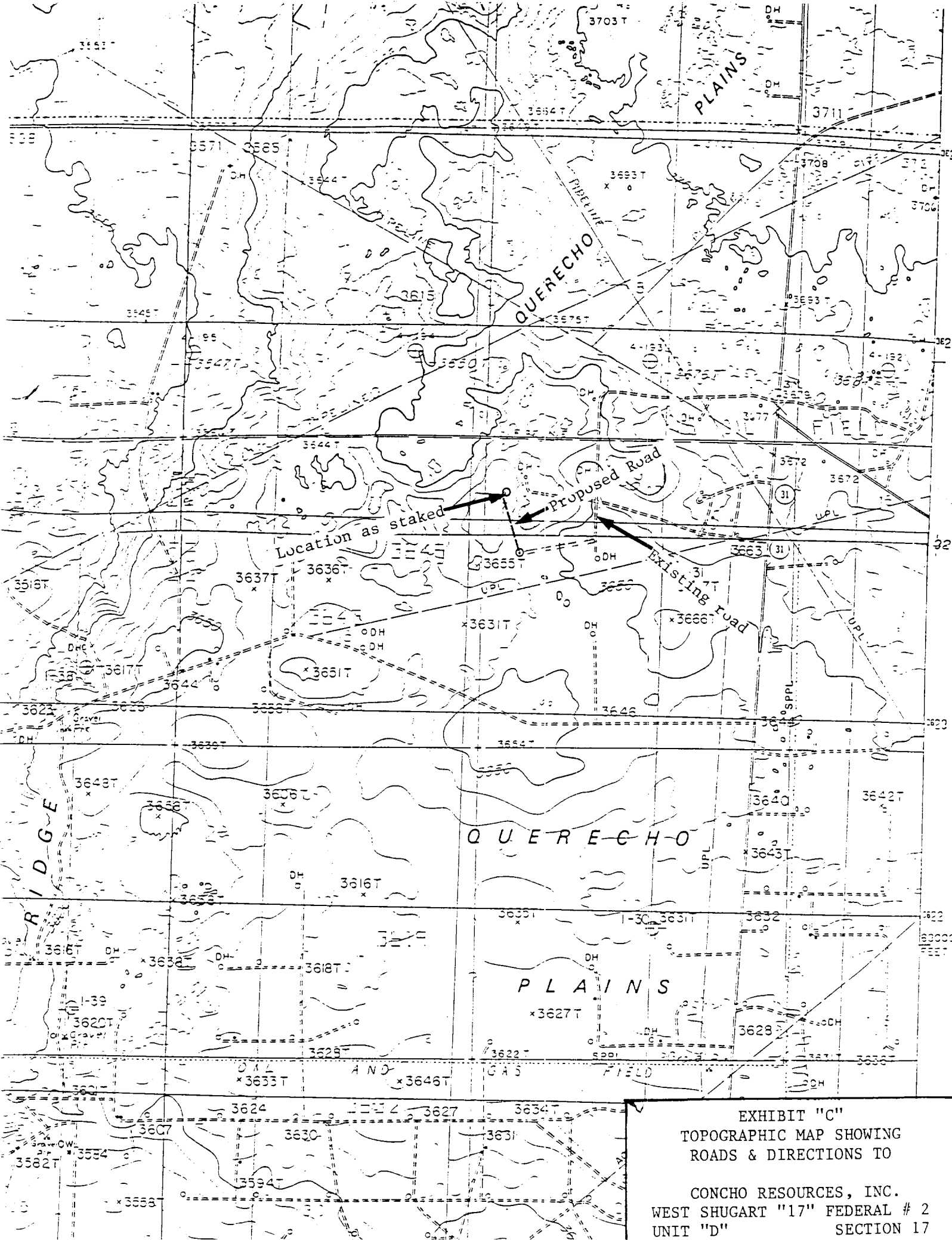


EXHIBIT "C"  
TOPOGRAPHIC MAP SHOWING  
ROADS & DIRECTIONS TO  
CONCHO RESOURCES, INC.  
WEST SHUGART "17" FEDERAL # 2  
UNIT "D" SECTION 17

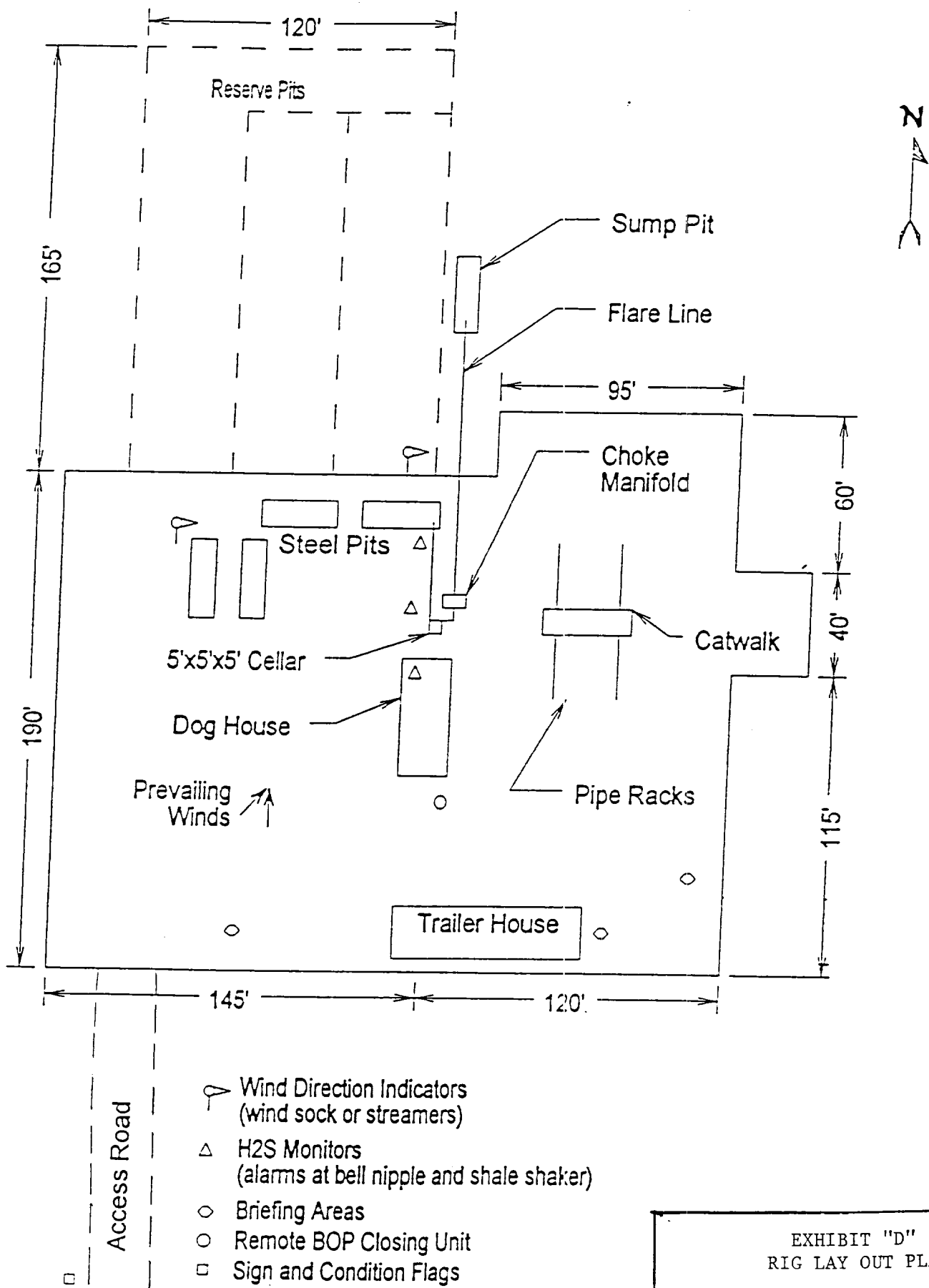
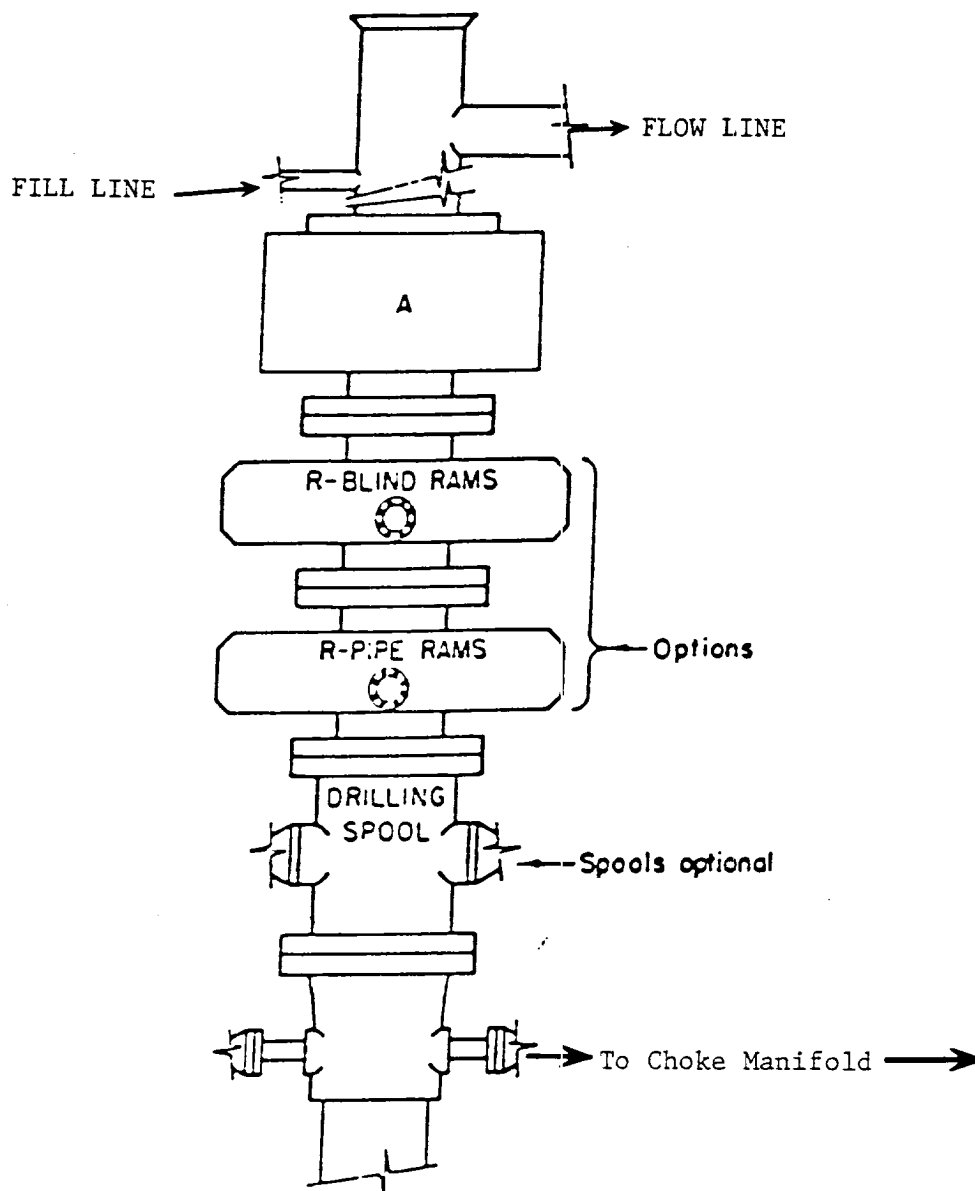


EXHIBIT "D"  
RIG LAY OUT PLAT

CONCHO RESOURCES, INC.  
WEST SHUGART "17" FEDERAL # 2  
UNIT "D" SECTION 17  
T18S-R31E EDDY CO. NM



# **ARRANGEMENT SRRA**

900 Series  
3000 PSI WP

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

CONCHO RESOURCES, INC.  
WEST SHUGART "17" FEDERAL # 2  
UNIT "D" SECTION 17  
T18C-R31E EDDY CO NM

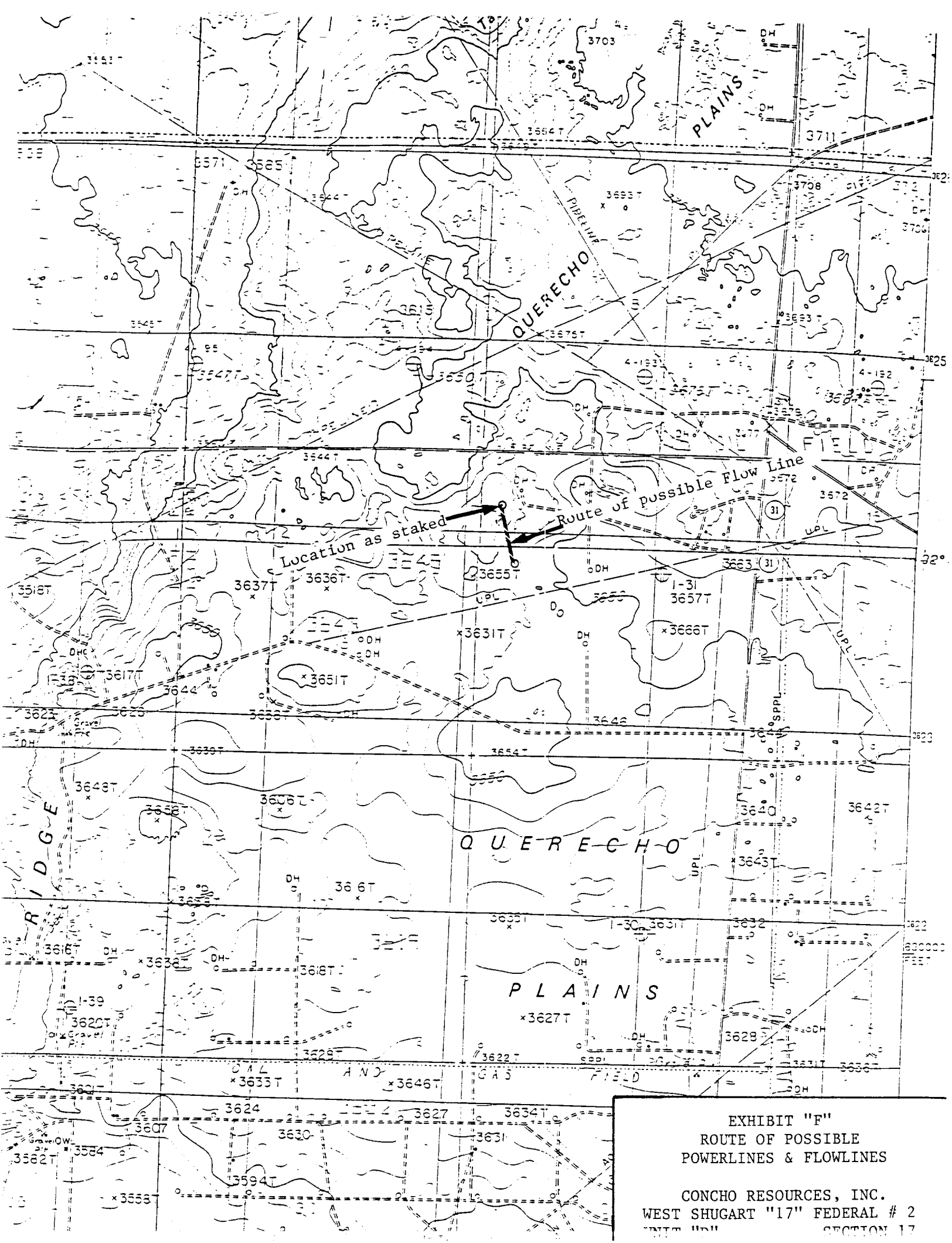


EXHIBIT "F"  
ROUTE OF POSSIBLE  
POWERLINES & FLOWLINES

CONCHO RESOURCES, INC.  
WEST SHUGART "17" FEDERAL # 2  
UNIT "B" SECTION 17

