

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE\*  
(Other instructions on  
reverse side)

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

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK <b>DRILL</b> <input checked="" type="checkbox"/> <b>DEEPEN</b> <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. NM 86153
b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME
2. NAME OF OPERATOR CONCHO RESOURCES INC.		7. UNIT AGREEMENT NAME
3. ADDRESS AND TELEPHONE NO. 110 W. LOUISIANA STE 410; MIDLAND TX 79701		8. FARM OR LEASE NAME, WELL NO. Tomcat '21' Federal #5
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 660' FNL & 1980' FWL, SEC. 21, T-23S, R-32E At proposed prod. zone SAME		9. API WELL NO. 30-025-35498
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* APPROX. 30 MILES WEST OF JAL, NEW MEXICO		10. FIELD AND POOL, OR WILDCAT Sand Dunes, Bone Spring, South
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT (Also to nearest drg. unit line, if any) 660'		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA SEC. 21, T-23S, R-32E
16. NO. OF ACRES IN LEASE 1020		12. COUNTY OR PARISH LEA CO.
17. NO. OF ACRES ASSIGNED TO THIS WELL 40		13. STATE NEW MEXICO
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 1320'		19. PROPOSED DEPTH 9,100'
20. ROTARY OR CABLE TOOLS ROTARY		21. ELEVATIONS (Show whether DF, RT, GR, etc.) 3672' GR
22. APPROX. DATE WORK WILL START*		

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
25"	20"	NA	40'	CMT TO SURF W/ REDI-MIX
17-1/2"	H-40, 13-3/8"	48	600'	650 SX; CIRC TO SURF
12-1/4"	J-55/S-80, 8-5/8"	32	4800'	1300 SX; CIRC TO SURF
7-7/8"	K55/N80; 5-1/2"	17	9100'	900 sx; Est. TOC @ 4600'

CONCHO RESOURCES INC. RESPECTFULLY REQUESTS APPROVAL TO DRILL THE TOMCAT '21' FEDERAL NO. 5 WELL  
ACCORDING TO THE FOLLOWING PROCEDURE:

1. Drill 25" hole to 40'. Set 40' of conductor & cement to surf w/ redi-mix.
2. Drill 17-1/2" hole to 600'. Run & set 600' of 13-3/8", H-40, 48#, ST&C csg. Cmt w/ 400 sx Class 'C' light & tail in w/ 250 sxs Class 'C' + 2% CaCl. Circ to surf.
3. Drill 12-1/4" hole to 4800'. Run & set 4800' of 8-5/8", J-55 & S-80, 32#, ST&C csg. Cmt w/ 1100 sxs Class 'C' light & tail in w/ 200 sxs Class 'C' + 2% Cacl. Circ to surf.
4. Drill 7-7/8" hole to 9100'. Run & set 9100' of 5-1/2", K-55/N-80, 17# LT&C csg. Cmt w/ 500 sx Class 'H' light & tail in w/ 400 sx 50/50 POZ "H" + additives. Est. top of cmt @ 4500'.

This APD was previous approved in 1997. APD has expired.

OPER. OGRID NO. 166111  
PROPERTY NO. 24225  
POOL CODE 53805  
EFF. DATE 4-5-01  
API NO. 30-025-35498

IN ABOVE SPACE DESCRIBE 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.

24. SIGNED	TITLE Production Analyst	DATE 05/02/00
(This space for Federal or State office use)		
PERMIT NO. ORIGINAL SIGNED BY	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:

APPROVED BY \_\_\_\_\_ TITLE Assistant Field Manager, Lands And Minerals DATE MAR 23 2001

\*See Instructions On Reverse Side

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.

RECEIVED  
MAY 04 2000  
BLM  
ROSSELL, NM

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88210

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

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised February 10, 1994  
Instruction on back  
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 <b>30-025-35498</b>	Pool Code <b>53805</b>	Pool Name <b>Sand Dunes</b> Bone Spring, <b>South</b>
Property Code <b>24225</b>	Property Name <b>TOMCAT "21" FEDERAL</b>	Well Number <b>5</b>
OGRM No. <b>166111</b>	Operator Name <b>Concho Resources Inc.</b>	Elevation <b>3686'</b>

Surface Location

UL or lot No. <b>C</b>	Section <b>21</b>	Township <b>23 S</b>	Range <b>32 E</b>	Lot Idn	Feet from the <b>660</b>	North/South line <b>NORTH</b>	Feet from the <b>1980</b>	East/West line <b>WEST</b>	County <b>LEA</b>
---------------------------	----------------------	-------------------------	----------------------	---------	-----------------------------	----------------------------------	------------------------------	-------------------------------	----------------------

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 <b>40</b>	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><b>OPERATOR CERTIFICATION</b></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 <b>Joe T. Janica</b> Printed Name <b>Agent</b> Title <b>03/17/97</b> Date</p> <p><b>SURVEYOR CERTIFICATION</b></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><b>GARY L. JONES</b> March 6, 1997 Date Surveyed Signature &amp; Seal of Professional Surveyor <b>W.O. 16831044-4</b> Certificate No. <b>GARY L. JONES, 7977</b></p>
--	--

## Application to Drill

**Concho Resources Inc.**  
**Tomcat "21" Federal No. 5**  
**UL: C; Sec. 21, T-23S, R-32E**  
**Lea County, NM**

In response to questions asked under Section IIB of Bulletin NTL-6 the following information is provided for your consideration:

1. Location: 660' FNL & 1980' FWL, Sec. 21, T-23S, R-32E, Lea County, NM
2. Elevation Above Sea Level: 3686' GR
3. Geologic Name of Surface Formation: Quaternary Aeolian Deposits
4. Drilling Tools and Associated Equipment: Conventional rotary drilling rig using fluid as a circulating medium for solids removal.
5. Proposed Drilling Depth: 9,100'
6. Estimated Tops of Geological Markers: Delaware 4900'  
Bone Spring 8700'
7. Possible Mineral Bearing Formation: Delaware Oil  
Bone Spring Oil

8. Casing Program:

Hole Sz	Interval	OD Csg	Weight	Thread	Collar	Grade	Condition
25"	0-40'	20"	Cond.	NA	NA	NA	New
17-1/2"	0-600'	13-3/8"	48#	8-R	ST&C	H-40	New
12-1/4"	0-4800'	8-5/8"	32#	8-R	ST&C	J-55/S-80	New
7-7/8"	0-9100'	5-1/2"	17#	8-R	LT&C	K-55/N-80	New

9. Cementing & Setting Depth:

20"	Conductor	Drill 25" hole to 40'. Set 40' of 20" conductor. Cement to surface with Redi-mix.
13-3/8"	Surface	Drill 17-1/2" hole to 600'. Run & set 600' of 13-3/8", 48#, H-40, ST&C casing. Cement with 400 sacks Class "C" Light, tail in with 250 sacks Class "C" + 2% CaCl. Circulate cmt to surface.
8-5/8"	Intermediate	Drill 12-1/4" hole to 4800'. Run & set 4800' of 8-5/8", J-55, 32# ST&C casing. Cement with 1100 sacks Class "C" Light, tail in with 200 sacks Class "C" + 2% CaCl. Circulate cmt to surface.
5-1/2"	Production	Drill 7-7/8" hole to 9100'. Run & set 9100' of 5-1/2", 17#, K-55/N-80, LT & C casing. Cement with 500 sacks Class "H" Light, tail in with 400 sacks 50/50 POZ "H" + additives. Estimated top of cement – 4600'.

## Application to Drill

**Concho Resources Inc.**  
**Tomcat "21" Federal No. 5**  
**UL: C; Sec. 21, T-23S, R-32E**  
**Lea County, NM**

10. Pressure Control Equipment: Exhibit "E". A 900 Series 3000 psi working pressure BOP consisting of a double ram type preventor with a bag type annular preventor. BOP unit will be hydraulically operated. Exhibit "E-1". Choke manifold and closing unit. BOP will be nipped up on 13-3/8" casing and will be operated at least once each 24 hour 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
40-600'	8.6-9.0	29 - 36	NC	Fresh Water spud mud add paper for seepage control.
600-4800'	10-10.3	29 - 32	NC	Brine water add Lime for pH control & paper for seepage.
4800-9100'	8.8-9.0	29 - 33	10 cc or less	Cut brine soda ash drispac & starch for water loss control.

Sufficient mud materials will be kept on location at all times in order to combat lost Circulation and/or unexpected kicks. In order to run open hole logs and casing the viscosity and water loss may have to be adjusted to meet these needs.

12. Testing, Logging and Coring Program:

- A. Gamma Ray from TD to surface, Caliper from TD to 8-5/8" casing shoe.
- B. CNL LDT, AIT, MSFL Caliper from TD to 8-5/8" casing shoe.
- C. Mud logger on from 4800' to TD.

13. Potential Hazards:

No abnormal pressures or temperatures are expected. Hydrogen Sulfide (H<sub>2</sub>S) 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 operations of equipment being used. Estimated BHP 3500 PSI, estimated BHT 130°.

14. Anticipated Starting Date and Duration of Operations:

Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved. Drilling expected to take 16-18 days. If production casing is run an additional 15 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 TD 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**

**Concho Resources Inc.  
Tomcat "21" Federal No. 5  
UL: C; Sec. 21, T-23S, R-32E  
Lea County, NM**

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 systems 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 blooey line (mud pit) and on derrick floor or doghouse.
3. Windsock and/or Wind Streamers
  - A. Windsock at mud pit 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 – indicating potential pressure and danger. Red Flag – danger – H<sub>2</sub>S present in dangerous concentration. Only emergency personnel admitted on location.
5. Well Control Equipment – See Exhibit "E"
6. Communication
  - A. While working under masks chalkboards will be used for communication.
  - B. Hand signals will be used where chalkboard is inappropriate.
  - C. Two way radio will be used to communicate off location in case emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.
7. Drill Stem Testing
  - A. All testing will be done in the daylight hours.
  - B. Exhausts will be watered.
  - C. Flare line will be equipped with an electric ignitor or a propane pilot light in case gas reaches the surface.
  - D. If location is near any dwelling a closed DST will be performed.

## **Hydrogen Sulfide Drilling Operations Plan**

**Concho Resources Inc.  
Tomcat "21" Federal No. 5  
UL: C; Sec. 21, T-23S, R-32E  
Lea County, NM**

8. Drilling contractor supervisor will be required to be familiar with the effects H<sub>2</sub>S has on tubular goods and other mechanical equipment.
9. If H<sub>2</sub>S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H<sub>2</sub>S scavengers if necessary.

## **Surface Use Plan**

**Concho Resources Inc.  
Tomcat "21" Federal No. 5  
UL: C; Sec. 21, T-23S, R-32E  
Lea County, NM**

1. **EXISTING ROADS:** Area map, Exhibit "B" is a reproduction of the New Mexico General Highway Co. map. Exhibit "C" is a reproduction of a USGS Topographic map. All existing roads and proposed roads are shown on each exhibit. All 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 development well as staked.
  - B. From Eunice New Mexico take State Highway 18 South 2.5 miles to Delaware Basin Rd (CR-21) go 32.6 miles to State Highway 128 turn West, go 13.2 miles to Lea-Eddy County Line and turn Northeast on pipeline road, go 3.7 miles turn Northwest and go .65 miles to Yates well bear North 1 mile to location.
  - C. Lay 3" polyethylene pipeline to transport produced fluids to a common tank battery. Construct a 1250 KV electric power line along road ROW in order to produce oil and gas from this well.
- A. **PLANNED ACCESS ROADS:** None
2. **LOCATION OF EXISTING WELLS IN A ONE MILE RADIOUS – EXHIBIT "A-1"**
  - A. Water Wells Exhibit C
  - B. Disposal Wells None known
  - C. Drilling Wells Exhibit C
  - D. Producing Wells Exhibit "A-1"
  - E. Abandoned Wells Exhibit "A-1"
3. 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.
4. **LOCATION AND TYPE OF WATER SUPPLY**

Water will be purchased locally from a private source and trucked over the access roads or piped in flexible lines laid on top of the ground.
5. **SOURCE OF CONSTRUCTION MATERIALS**

If needed, construction materials will be obtained from the drill site's excavations or from a local source. These materials will be transported over the access route as shown on Exhibit "A".



## **Surface Use Plan**

**Concho Resources Inc.  
Tomcat "21" Federal No. 5  
UL: C; Sec. 21, T-23S, R-32E  
Lea County, NM**

### **6. METHODS FOR HANDLING WASTE DISPOSAL**

- A.
  - 1. Drill cuttings will be disposed of in the reserve pit.
  - 2. Trash, waste paper, and garbage will either be contained in a fenced trash trailer or a trash pit, fenced with mesh wire to prevent wind scattering during storage. When the rig moves out, all trash and debris left at the site will be contained to prevent scattering and will be buried at least 36" deep within a reasonable period of time.
  - 3. Salts remaining after completion of the well and broken sacks will be picked up by the supplier.
  - 4. Sewage from trailer house will drain into holes with a minimum depth of 10' 00". These holes will be covered during drilling and backfilled upon completion. A "porta potty" will be provided for the rig crews. This will be properly maintained during the drilling operations and removed upon completion of the well.
- B. Remaining drilling fluids will be allowed to evaporate in the reserve pit until the pit is dry enough for backfilling. In the event drilling fluids will not evaporate in a reasonable period of time they will be transported by tank truck to a state approved disposal site.  
Water produced during testing of the well will be disposed of in the reserve pit. Oil produced during testing of the well will be stored in test tanks until sold and hauled from the site.

### **7. ANCILLARY FACILITIES**

No camps or airstrips will be constructed.

### **8. WELL SITE LAYOUT**

- A. Exhibit "D" shows location and rig layout.
- B. Exhibit "D" indicates proposed location of reserve and trash pits; and living facilities.
- C. Pit is proposed to be unlined, unless subsurface conditions encountered using pit construction indicate that lining is needed for lateral containment of fluids.
  - 1. If lining of reserve pit is needed it is to be lined with PVC or polyethylene. The pit liner will be 6 mils thick. Pit liners will extend a minimum 2' 00" over the reserve pit dikes, where the liner will be anchored down.

**Surface Use Plan  
Concho Resources Inc.  
Tomcat "21" Federal No. 5  
UL: C; Sec. 21, T-23S, R-32E  
Lea County, NM**

- D. 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.

9. **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 of 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 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. Top soil 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.

10. **OTHER INFORMATION:**

- A. Topography, as shown on topographic map consists of sand dunes with a Westerly dip toward the Pecos River. The surface is used mainly for live stock grazing and access to Oil & Gas production. Surface vegetation consists of native grasses, shinnery oak, mesquite, sandsage and snake weed.
- B. The surface is owned by the Department of Interior, Bureau of Land Management.
- C. An archeological survey has been conducted of the location and road. This was submitted separately to the BLM upon completion.
- D. There are no dwellings within 2 miles of this location.

## Surface Use Plan

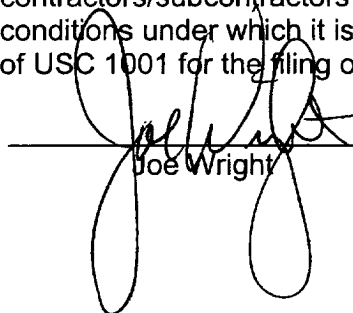
**Concho Resources Inc.**  
**Tomcat "21" Federal No. 5**  
**UL: C; Sec. 21, T-23S, R-32E**  
**Lea County, NM**

12. OPERATORS REPRESENTATIVES:

Concho Resources Inc.  
110 W. Louisiana, Suite 410  
Midland, Tx 79701  
(915) 683-7443  
Mr. Joe Wright  
Mr. Jim Blount

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 the conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provision of USC 1001 for the filing of a false statement.

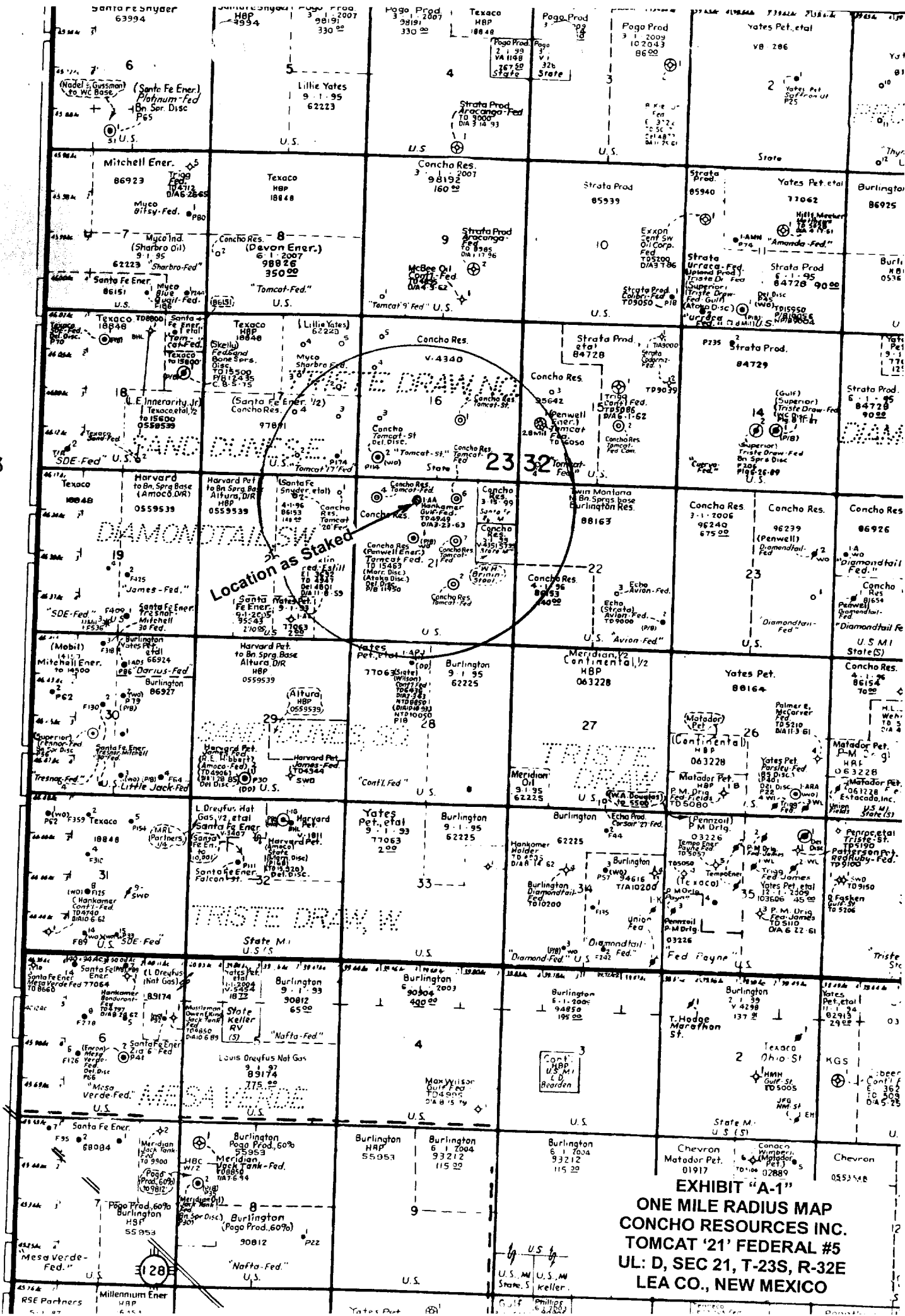


Joe Wright

Engineer  
Title

5/2/00  
Date

T  
23  
S



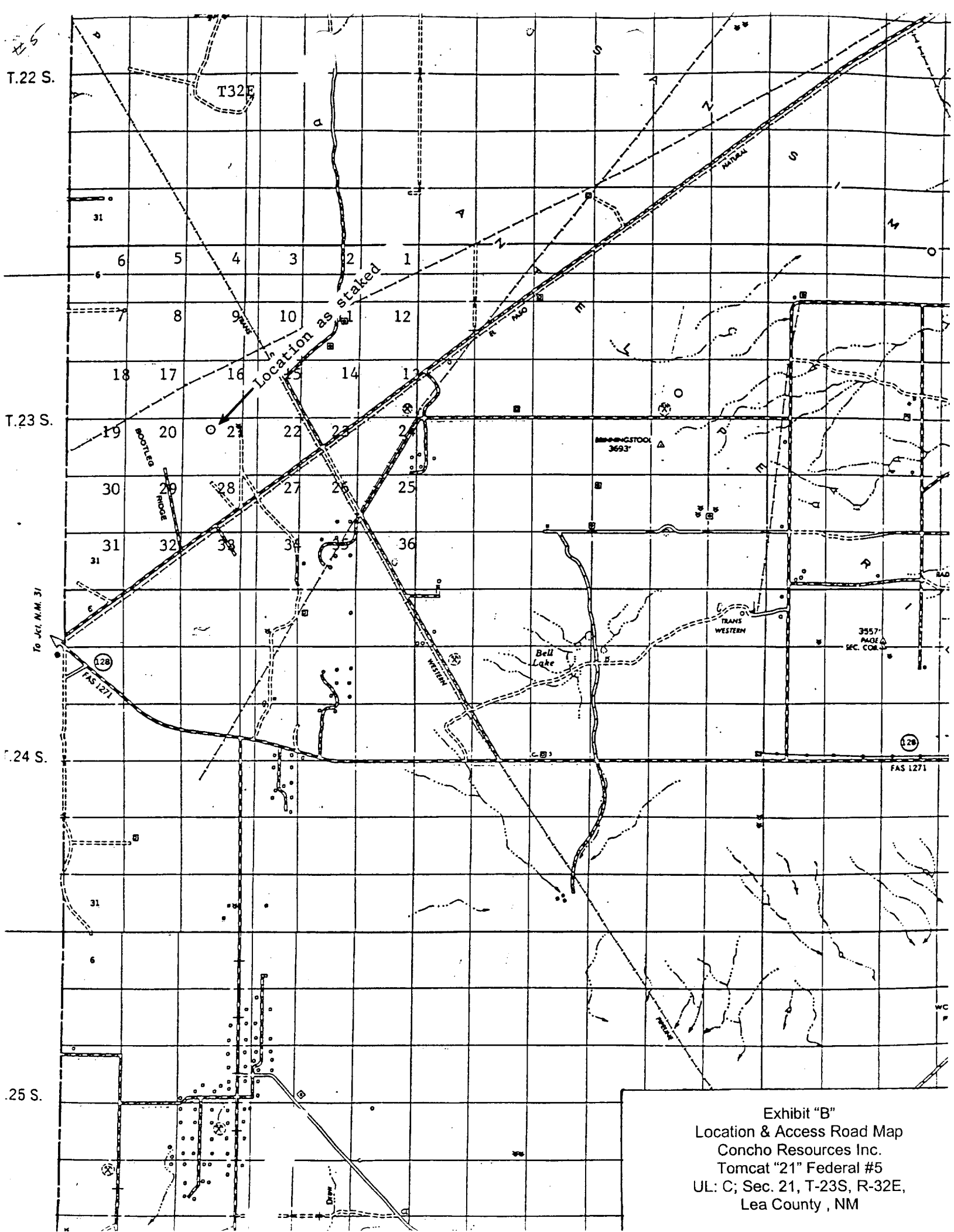


Exhibit "B"  
 Location & Access Road Map  
 Concho Resources Inc.  
 Tomcat "21" Federal #5  
 UL: C; Sec. 21, T-23S, R-32E,  
 Lea County, NM



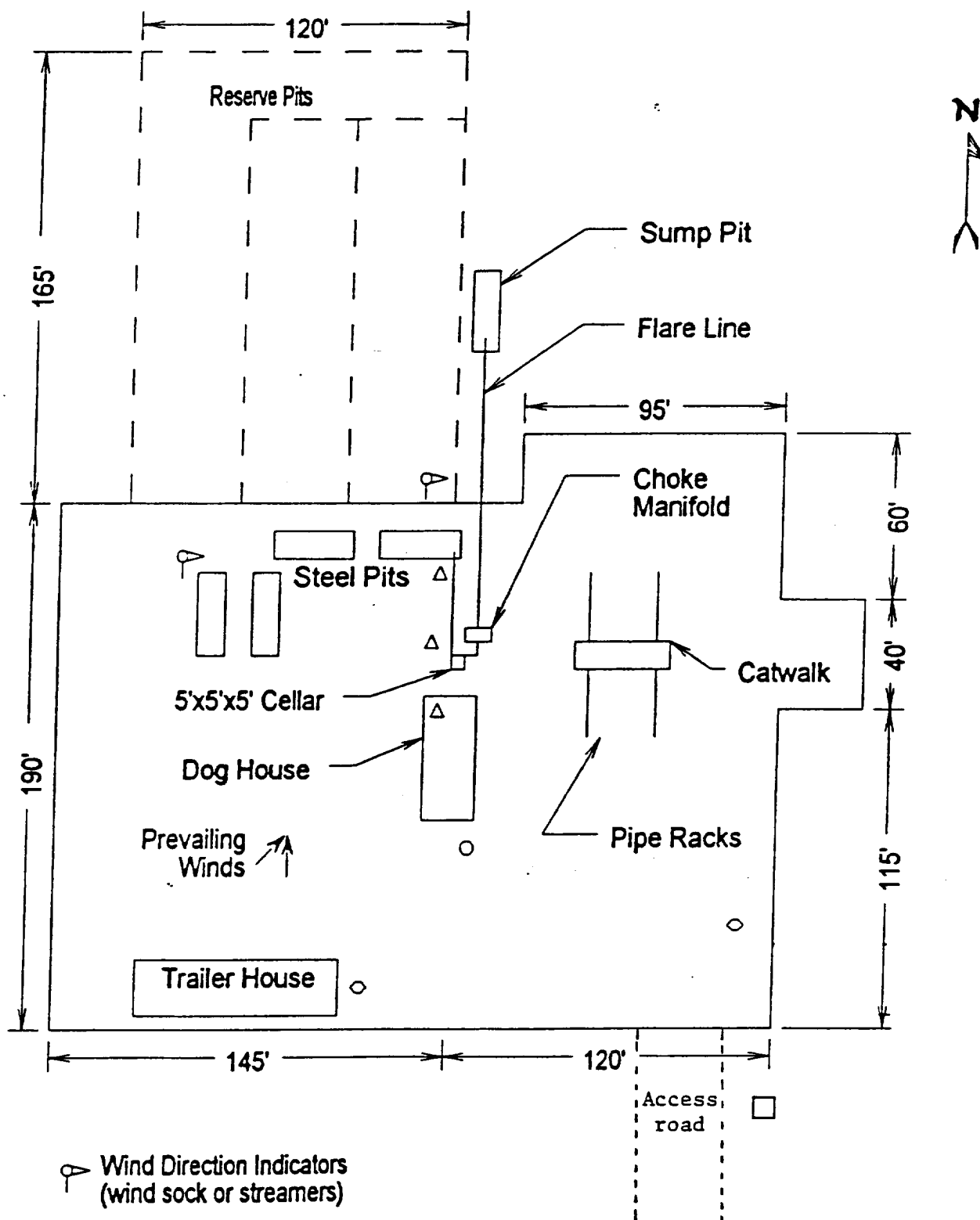


Exhibit "D"

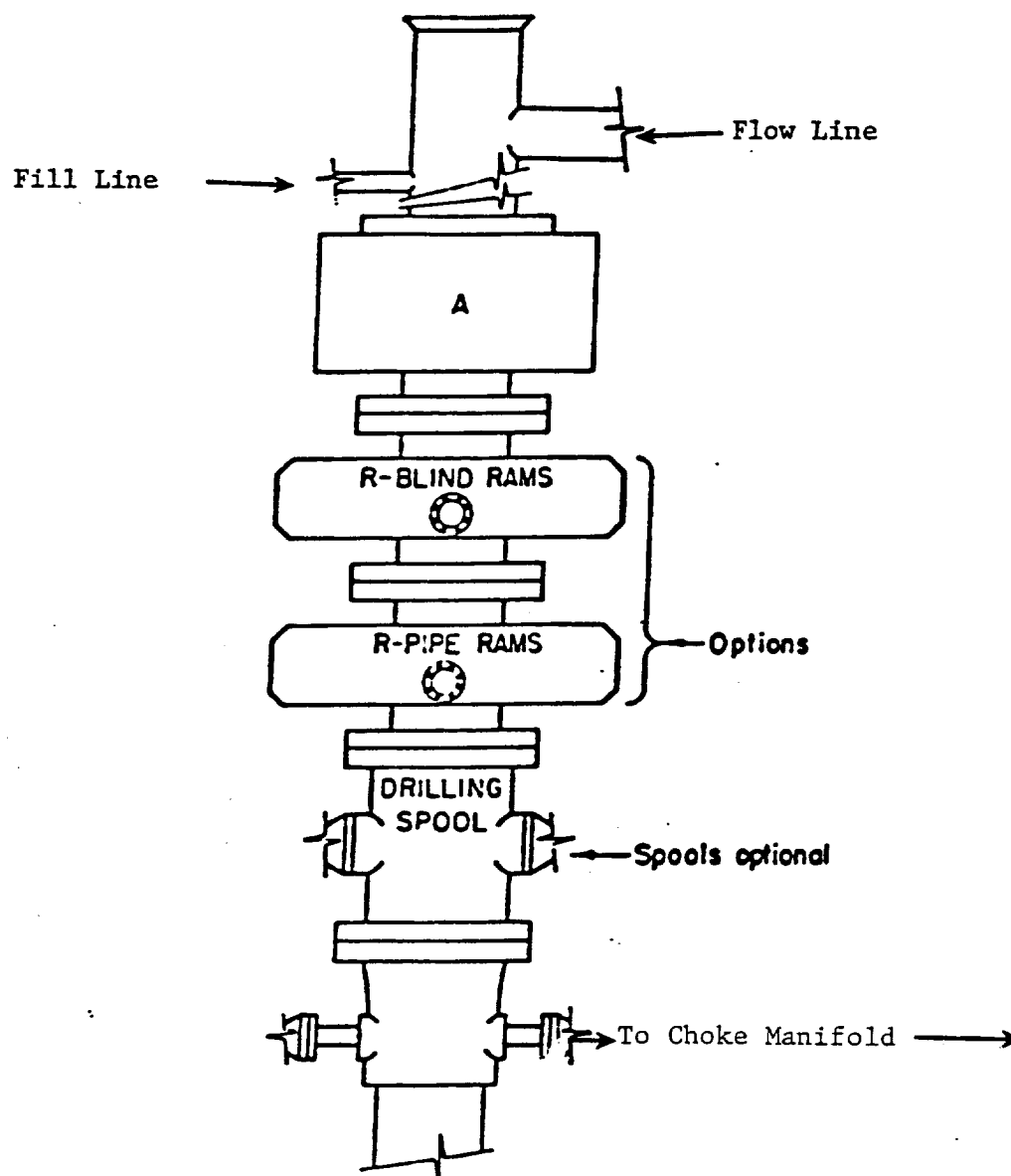
Rig Layout Plat

Concho Resources Inc.

Tomcat "21" Federal #5

UL: C; Sec. 21, T-23S, R-32E,

Lea County, NM



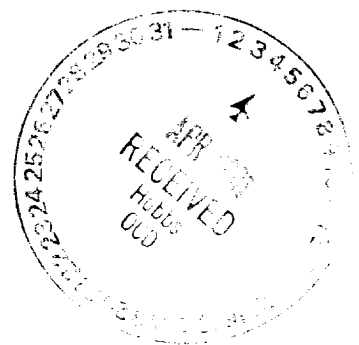
# **ARRANGEMENT SRRA**

900 Series

3000# Working Pressure

Exhibit "E"  
 BOP Sketch to be Used On:  
 Concho Resources Inc.  
 Tomcat "21" Federal #5  
 UL: C; Sec. 21, T-23S, R-32E,  
 Lea County, NM





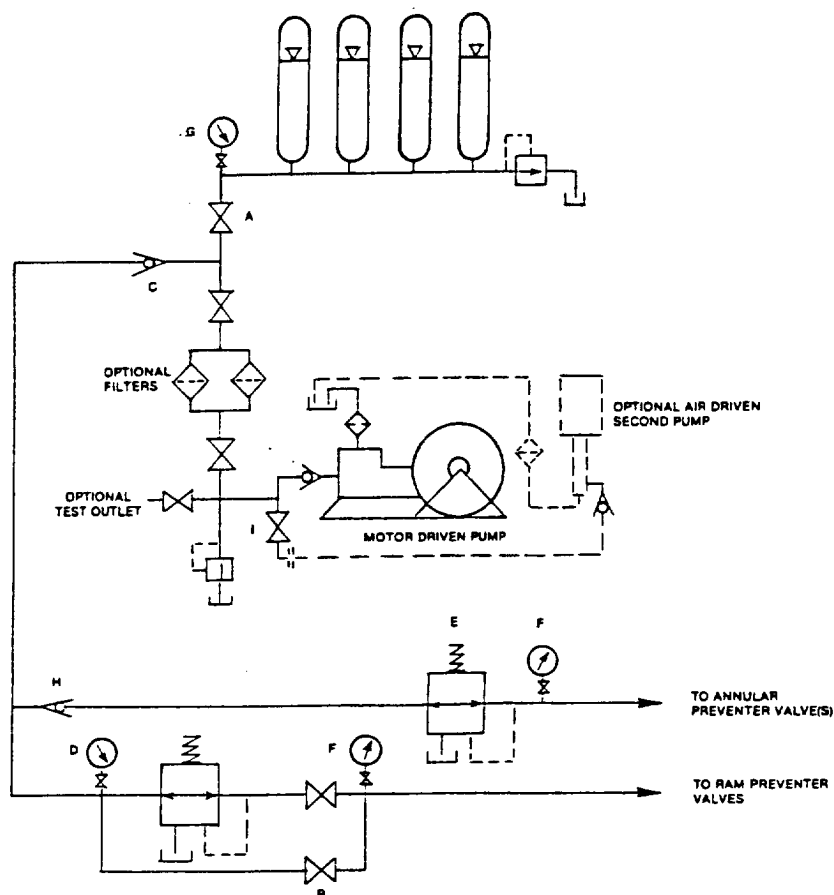


FIGURE K6-1. The schematic sketch of an accumulator system shows required and optional components.

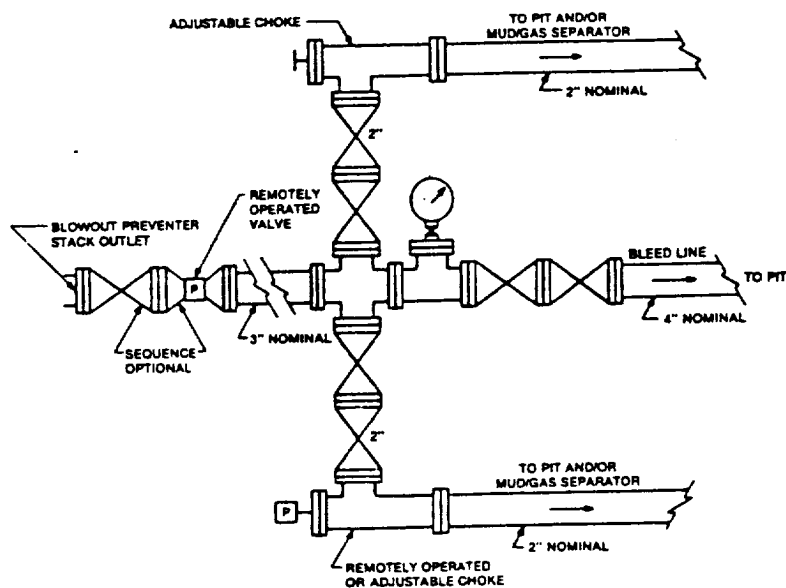


FIGURE K4-2. Typical choke manifold assembly for 5M rated working pressure service — surface installation.

Exhibit "E-1"  
Choke Manifold & Closing Unit  
Concho Resources Inc.  
Tomcat "21" Federal #5  
UL: C; Sec. 21, T-23S, R-32E,  
Lea County, NM

