

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

Max Wilson, Inc.
Wildernhel No. 4
1,980' FWL & 506' FNL
Section 6, T.20S, R.23E
Eddy County, New Mexico
(Exploratory Well)

RECEIVED

JUN 6 1979

U.S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

This plan is submitted with Form 9-331C, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of necessary surface disturbance involved, and the procedures to be followed in rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effects associated with the operation.

1. EXISTING ROADS.

- A. Exhibit A is composit BLM Quad-Color maps. Exhibit B is a portion of a USGS topographic map of the area on a scale of approximately 2.65 inches to the mile, showing the location of the proposed wellsite, and the roads in the vicinity. The proposed location is situated approximately 14 miles south of Hope, New Mexico, via the access route shown in red.

DIRECTIONS:

1. Proceed south from Hope (Shell Station) for 14 miles.
2. The new road will start at this point to the west and continue for 1.1 miles to the site.

2. PLANNED ACCESS ROAD.

- A. The proposed new access will be approximately 1.1 miles due west from point of origin. Turn due south for 400'. When turning south a cattle guard will be set in the fence.
- B. The new road will be 12 feet in width (driving surface), except at the point of origin, adjacent to the existing road, at which point enough additional width will be provided to allow heavy trucks and equipment to turn.
- C. The surface will be crowned, with drainage on both sides. No turnouts will be necessary.
- D. The center line of the new road has been staked and flagged and the route of the road is clearly visible.

3. LOCATION OF EXISTING WELLS.

- A. The well locations in the vicinity of the proposed well are shown in Exhibit C. There are no wells within a two-mile radius.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES.

- A. There is no producing well on this lease at the present time.
- B. In the event that the well is productive, the necessary production facilities will be installed on the drilling pad. If the well is productive of oil, a gas or diesel self-contained unit will be used to provide the necessary power. No power will be required if the well is productive of gas.

5. LOCATION AND TYPE OF WATER SUPPLY

- A. It is planned to drill the proposed well with a fresh water system. The water will be obtained from commercial sources and will be hauled to the location by truck over the existing and proposed roads shown in Exhibits A and B.

6. SOURCES OF CONSTRUCTION MATERIALS.

- A. Any caliche required for construction of the drilling pad and the new access road will be obtained from an existing pit on federally owned surface shown on Exhibit A.

7. METHODS OF HANDLING WASTE DISPOSAL.

- A. Drill cuttings will be disposed of in the reserve pits.
- B. Drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry.
- C. Water produced during operations will be collected in tanks until hauled to an approved disposal system or a separate disposal application will be submitted to the USGS for appropriate approval.
- D. Oil produced during operations will be stored in tanks until sold.
- E. Current laws and regulations pertaining to the disposal of human waste will be complied with.
- F. Trash, waste paper, garbage and junk will be buried in a separate trash pit and covered with a minimum of 24 inches of dirt. All waste material will be contained to prevent scattering by the wind.
- G. All trash and debris will be buried or removed from the wellsite within 30 days after finishing drilling and/or completion operations.

8. ANCILLARY FACILITIES.

- A. None required.

9. WELLSITE LAYOUT.

- A. Exhibit D shows the dimensions of the well pad and reserve pits, and the location of major rig components.
- B. The ground surface at the drilling location is sloping down toward the north. Cutting will be required to level the pad area.
- C. The reserve pits will be plastic lined.
- D. The pad and pit area has not been staked and flagged.

10. PLANS FOR RESTORATION OF THE SURFACE.

- A. After finishing drilling and/or completion operations, all equipment and other material not needed for further operations will be removed. The location will be cleared of all trash and junk, to leave the wellsite in as aesthetically pleasing a condition as possible.
- B. Unguarded pits, if any, containing fluids will be fenced until they have been filled.
- C. If the proposed well is non-productive, all rehabilitation and/or vegetation requirements of the Bureau of Land Management and the United States Geological Survey will be complied with and will be accomplished as expeditiously as possible. All pits will be filled and leveled within 30 days after abandonment.

11. TOPOGRAPHY.

- A. The wellsite and access route are located in a hilly area.
- B. The top soil at the wellsite is rocky.
- C. The vegetation cover at the wellsite is moderately sparse, with prairie grasses, some yucca, and miscellaneous weeds.
- D. No wildlife was observed but it is likely that rabbits, lizards, insects and rodents traverse the area. The area is used for cattle grazing.
- E. There are no ponds, lakes, streams, or rivers within several miles of the wellsite.
- F. There are no dwellings in the vicinity of this wellsite.
- G. The wellsite is located on federal surface.
- H. There is no evidence of any archaeological, historical, or cultural sites in the vicinity of the location.

12. OPERATOR'S REPRESENTATIVES.

- A. The field representatives responsible for assuring compliance with the approved surface use plan are:

Max M. Wilson
Max Wilson, Inc.
901 Security National Bank
Roswell, NM 88201
Office: 505-623-0507
Home: 505-623-0452

C. E. Dorsey
Geologist
P.O. Box 1978
Roswell, NM 88201
Office: 505-623-0507
Home: 505-622-3576

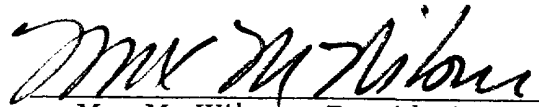
E. G. Durrett
Drilling Consultant
P.O. Box 4431
Odessa, TX 79763
915-337-5407

13. CERTIFICATION.

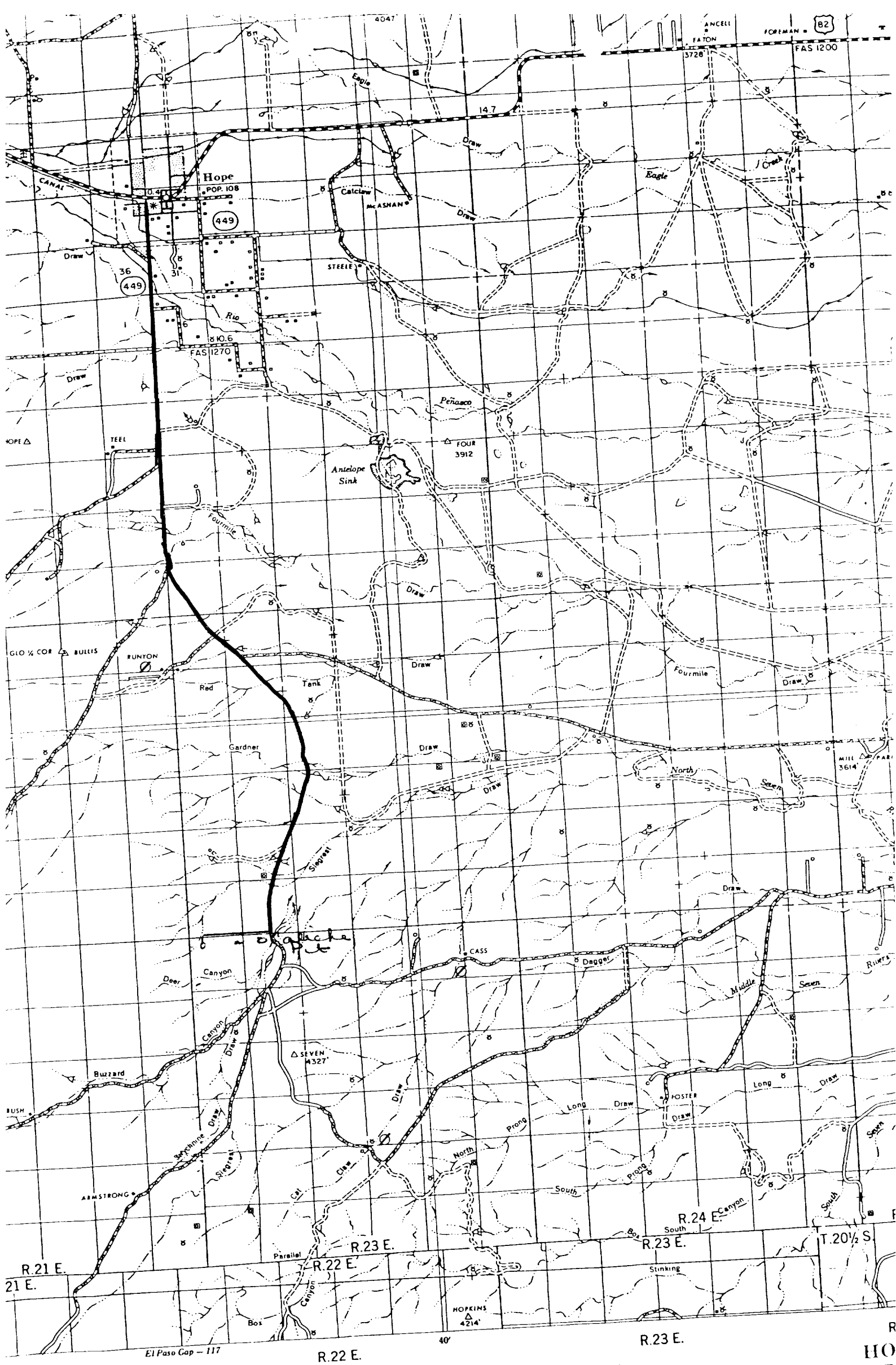
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Max Wilson, Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

6-4-79

Date



Max M. Wilson, President
Max Wilson, Inc.



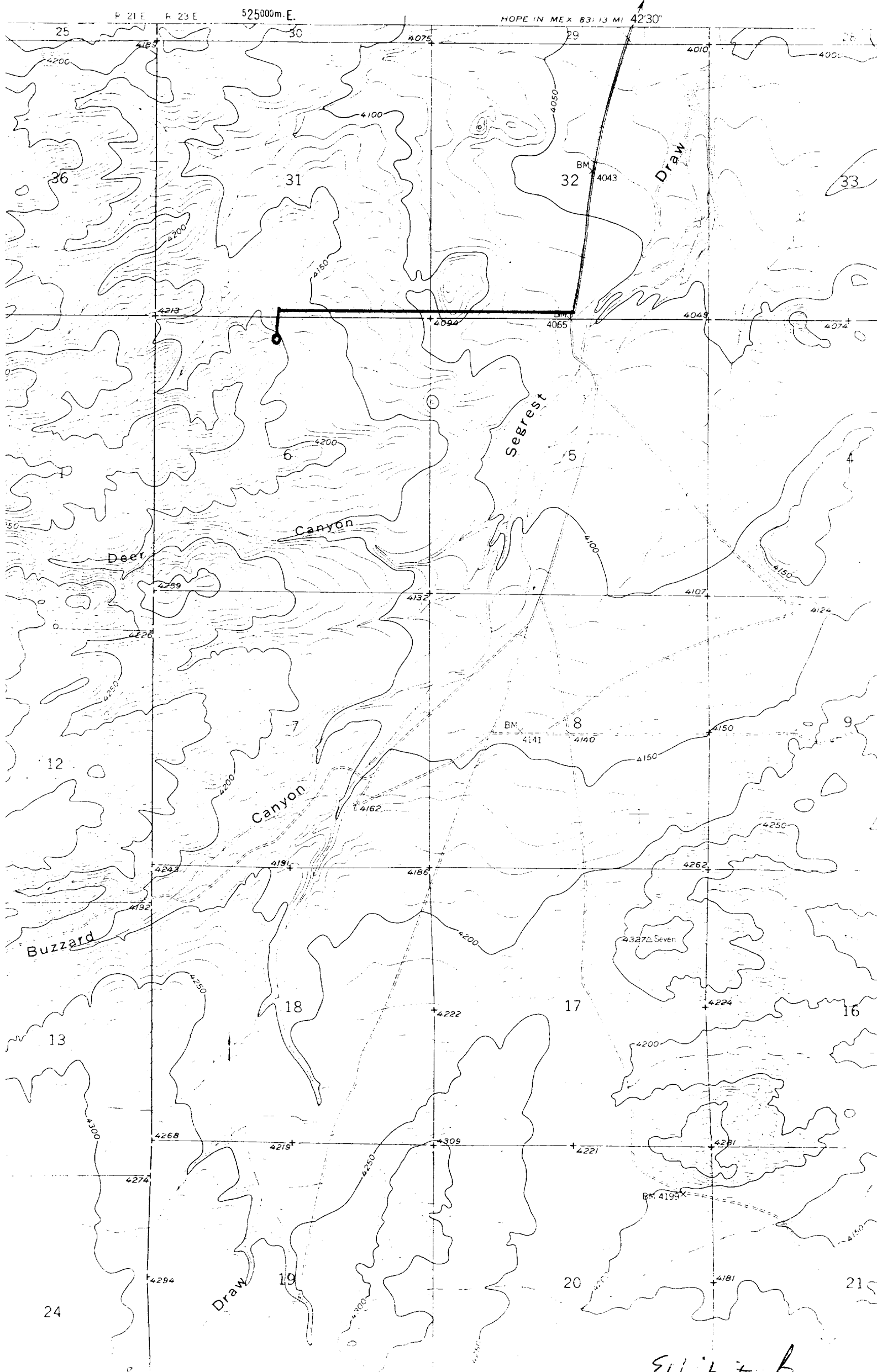
Scale $\frac{1}{126120}$ or 1 Inch = 2 Miles
1 2 3 4
STATUTE MILES

DATE OF INVENTORY
EDDY COUNTY 1965
CHAVES COUNTY 1966
OTERO COUNTY 1966

HOPE
QUADR
10

Exhibit A

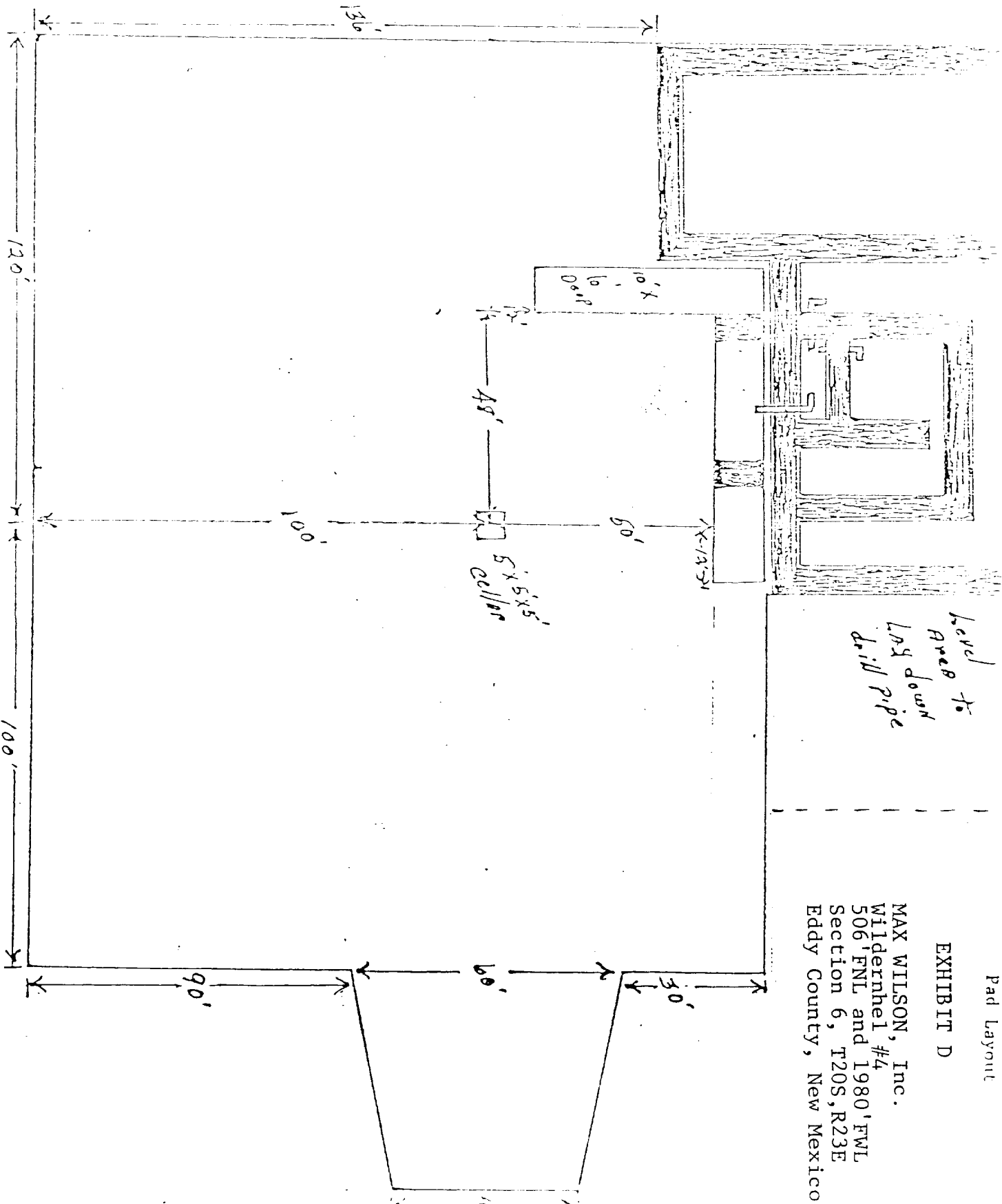
Exhibit B



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EXHIBIT D

MAX WILSON, Inc.
 Wilderhnel #4
 506' FNL and 1980' FWL
 Section 6, T20S, R23E
 Eddy County, New Mexico

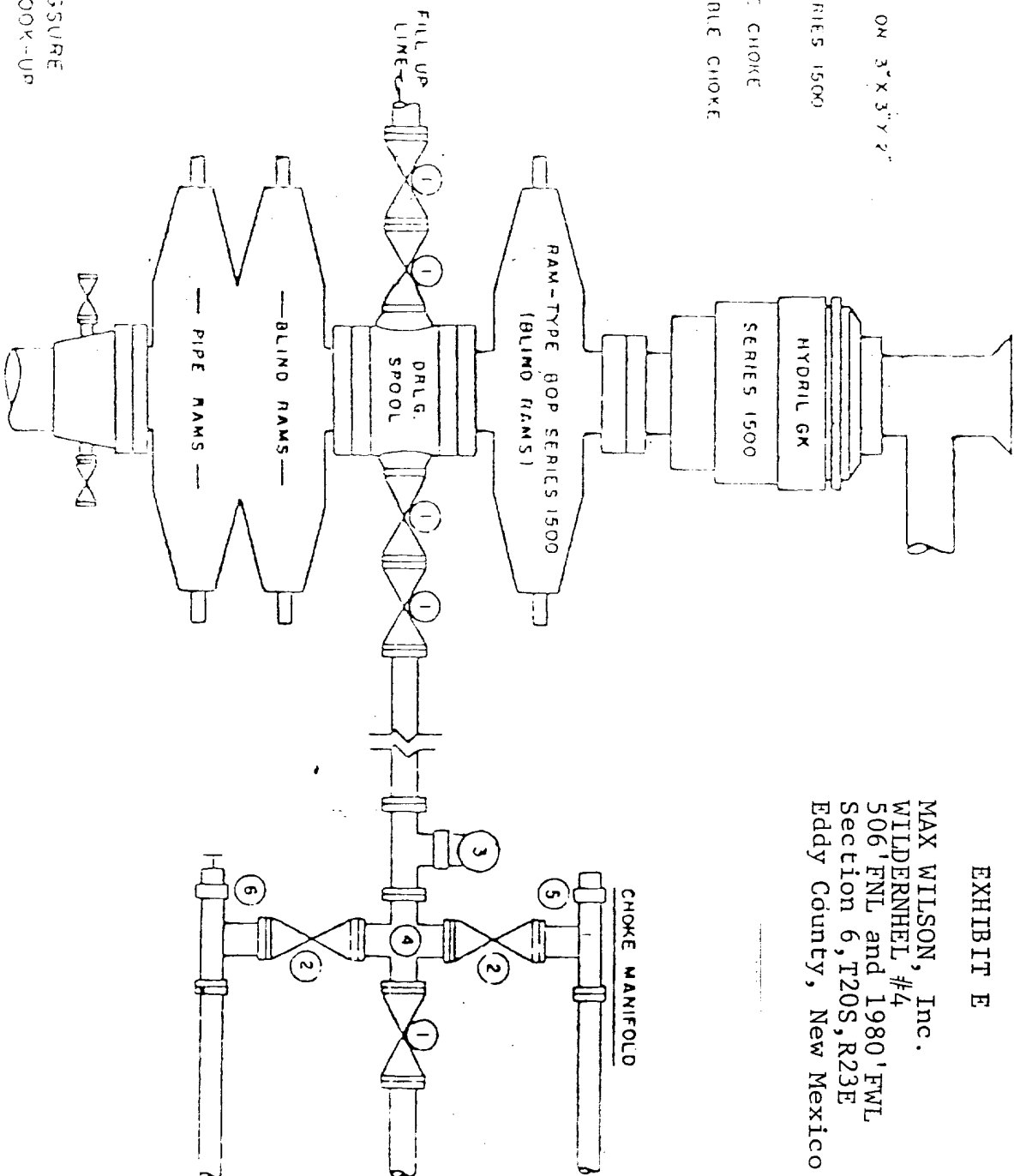


Blowout Preventer

EXHIBIT E

MAX WILSON, Inc.
WILDERNHILL #4
506' FNL and 1980' FWL
Section 6, T20S, R23E
Eddy County, New Mexico

- ① 3" SERIES 1500 VALVE
- ② 2" SERIES 1500 VALVE
- ③ 2" MUD PRESSURE GAUGE ON 3" X 3" X 2" SERIES 1500 STEEL TEE
- ④ 3" SERIES 1500 X 2" SERIES 1500 STEEL CROSS
- ⑤ 2" SERIES 1500 POSITIVE CHOKE
- ⑥ 2" SERIES 1500 ADJUSTABLE CHOKE



5000 PSI WORKING PRESSURE
BLOWOUT PREVENTER HOOK-UP
(SERIES 1500 FLANGES OR BETTER)

MAX WILSON, Inc.
SUMMARY

DRILLING, DRILL STEM TESTS, CASING AND CEMENTING PROGRAM

1. Drill 17-1/2" hole to 30'±. Will be at the San Andres at the surface.
2. Cement 13-3/8", 48# & 54.5# K-55 casing with 100 sacks circulated.
3. Release pressure immediately, nipple up and install BOP's. Test casing to 600 psi after 18 hours and drill out cement.
4. Drill 12-1/2" hole to 2000'± in Glorieta. Anticipated lost circulation zone at 800' to 2,000' with possibility of dry drilling.
5. Cement 8-5/8", 28# S-80 & 32# K-55 casing with 200 sacks Class "C" "Thickset", followed by 1000 sx. HOWCO Lite containing 5#/sk. Gilsonite and 1/4#sk. Flocele and tail in with 200 sx. Class "C" containing 2% CaCl₂ and 1/4#sk. Flocele. Run guide shoe and insert float on bottom joint, and 3-6 centralizers. Weld first few joints of casing. Use one wooden plug to displace cement.
6. Release pressure immediately, nipple up and install BOP's. Test casing 1500 psi for 30 minutes after WOC 18 hours and drill out cement after 24 hours.
7. Drill 7-7/8" hole to total depth at 8700'. A fresh water mud system will be used to 6500'. At this point the system will be mudded up to 8.7 to 9.3#/gal. to obtain good samples. Anticipated pressure of Atoka-Morrow at 8000'± = 3300 psi. See attached mud plan for details. Pit levelers and flowline sensors will be utilized on the pits. Drill stem tests are anticipated in the following zones: Wolfcamp- 5000'; Cisco-Canyon- 6350'; Atoka-Morrow-7750'.

DST flow periods and shut in time will be determined on location. A mud logging unit will be on location at 4750' to assist in evaluating samples and shows for exact drill stem test intervals. Run Formation Density-Compensated Neutron-Gamma Ray Log, Dual Induction-Laterolog, and Microlaterolog.
8. Run 5-1/2", 17#, N-80 casing and cement with 700 sx. 50-50 Pozmix "A"- Class "C", containing 2% gel, 8#/sx. salt and 0.75% CFR-2 friction reducer. Use guide shoe and float collar, and 12-15 centralizers when necessary. Use top and bottom plugs (rubber) displace cement with fresh water treated with 2% KCL and non-emulsifying agent (2 gals. NE per 1000 gals, water)
9. Perforations, acid job, and additional stimulation to be determined after completion.

EXHIBIT F

MAX WILSON, Inc.



SUGGESTED DRILLING FLUID PROGRAM

April 2, 1979

EXHIBIT G

Mr. E. G. Durrett
Durrett & Associates
P. O. Box 4431
Odessa, TX 79760

MAX WILSON, Inc.
WILDERNHIL #4
506' FNL and 1980' FWL
Section 6, T20S, R23E
Eddy County, NM

Dear Mr. Durrett:

Thank you for giving Magcobar this opportunity to be of service to you and to Durrett & Associates.

The following is our suggested drilling fluid program with casing and estimated mud cost for wells to be drilled in Section 6-20S-23E and in Section 18-20S-23E, Eddy County, New Mexico.

CONDUCTOR: 30' of 13 3/8"

Rathole Machine

SURFACE: 2000' of 8 5/8"

We suggest drilling out below conductor with air (dusting) with the possibility of mist drilling the major portion of surface hole.

Water intrusion can be expected at any depth.

COMMENTS:

1. There is a possibility you may encounter severe loss circulation while drilling surface hole. If loss circulation occurs, we suggest dry drilling with air or mist to casing point.

Prior to running 8 5/8" casing, we suggest mixing 300 barrels of 50 to 60 sec/1000 cc viscosity consisting of Magcogel and Soda Ash and spot in bottom portion of surface hole prior to running casing to insure a good cement bond around bottom of casing.

2. In the event air is not available, we suggest drilling out below conductor with a fresh water, Magcogel and Lime type drilling fluid having a 40 to 60 sec/1000 cc viscosity, pretreat system with loss circulation material.

There is a good possibility you will encounter complete loss circulation.

In the event you encounter loss circulation, we suggest dry drilling to 2000'. And prior to running 8 5/8" casing, we suggest spotting mud on bottom as stated above.

PRODUCTION: 8800' of 5 1/2"

We suggest drilling out below surface casing with air (dusting).

It is possible to dust drill to 4000'. However, fluid intrusion problems and deviation problems can be expected from 2500' to 3800'.

At first indication of fluid intrusion, deviation problems or hole problems, we suggest loading the hole with an 8.7 to 9.0 lbs/gal. controlled Brine water, KCL (2 to 3 %) type drilling fluid.

This type drilling fluid should be sufficient to drill to 6000', or top of the Cisco Section. However, there is a possibility you may encounter sloughing shale problems from 4600' to 5800'.

NOTE: In the event air is not available, we suggest drilling out below surface with the controlled Brine water (8.7 to 9.0 lbs/gal.), using Lime for pH control, 10.0 to 11.0 pH.

At 6000', or the first indication of sloughing shale, we suggest mudding up with a controlled Brine water, KCL, Soda Ash and Drispac type drilling fluid having the following characteristics:

Weight	8.7 to 9.1 lbs/gal.
Funnel Viscosity	32 to 34 sec/1000 cc
Water Loss	10 cc or less
pH	8.5 to 9.5 (Caustic Soda)

This type drilling fluid should be sufficient to drill to 8800' with exception of weight and viscosity, which may need altering as hole conditions dictate.

COMMENTS:

1. There is a possibility you may encounter high pressure gas in the Atoka-Morrow Section that will require a drilling fluid weight in excess of 9.1 lbs/gal. to control.
2. For corrosion control: see CORROSION SECTION.

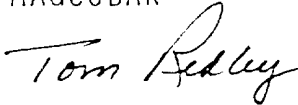
ESTIMATED MUD COST: \$10,000.00 to \$12,000.00

The estimated mud cost is under normal operating conditions and does not include any extensive loss circulation, gas problems, fishing jobs, etc. This cost is also based on a normal drilling rate per day; therefore, any excessive time spent drilling due to crooked hole, testing, breakdown, etc. would increase mud cost.

I hope the above information will be of benefit to you. If we may be of further service to you, please do not hesitate to call.

Sincerely yours,

MAGCOBAR



Tom Ridley
Engineer III

TR:kb

DISTRICT MANAGER:

Bob Thurman
Hobbs, New Mexico
Phone: 505-392-5583

ENGINEERS:

Martin Crow
Carlsbad, New Mexico
Phone: 505-887-7150

Charles Richardson
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WAREHOUSE:

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