

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

## APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

## 1a. TYPE OF WORK

DRILL ☒DEEPEN ☐PLUG BACK ☐

## b. TYPE OF WELL

OIL  
WELL ☒GAS  
WELL ☒

OTHER dual

SINGLE  
ZONE ☐MULTIPLE  
ZONE ☒

## 2. NAME OF OPERATOR

GULF OIL CORPORATION

## 3. ADDRESS OF OPERATOR

P. O. Box 670, Hobbs, NM 88240

## 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*

At surface  
1850' FNL & 1850' FWL

At proposed prod. zone

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

10 miles east of Counserlors

## 15. DISTANCE FROM PROPOSED\*

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

## 18. DISTANCE FROM PROPOSED LOCATION\*

TO NEAREST WELL, DRILLING, COMPLETED,  
OR APPLIED FOR, ON THIS LEASE, FT.

## 16. NO. OF ACRES IN LEASE

160

## 19. PROPOSED DEPTH

3800'

17. NO. OF ACRES ASSIGNED  
TO THIS WELL *Chaco 2*

160

## 20. ROTARY OR CABLE TOOLS

Rotary

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

6947' GL

## 22. APPROX. DATE WORK WILL START\*

6-10-78

## 23.

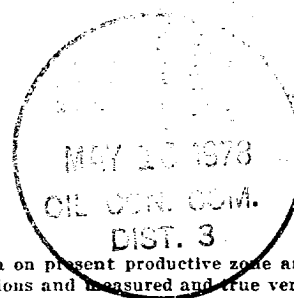
## PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	9 5/8"	32#	250'	Circ
8 3/4"	7"	20#	3800'	Circ

Note See Attached BOP drawing #2

Mud: 0-250' FW spud mud  
250-TD Saturated BW w/ Polymer

Gas is not dedicated.



IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, 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

*W. B. Borland*

TITLE

Area Production Manager

DATE

5-9-78

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

RECEIVED

APPROVED BY

*Frank S. Gandy*

TITLE

MAY 15 1978

CONDITIONS OF APPROVAL, IF ANY:

U. S. GEOLOGICAL SURVEY  
DURANGO, COLO.

\*See Instructions On Reverse Side

## Instructions

**General:** This form is designed for submitting proposals to perform certain well operations, as indicated, on all types of lands and leases for appropriate action by either a Federal or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

**Item 1:** If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable State or Federal regulations concerning subsequent work proposals or reports on the well.

**Item 4:** If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

**Item 14:** Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on this reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal or State agency offices.

**Items 15 and 18:** If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective production zone.

**Item 22:** Consult applicable Federal or State regulations, or appropriate officials, concerning approval of the proposal before operations are started.

**NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102  
Supersedes C-128  
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

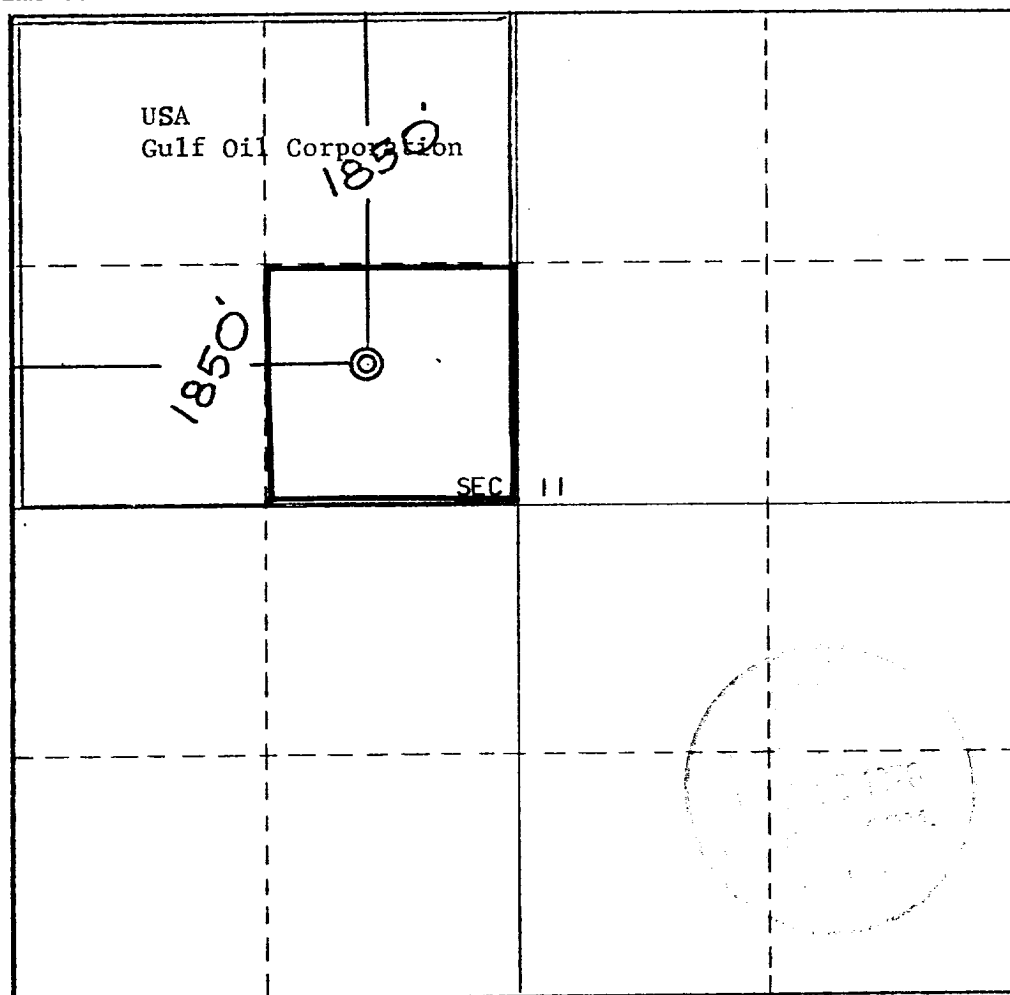
Operator <b>Gulf Oil Corporation</b>			Lease <b>Navajo KY</b>		Well No. <b>1</b>
Unit Letter <b>F</b>	Section <b>11</b>	Township <b>22 North</b>	Range <b>7 West</b>	County <b>Sandoval</b>	
Actual Footage Location of Well: <b>1850</b> feet from the <b>North</b> line and <b>1850</b> feet from the <b>West</b> line					
Ground Level Elev. <b>6947</b>	Producing Formation <b>Menefee &amp; Chacra</b>	Pool <b>Rusty Chacra ext</b> <b>Rusty Menefee &amp; Chacra ext</b>		Dedicated Acreage: <b>40</b> → <b>160</b> Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes   ☐ No   If answer is "yes," type of consolidation \_\_\_\_\_

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



**CERTIFICATION**

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

*C. D. Borland*

Name  
**C. D. Borland**

Position  
**Area Production Manager**

Company  
**Gulf Oil Corporation**

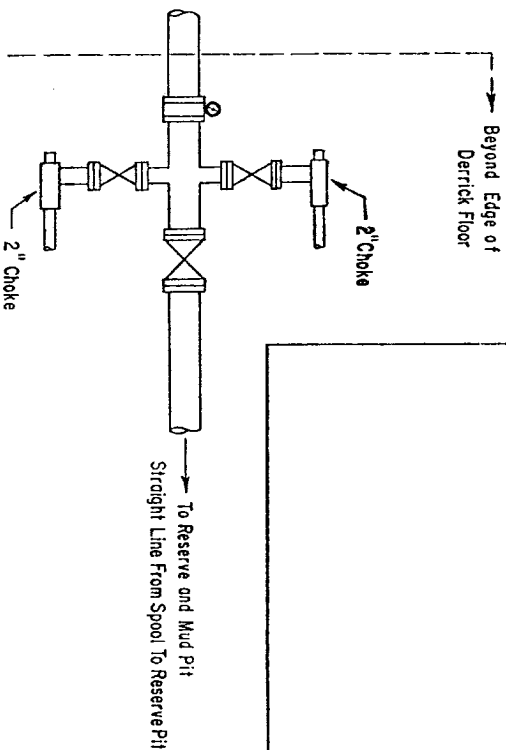
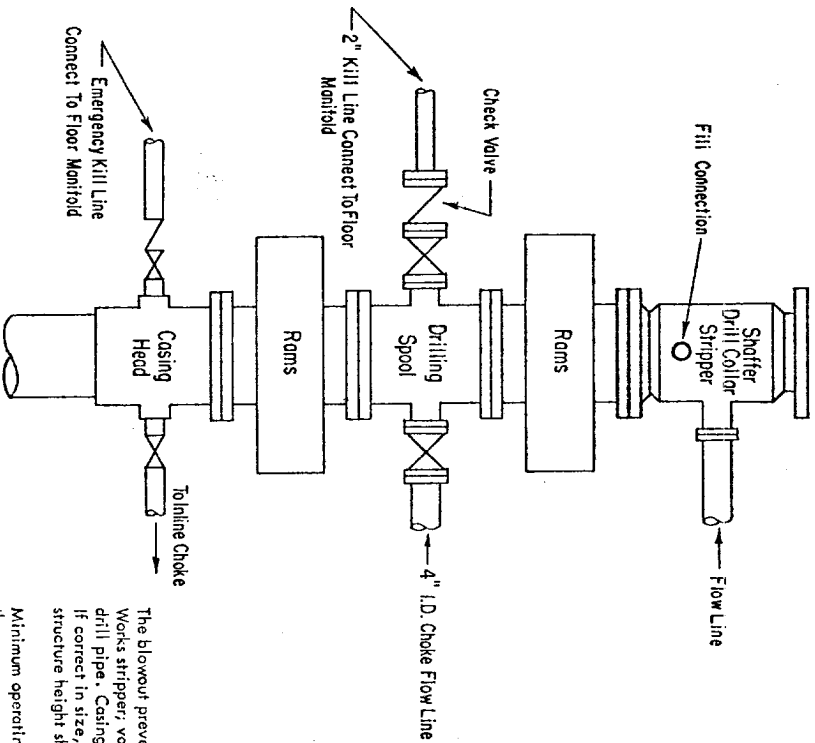
Date  
**5-9-78**

Date Surveyed  
**April 19, 1978**

Registered Professional Engineer  
and/or Land Surveyor

*E.V. Echshaw*

Certificate No. **3602**  
**E.V. Echshaw LS**



ADDITIONS - DELETIONS - CHANGES SPECIFY
<p>Delete Shaffer Drill Collar Stripper</p>

### 3000 PSI WORKING PRESSURE BLOWOUT PREVENTER HOOK-UP

The blowout preventer assembly shall consist of one blind ram preventer and one pipe ram preventer, both hydraulically operated; a Shaffer Tool Works stripper, valves, chokes and connections, as illustrated. If a tapered drill string is used, a ram preventer must be provided for each size of drill pipe. Casing and tubing rams to fit the preventers are to be provided as needed. The ram preventers may be two singles or a double type. If correct in size, the flanged outlets of the ram preventer may be used for connecting to the 4-inch I.D. choke flow line and kill line. The substructure height shall be sufficient to install a rotating blowout preventer.

Minimum operating equipment for the preventers shall be as follows: (1) Pump (s), driven by a continuous source of power, capable of closing all the pressure-operated devices simultaneously within \_\_\_\_\_ seconds. The pump (s) is to be connected to a closed type hydraulic operating system. (2) When requested, accumulators with a precharge of nitrogen of not less than 750 PSI and connected so as to receive a fluid charge from the above pump (s). With the charging pump (s) shut down, the pressurized fluid volume stored in the accumulators must be sufficient to close all the pressure-operated devices simultaneously within \_\_\_\_\_ seconds; after closure, the remaining accumulator pressure shall be not less than 1000 PSI with the remaining accumulator fluid volume of at least \_\_\_\_\_ percent of the original. (3) When requested, an additional source of power, remote and equivalent, is to be available to operate the above pump (s); or there shall be an additional pump (s) operated by separate power and equal in performance capabilities.

The closing manifold shall have a separate control for each pressure-operated device. Controls are to be labeled, with control handles indicating open and closed positions. A pressure reducer and regulator must be provided if a Hydril preventer is used. Gulf Legion No. 38 hydraulic oil, an equivalent or better, is to be used as the fluid to operate the hydraulic equipment.

The choke manifold, choke flow line, and choke lines are to be supported by metal stands and adequately anchored. The choke flow line and choke lines shall be constructed as straight as possible and without sharp bends. Easy and safe access is to be maintained to the choke manifold. All valves are to be selected for operation in the presence of oil, gas, and drilling fluids. The choke flow line valve connected to the drilling spool and all ram type preventers must be equipped with stem extensions, universal joints if needed, and hand wheels which are to extend beyond the edge of the derrick substructure. All other valves are to be equipped with handles.

# Gulf Oil Exploration and Production Company

C. D. Borland  
PRODUCTION MANAGER, HOBBS AREA

May 9, 1978

P. O. Box 670  
Hobbs, NM 88240

Re: Application for Permit to Drill  
Proposed Navajo "KY" Well No. 1,  
Sandoval County, New Mexico

U. S. Geological Survey  
P. O. Box 1809  
Durango, CO 81301

Gentlemen:

We are submitting the information requested in NTL-6 which should accompany application for permit to drill.

Well: Navajo "KY" Well No. 1

1. Location: 1850' FNL & 1850' FWL of Section 11, T-22-N, R-7-W, Sandoval County, NM
2. Elevation of Unprepared Ground: 6947' GL
3. Geologic Name of Surface Formation: Quarternary Alluvium
4. Type Drilling Tools: Rotary
5. Proposed Drilling Depth: 3800'
6. Estimated Top of Geologic Markers: Picture Cliffs, 1540'; Chacra, 1900';  
Cliff House, 2990'; Menefee, 3050'
7. Estimated Depths at which Anticipated Gas or Oil-Bearing Formations Expected:
  - a. Chacra - 1900'
  - b. Menefee - 3050'
8. Casing Program and Setting Depths:

	<u>SIZE</u>	<u>WEIGHT</u>	<u>GRADE</u>	<u>SETTING DEPTH</u>
Surface	9-5/8"	32.3	H40	250'
Production	7"	20.0	K55	3800'



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9. Casing Setting Depth and Cementing Program:

- a. Surface casing will be 9-5/8" set at 250' and cemented with Class "C" with 2%  $\text{CaCl}_2$ . Volume of cement will be sufficient to circulate cement to surface.
- b. Production casing will be 7" set at approximately 3800' and cemented with Class "C" with 16% gel, 3%  $\text{CaCl}_2$  and .2% friction reducer plus Class "C" Neat cement. Volume of cement to be determined by caliper survey.

10. Pressure Control Equipment:

The minimum specifications for pressure control equipment can be seen on the attached Drawing No. 2 of Gulf's blowout preventer hook-up for 3000 psi working pressure.

11. Circulating Media: 0' - 250' fresh water spud mud; 250' - 3800' saturated brine water with polymer added as needed for samples and DST's.

12. Testing, Logging and Coring Programs:

- a. Formation testing may be done at any depth where samples, drilling rate, or log information indicate a possible show of oil or gas.
- b. Open hole logs will be run at total depth.
- c. No coring is planned.

13. Abnormal Pressure or Temperature and Hydrogen Sulfide Gas: We do not anticipate any abnormal pressure or temperature; however, BOP's with remote control and choke manifold as shown on Drawing No. 2 will be installed prior to drilling below intermediate casing.

14. Anticipated Starting Date: Drilling operations should begin between June 1, 1978 and July 1, 1978.

15. Other Facets of the Proposed Operation: None



C. D. BORLAND  
Area Production Manager

Att'd

# Gulf Oil Exploration and Production Company

C. D. Borland  
PRODUCTION MANAGER, HOBBS AREA

May 9, 1978

P. O. Box 670  
Hobbs, NM 88240

Re: Surface Development Plan for  
Proposed Navajo "KY" Well No. 1,  
Sandoval County, New Mexico

U. S. Geological Survey  
P. O. Box 1809  
Durango, CO 81301

Gentlemen:

The surface use and operations plan for the proposed Navajo "KY" Well No. 1 are as follows:

1. Existing Roads:

- a. Exhibit "A" is a portion of a general highway map showing the location of the proposed well as staked. Go east of Lybrook, New Mexico, approximately one-half (1/2) mile on State Highway No. 44; turn south approximately six (6) miles and turn left (east) 1500' on ranch road to flagged, proposed new road (450' northeast); then to proposed new location.
- b. Exhibit "B" is a plat showing all existing roads within a one mile radius of the well site as well as the planned access road.

2. Planned Access Roads:

- a. Length and Width: The required new road will be 450' long and 12' wide, constructed of graded surface material compacted and watered to a depth of 6". This new road is labeled and color-coded red on Exhibits "A" and "B". The road to be improved (to the above specifications) will extend from the new road 1500' west to existing county road and color-coded brown.
- b. Turnouts: None required
- c. Culverts: None required
- d. Cuts and Fills: The road will follow contour lines to reduce cuts and fills. The road will be drained with water bars as needed.
- e. Gates and Cattleguards: None required



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3. Location of Existing Wells: Only two wells exist within a one mile radius of the proposed location. The location of these wells are shown on Exhibit "B".
4. Tank Batteries, Production Facilities and Lease Pipelines: Should this well be completed as a commercial producing well, new tank battery facilities will be required. These facilities will be constructed within the 400' X 400' work area as staked. All lines will be installed above ground and located as shown on Exhibit "D".
5. Water Supply: Drilling water will be hauled by trucks over existing roads.
6. Source of Construction Materials: The proposed roads and drilling pad will be constructed by levelling and compacting existing surface materials (mainly sand and clay). No outside materials will be hauled in for construction of roads or drilling pad.
7. Methods of Handling Waste Disposal:
  - a. Drill cuttings will be disposed of in the drilling pits.
  - b. Drilling fluids will be allowed to evaporate in drilling pits until pits are dry.
  - c. Water produced during tests will be disposed of in drilling pits. Oil produced during tests will be stored in test tanks until sold.
  - d. Current laws and regulations pertaining to disposal of human waste will be complied with.
  - e. Trash, waste paper, sacks, garbage and junk will be burned or 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. Location of trash pit is shown on Exhibit "C".
  - f. All trash and debris will be buried or removed from well site within 30 days after finishing drilling and/or completion operations.
8. Ancillary Facilities: None required
9. Well Site Layout:
  - a. Exhibit "C" shows the relative location and dimensions of the well pad, mud pits, reserve pits, trash pits and location of major rig components.
  - b. Construction of drilling pad will not require a cut or fill. A drainage ditch will be constructed to divert water run-off from southeast of location to the west side.
  - c. The reserve pit will be on north side of pad.
  - d. The well site and road have been staked.



10. Plans for Restoration of Surface:

- a. After completion of drilling and/or completion operations, all equipment and other material not needed for operations will be removed. Pits will be filled and location cleaned of all trash and junk to leave well site in as aesthetically and pleasing condition as possible.
- b. Any unguarded pits containing fluids will be fenced until they are filled.
- c. After abandonment, any special rehabilitation and/or revegetation requirements (reseed with seed mixture #2) will be complied with and accomplished as expeditiously as possible. All pits should be filled and levelled within 90 days after abandonment.

11. Other Information:

- a. Topography: Relatively flat, sandy surface.
- b. Soil: Soil is sandy clay.
- c. Flora and Fauna: The vegetation cover generally consists of sagebrush, blue gramma, and galleta.
- d. Ponds and Streams: There are no streams or ponds in the immediate area.
- e. Residences and Other Structures: The nearest occupied dwelling is an Indian house one-half mile northwest of the well site.
- f. Land Use: Present land use is grazing.
- g. Surface Ownership: Well site is on Navajo surface.

12. Operator's Representative: GULF OIL EXPLORATION and PRODUCTION COMPANY  
A Division of Gulf Oil Corporation  
P. O. Box 670, Hobbs, New Mexico 88240  
Telephone: (505) 393-4121  
Area Production Manager: C. D. BORLAND

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 the 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 Gulf Oil Corporation and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.



C. D. BORLAND

Area Production Manager

Date: May 9, 1978

Exhibit A

Navajo "KY" #1

Sec 11, T22N, R7W

Sandoval, New Mexico

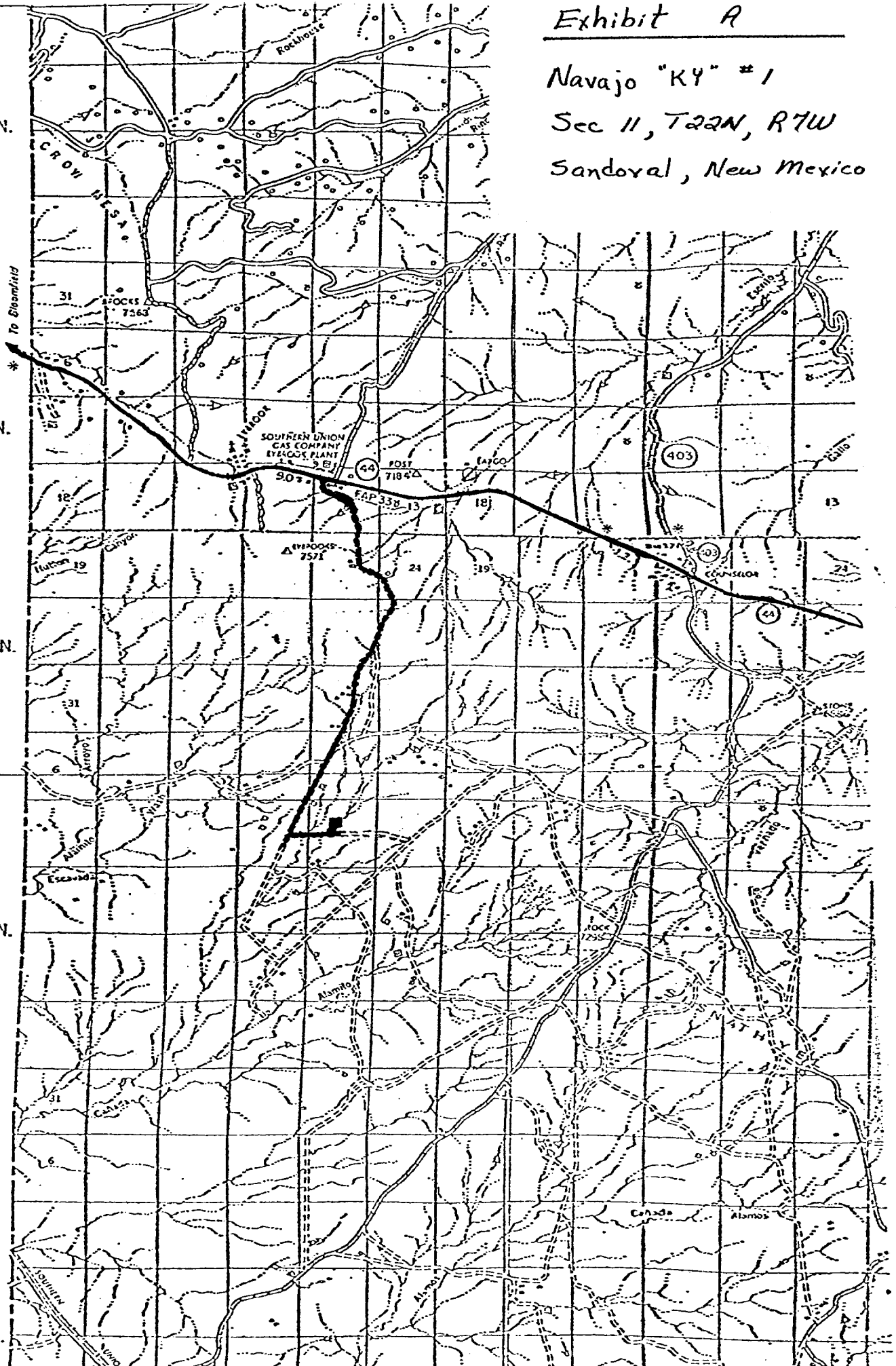
T.24 N.

T.23 N.

T.23 N.

T.22 N.

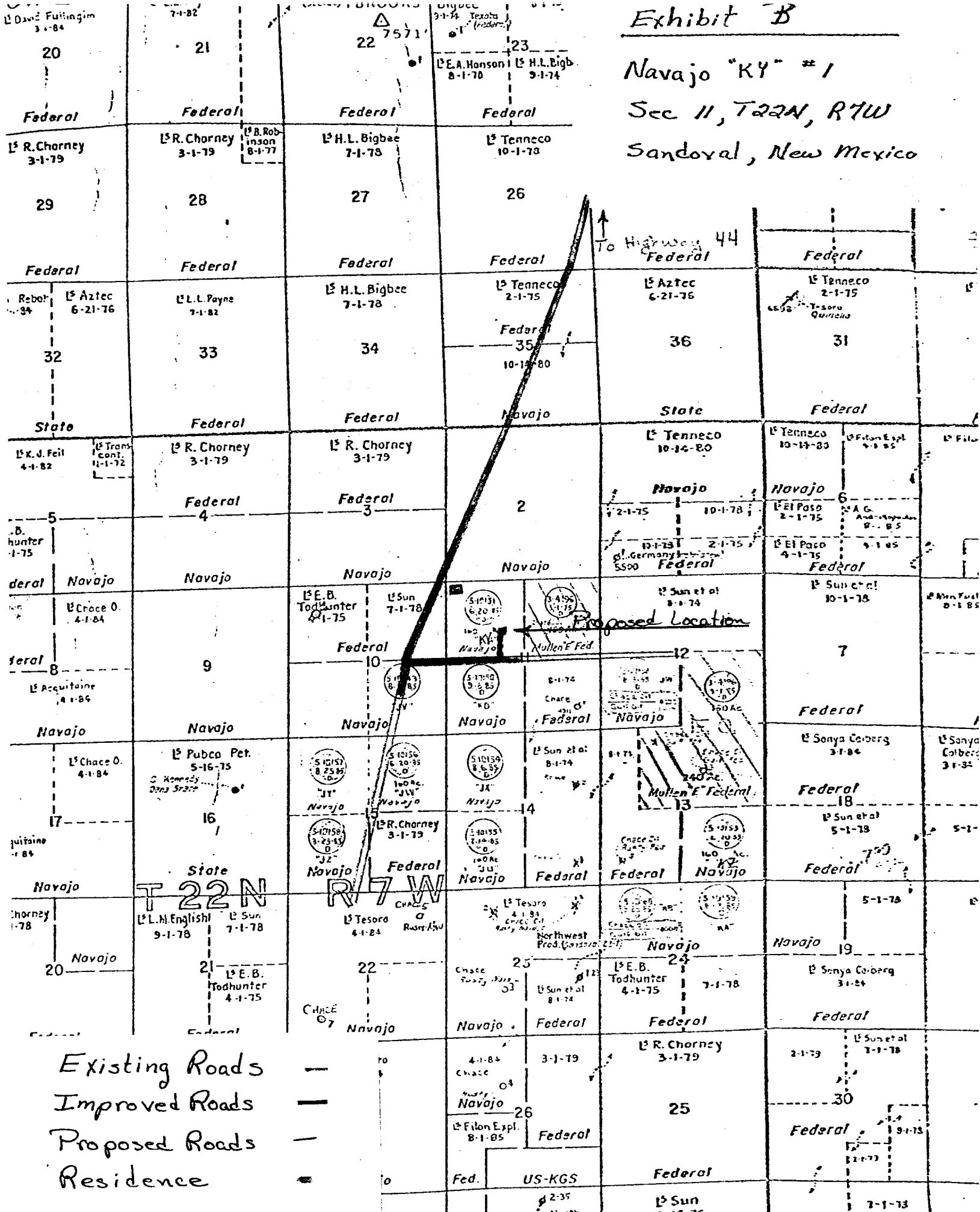
T.21 N.



David Fullington  
3-1-84

Exhibit B

Navajo "KY" #1  
Sec 11, T22N, R7W  
Sandoval, New Mexico



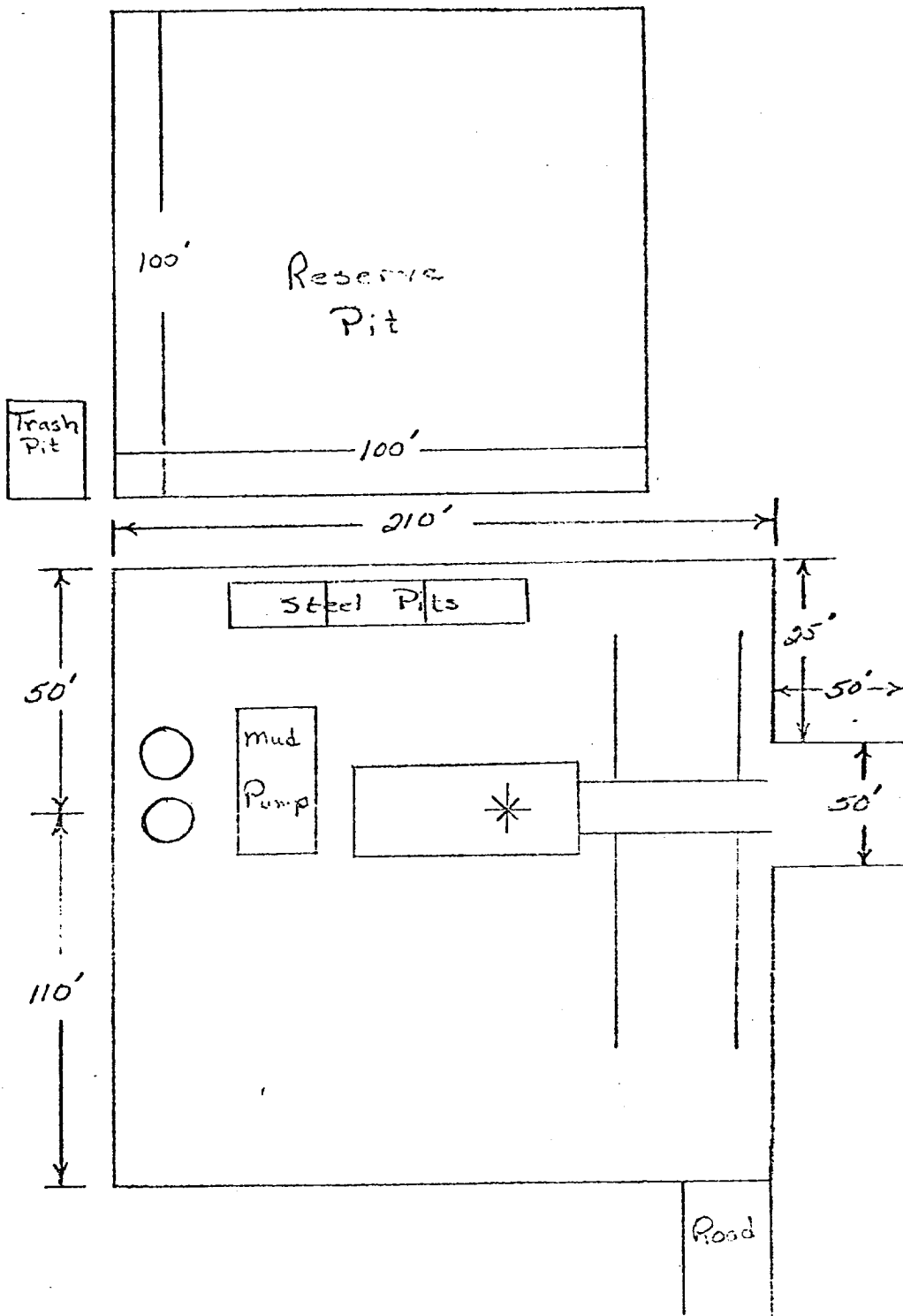


Exhibit C

Navajo "KY" #1

Sec 11, T22N, R7W

Sandoval, New Mexico

Exhibit D

Navajo "KY" #1

Sec 11, T22N, R7W

Sandoval, New Mexico

