

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

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
ELK OIL COMPANY

3. ADDRESS AND TELEPHONE NO.
Post Office Box 310, Roswell, New Mexico 88202-0310 (505)623-3190

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface
2070' FSL & 2291' FEL, Section 28
At proposed prod. zone
Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
15 miles south of Kenna, New Mexico

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT.
(Also to nearest drilg. unit line, if any)
2070'

16. NO. OF ACRES IN LEASE
960

17. NO. OF ACRES ASSIGNED TO THIS WELL
40

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.
None

19. PROPOSED DEPTH
10,600

20. ROTARY OR CABLE TOOLS
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
4259' GR

22. APPROX. DATE WORK WILL START*
As soon as possible

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2	13 3/8	48# H-40	400'	Circulate to surface
12 1/4	8 5/8	24# & 32# K-55	3100'	Circulate to surface
7 7/8	5 1/2	17# J-55	10600'	Cement as necessary
		N-80, LTC		See Drilling Specifications

PAY ZONE WILL BE SELECTIVELY PERFORATED AND STIMULATED, AS NEEDED FOR OPTIMUM PRODUCTION.

ATTACHED ARE: 1. LOCATION & DEDICATION ACREAGE PLAT
OPER. OGRID NO. 7147 2. SUPPLEMENTAL DRILLING DATA
PROPERTY NO. 20054 3. PARTIAL SURFACE USE PLAN
POOL CODE ✓
EFF. DATE 12/13/96
API NO. 30-005-21145

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.

24. SIGNED [Signature] TITLE Joseph J. Kelly, President DATE 11/13/96
(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:

APPROVED BY Earle Smith TITLE Acting Area Mgr. DATE 12/11/96

*See Instructions On Reverse Side

RECEIVED
NOV 13 2 28 PM '96

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, the local Federal and/or State office.

ITEM 14: Needed only when location of well cannot readily be found by road from the land and/or lease description. A plat, or plat, 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.

NOTICE

The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR Part 3160.

PRINCIPAL PURPOSE: The information is to be used to process and evaluate your application for permit to drill or deepen an oil or gas well.

ROUTINE USES: (1) The analysis of the applicant's proposal to discover and extract the Federal or Indian resources encountered. (2) The review of procedures and equipment and the projected impact on the land involved. (3) The evaluation of the effects of proposed operation on surface and subsurface water and other environmental impacts. (4)(5) Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions, as well as routine regulatory responsibility.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if the operator elects to initiate drilling operations on an oil and gas lease.

BURDEN HOURS STATEMENT

Public reporting burden for this form is estimated to average 30 minutes per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management, (Alternate) Bureau Clearance Officer, (WO-771), 1849 C Street, N.W., Washington, D.C. 20240, and the Office of Management and Budget, Paperwork Reduction Project (1004-0136), Washington, D.C. 20503.

The Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq) requires us to inform you that:

This information is being collected to allow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases.

This information will be used to analyze and approve applications.

Response to this request is mandatory only if the operator elects to initiate drilling operations on an oil and gas lease.

District I
PO Box 1900, Hobbs, NM 88241-1900
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

APT Number 30-DD5-21145		Pool Code ✓	Pool Name Wildcat
Property Code 20054	Property Name MA Federal		Well Number 1
OGRID No. 007147	Operator Name Elk Oil		Elevation 4259

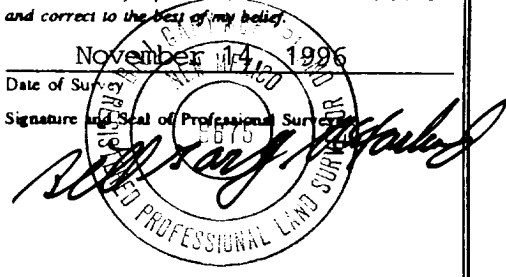
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	28	8S.	31E.		2070	FSL	2291	FEL	Chaves

¹¹ Bottom Hole Location If Different From Surface

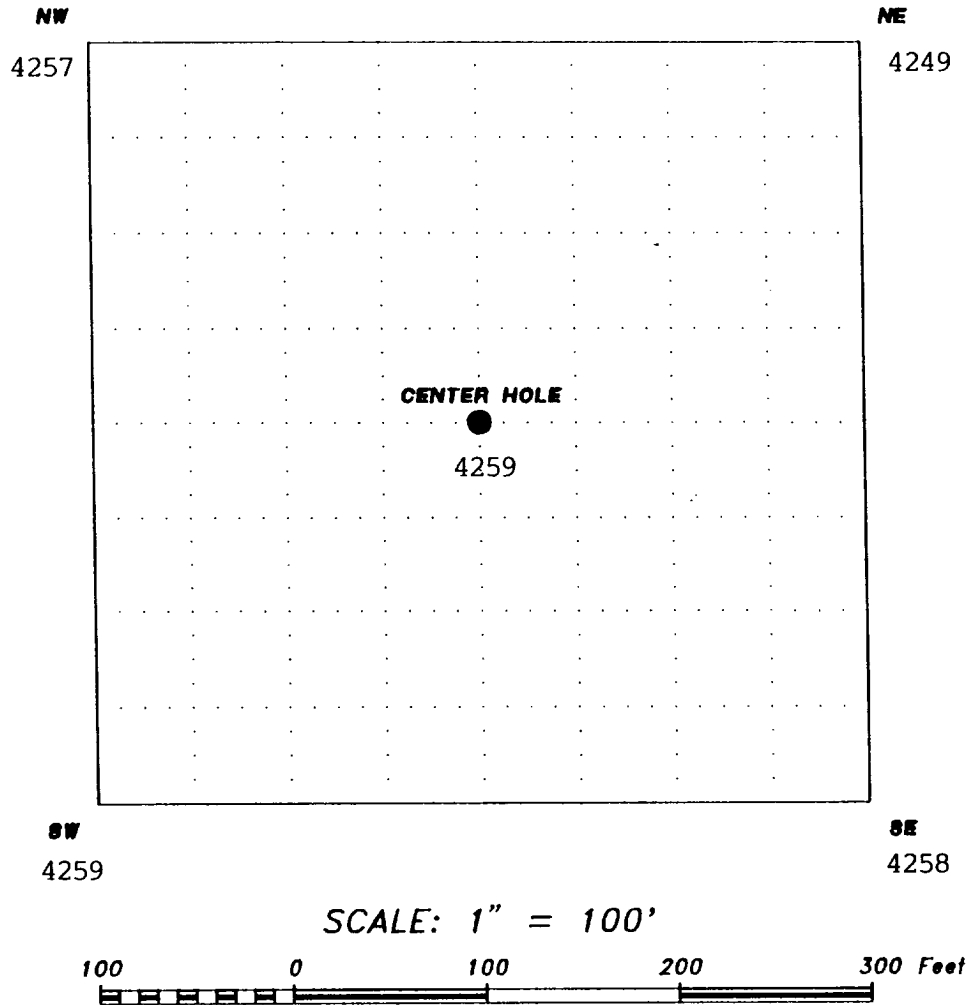
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
¹² Dedica d Acres 40		¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No.			

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

16				N 942991.9 E 671014.9 2291' 2070' N 940336.4 E 668326.7 N 940360.5 E 670977.2	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief ELK OIL COMPANY  Signature Joseph J. Kelly Printed Name President Title 11/13/96 Date
	STATE PLANE COORDINATES NEW MEXICO EAST NAD 83 N 942409.6 S 668715.7				¹⁸ 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 supervision, and that the same is true and correct to the best of my belief. November 14, 1996 Date of Survey  Signature and Seal of Professional Surveyor 8675 Certificate Number



John D. Jaquess & Associates
Well Grid Elevations



WELL INFORMATION

MA Federal #1
2070 FSL 2291 FEL, NMPM
Section 28, T.8S., R.31E.
Chaves County, New Mexico

DRILLING PROGRAM

Attached to Form 3160-3
ELK OIL COMPANY
MA Federal #1 Well
2070' FSL & 2291' FEL
Section 28-T8S-R31E
Chaves County, New Mexico

1. Geologic Name of Surface Formation:

Permian
Quaternary Sandy Alluvium

2. Estimated Tops of Important Geologic Markers:

Permian	Surface	Wolfcamp	7730'
Yates	1910'	Strawn	9210'
San Andres	3090'	Atoka	9330'
Tubb	5970'	Miss.	9930'
Abo	6830'	Devonian	10570'

3. Estimated Depths of Anticipated Fresh Water, Oil or Gas:

Fresh Water	200'
Devonian	10570'

No other formations are expected to give up oil, gas, or fresh water in measurable quantities. The surface fresh water sands will be protected by setting 13 3/8 casing at 400' and circulating cement back to surface.

4. Pressure Control Equipment:

See Exhibit "A" for description. Equipment to be tested daily after installation.

5. Casing Program:

<u>Hole Size</u>	<u>Interval</u>	<u>OD csg</u>	<u>Weight, Grade, Jt. Cond. Type</u>
17 1/2"	0 - 400	13 3/8"	48# H-40
12 1/4"	400 - 3100	8 5/8"	32# 24# K-55
7 7/8"	3100 - TD	5 1/2"	17# J-55
			N-80, LTC

Cement Program:

13 3/8 Surface Casing:	Cement to surface with 350 sxs of Class C with 2% cc.
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8 5/8 Intermediate Casing:	Cement to surface with 1300 sxs of Class C.
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5½ Production:

Cement as necessary to isolate productive zones.

6. Types and Characteristics of the Proposed Mud System:

The well will be drilled to TD with cut brine. The applicable depths and properties of this system are as follows:

<u>Depth</u>	<u>Type</u>	<u>Weight (ppg)</u>	<u>Viscosity (sec)</u>	<u>Waterloss (cc)</u>
0 - 400	Fresh Water (Spud)	8.5	28	N.C.
400 - 3100	Brine	9.8-10.2	28 - 32	N.C.
3100 - 6800	Brine / Oil	9.2-10.2	32 - 34	N.C.
6800 - TD	Brine / Oil	9.2-10.2	36 - 45	15-30

7. Testing, Logging, and Coring Programs:

DST's: Possible on all of secondary target formations, plus target formations.

Mud Logging: From ABO Formation to TD.

Electric Logging: From Surface to TD; projected to run CNL/LDT/GR and possibly DLL/MLL.

Coring: No coring is planned at this time. However, rotary sidewall cores may be taken before production casing would be run.

8. Abnormal Pressures, Temperatures, or other Hazards:

Lost Circulation Zones:

Records on nearby wells do not mention any lost circulation zones. However, appropriate measures will be taken if such zones are encountered.

High Pressure Zone:

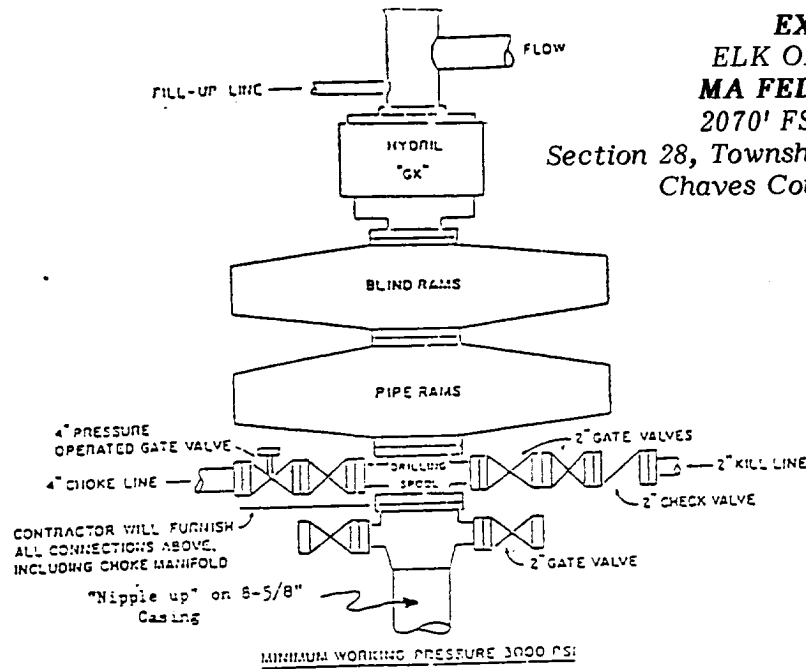
Records available on nearby wells do not mention any zones of high pressure.

9. Anticipated Starting Date:

As soon as possible.

EXHIBIT "A"
ELK OIL COMPANY
MA FEDERAL #1 Well
2070' FSL & 2291' FEL

Section 28, Township 8 South, Range 31 East
 Chaves County, New Mexico



CONTRACTOR TO FURNISH

1. ALL EQUIPMENT ABOVE CASING HEAD HOUSING INCLUDING CHOKER MANIFOLD.
2. INDEPENDENT AUTOMATIC ACCUMULATOR 3000 PSI WP.
3. B.O.P. CONTROLS TO BE LOCATED NEAR DRILLER'S POSITION AND AT SAFE DISTANCE FROM THE WELL.
4. SPARE SET PIPE RAMS TO FIT PIPE IN USE.

COMPANY TO FURNISH

1. WELLHEAD EQUIPMENT
2. WEAR DUSHING, IF REQUIRED.

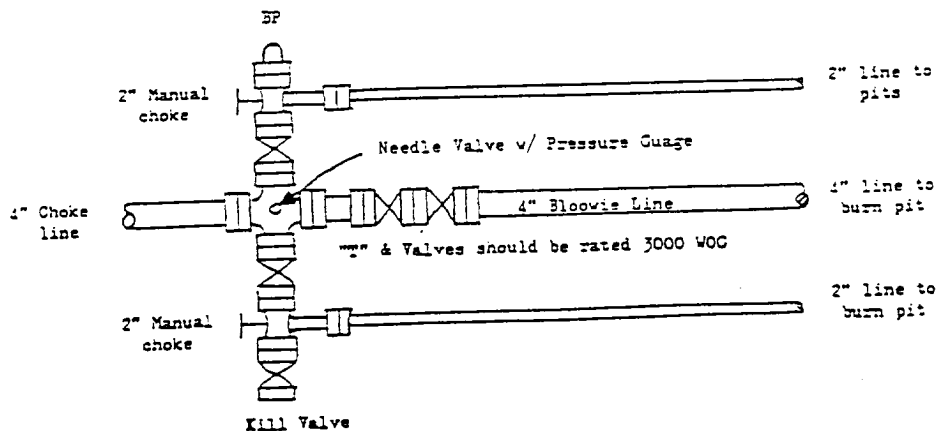
GENERAL NOTES

1. ALL VALVES, PIPING, FLANGES ETC. MUST HAVE MINIMUM WORKING PRESSURE EQUAL TO WORKING PRESSURE OF PREVENTERS. VALVES MUST BE OF THE FULL OPENING TYPE.
2. CONTROLS TO BE OF STANDARD DESIGN AND EACH MARKED SHOWING OPEN AND CLOSED POSITION.
3. CHOKER MANIFOLD AS SHOWN IN APP. 18 AND 19 REPLACEABLE PARTS AND WRENCHES TO BE CONVENIENTLY LOCATED FOR IMMEDIATE USE.
4. ALL VALVES TO BE EQUIPPED WITH HANDWHEELS.
5. CHOKER LINES MUST BE SUITABLY ANCHORED.
6. DEVIATIONS FROM THIS DRAWING MAY BE MADE ONLY WITH THE PERMISSION OF THE COMPANY.

MINIMUM BLOWOUT PREVENTER REQUIREMENTS

NORMAL PRESSURE SERVICE

CHOKER MANIFOLD SETUP



The above Manifold Hookup Design will meet minimum requirement by the Operator. Drilling Contractor to supply choke line and choke manifold. Operator to supply downstream lines from manifold assembly to pits.

SURFACE USE PLAN
To Accompany
APPLICATION FOR PERMIT TO DRILL
ELK OIL COMPANY
MA FEDERAL #1 WELL
2070' FSL & 2291' FEL
Section 28, Township 8 South, Range 31 East, NMPM.
CHAVES COUNTY, NEW MEXICO

1. EXISTING ROADS

A. REGIONAL MAP

Exhibit "B" is a portion of the New Mexico State Highway Department Quadrangle No. 23, "Elida Quadrangle" and Quadrangle No. 95, "Caprock Quadrangle", showing the regional road network and access from the nearest town.

B. NARRATIVE ACCESS DIRECTIONS

Turn North off highway 380 at mile marker 206. Travel North 10.5 miles, turn west travel 1.4 miles, turn North and travel 5.2 miles then turn West and travel 7.8 miles, turn South for .7 miles then turn and travel SE 1 mile. Turn left at fork in road and travel south .4 miles. Turn right and travel West 1400' to rig location.

C. SITE MAP

Exhibit "C" is a reproduction of a portion of the U.S.G.S. 7.5' Topographic Quadrangle "Curlew Lake SE Quadrangle", edition of 1979, showing the wellsite and access roads as staked.

D. ROAD MAINTENANCE

All roads shall be maintained in a condition equal to or better than that which existed prior to the start of construction.

2. PLANNED ACCESS ROADS

Approximately 1400' of new access road will be constructed on the same alignment as an extant seismic line. Required off-lease rights of way are already held by the applicant.

A. The access road will be crowned and ditched to a 14'-0" wide travel surface with a 30' right-of-way.

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

C. Turnouts will be constructed at intervals not exceeding 1000 feet; the exact location of which will be as dictated by topography to provide optimal sight distance.

- D. Road will be surfaced with a minimum of 4" of caliche, obtained as described in Article 6.
 - E. Centerline for the new access road has been flagged; earthwork will be as required by field conditions.
 - F. No culverts will be required, as the road alignment does not cross any defined drainageways.
3. LOCATION OF EXISTING WELLS WITHIN AREA OF CONCERN
- A. Drilling Wells: Proposed; none known
 - B. Producing Wells: Numerous, as shown on Exhibit "D"
 - C. Abandoned Wells: Numerous, as shown on Exhibit "D"
4. LOCATION OF PRODUCTION FACILITIES
- If the well is productive, a tank battery will be installed on the location.
5. LOCATION AND TYPE OF WATER SUPPLY
- Both Fresh Water and Brine will be purchased on location from a licensed commercial water hauling firm who both owns the water and who has transported same by truck over the designated access route. Applicant has no intent to either appropriate waters of the State of New Mexico or to acquire any interest in or control over any source of the drilling water purchased from commercial suppliers of those products.
6. SOURCE OF CONSTRUCTION MATERIALS
- Caliche will be obtained from the reserve pit to the extent available. Additional caliche will be obtained from a BLM approved caliche pit, located in the NW $\frac{1}{4}$ of Section 27, Township 8 South, Range 31 East, N.M.P.M.
7. METHOD OF WASTE DISPOSAL
- A. Solid Waste:
 - 1. Drill cuttings will be disposed of in the reserve pit.
 - 2. Trash, waste paper, and garbage will be disposed of in a dumpster located on the wellpad and serviced by a commercial disposal company.
 - 3. Salt, starch, bentonite gel, and other related chemicals will be stored in the manufacturer's containers until used; unused and/or damaged containers will be removed from the wellsite.

B. *Liquid Waste:*

1. *Drilling Fluid will be allowed to evaporate in the reserve pit until the pit is dry enough to backfill.*
2. *Water produced during testing of the well will be disposed of in the reserve pit, where it will evaporate.*
3. *Oil produced during testing of the well will be stored in test tanks until sold and hauled from the site.*

8. *ANCILLARY FACILITIES*

No camps or airstrips will be constructed.

9. *WELLSITE LAYOUT*

- A. *Exhibit "E" shows the proposed wellsite layout.*
- B. *Steel pits will be utilized for the active mud circulation system, the reserve pit used for final separation of suspended drill cuttings.*
- C. *The reserve pit is to be lined with a plastic liner which will extend beyond the crest a minimum of 2 feet and will be anchored with earth in the standard industry practice.*
- D. *The reserve pit will be fenced on three sides with a four strand barbwire fence during drilling and completion; after drilling operations cease the remaining side will be fenced. The fence will be removed when the reserve pit is backfilled.*

10. *SURFACE RESTORATION*

- A. *Rehabilitation and restoration of the location and reserve pit will start in a timely manner upon the cessation of drilling operations.*
- B. *The reserve pit shall be allowed to dry, and then backfilled. The area will be leveled and reshaped to eliminate erosion while maintaining the general topography of the preconstruction landform. Revegetation will be in accordance with BLM recommendations.*
- C. *Wellpad and access road will be recontoured and revegetated according to BLM recommendations in effect at the time of plugging the well.*

11. *OTHER INFORMATION*

A. *Cultural Resources*

A Cultural Resources Examination has been requested and will be forwarded to your office in the near future. Under a previous application, which was approved June 1994, Archaeological Survey Consultants conducted investigation 94099 for a 3D survey. That report is on file and is incorporated herein by reference.

B. Development

Land surface affected by this application is Public Domain under the surface management auspices of the Bureau of Land Management. There are no buildings or other improvements save for fences and stock waterings.

C. Existing Land Use

The only evident land use at this time is for livestock grazing. The Permittee for livestock grazing is:

Thomas E. Davis
HCR 60, Box 45
Elida, New Mexico 88116

D. Landform and Vegetation

Soiltype as identified by the Soil Conservation Service and published in "Soil Survey of Chaves County, New Mexico, Southern Part" (April 1980) is of the Roswell-Jalmar Complex, a deep, excessively drained soil of aeolian sediment, formed in a upland environment. Vegetation is mainly sand dropseed, little bluestem, sand bluestem, threeawn, sandbur, shinnery oak, sand sagebrush, and yucca. A more intensive, site-specific, discussion of the vegetation and landform of this site will be found in the cultural resource investigation report.

12. OPERATOR'S REPRESENTATIVE

Project Coordinator

Mr. Joseph J. Kelly
ELK OIL COMPANY
Post Office Box 310
Roswell, New Mexico 88201
(505)623-3190

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 the applicant and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

ELK OIL COMPANY



Joseph J. Kelly, President

Dated: 11/13/96

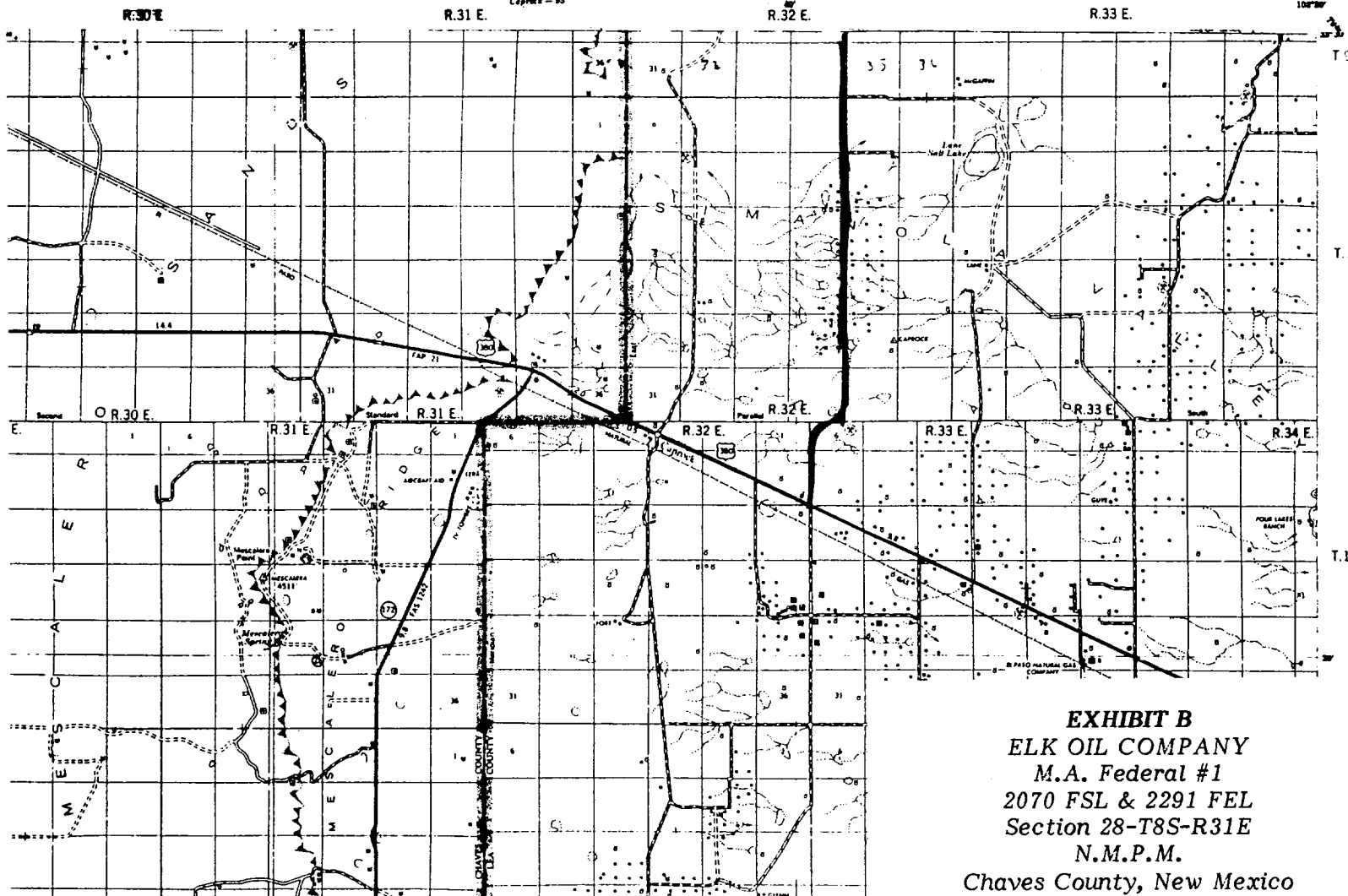
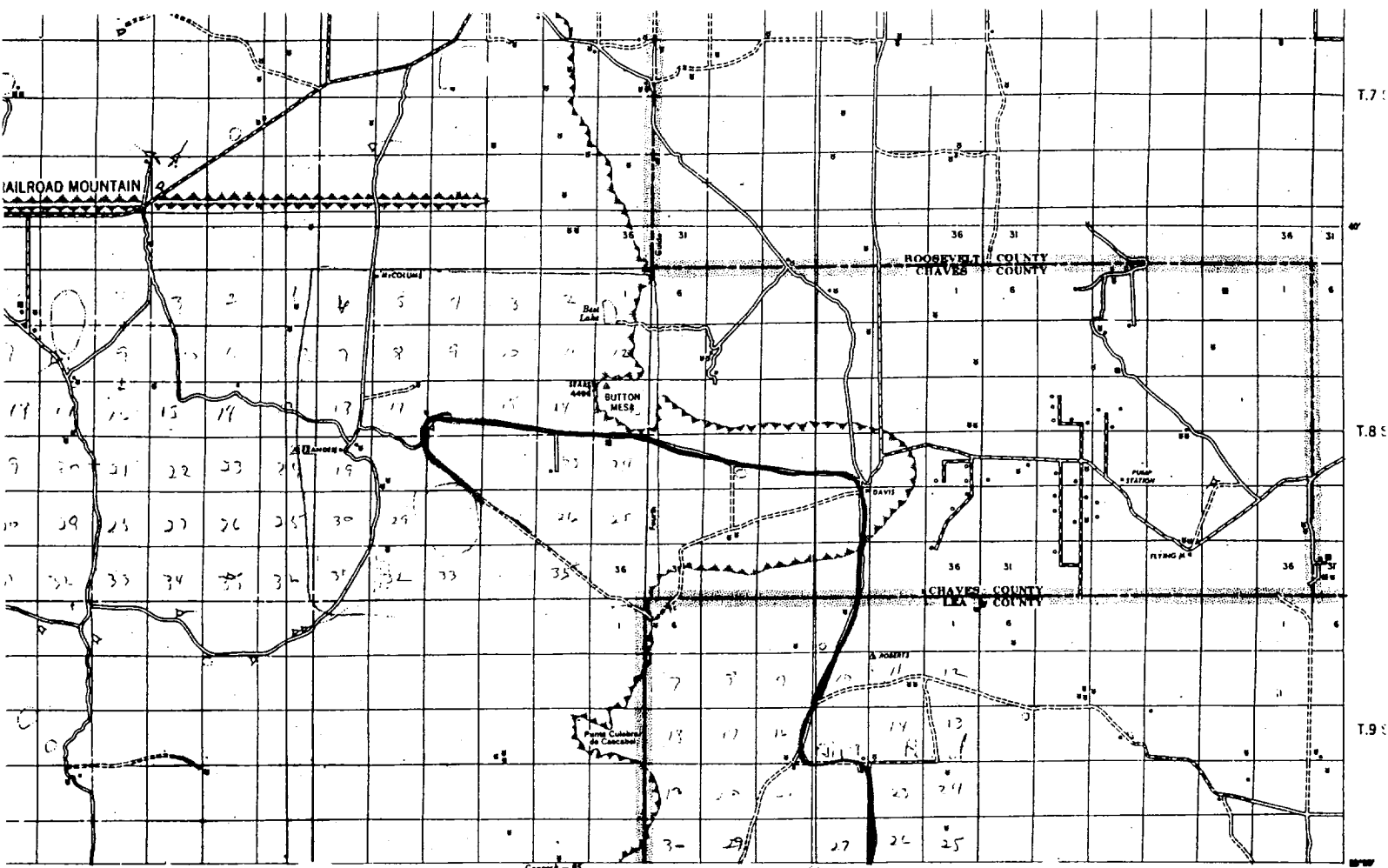


EXHIBIT B
ELK OIL COMPANY
M.A. Federal #1
2070 FSL & 2291 FEL
Section 28-T8S-R31E
N.M.P.M.
Chaves County, New Mexico

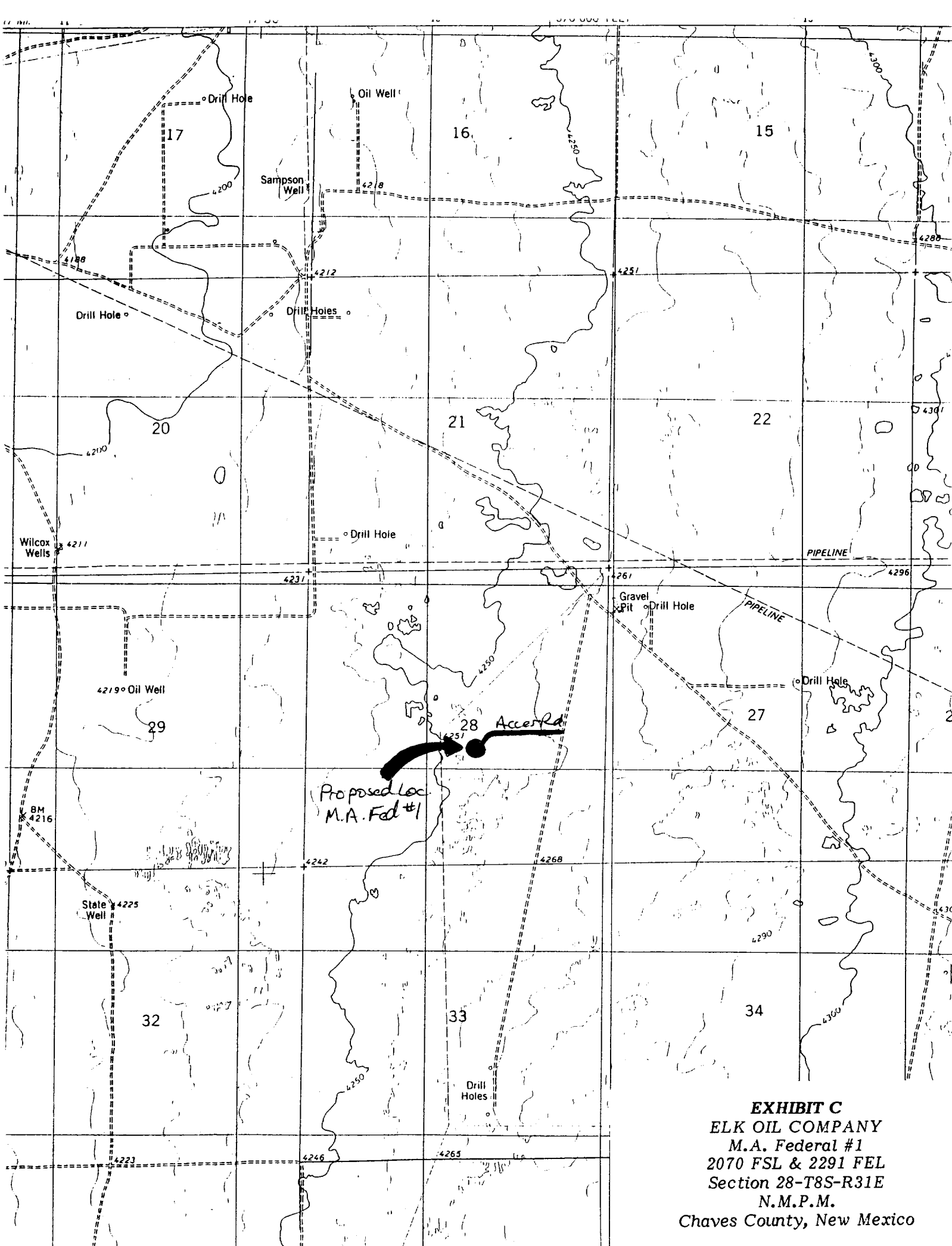
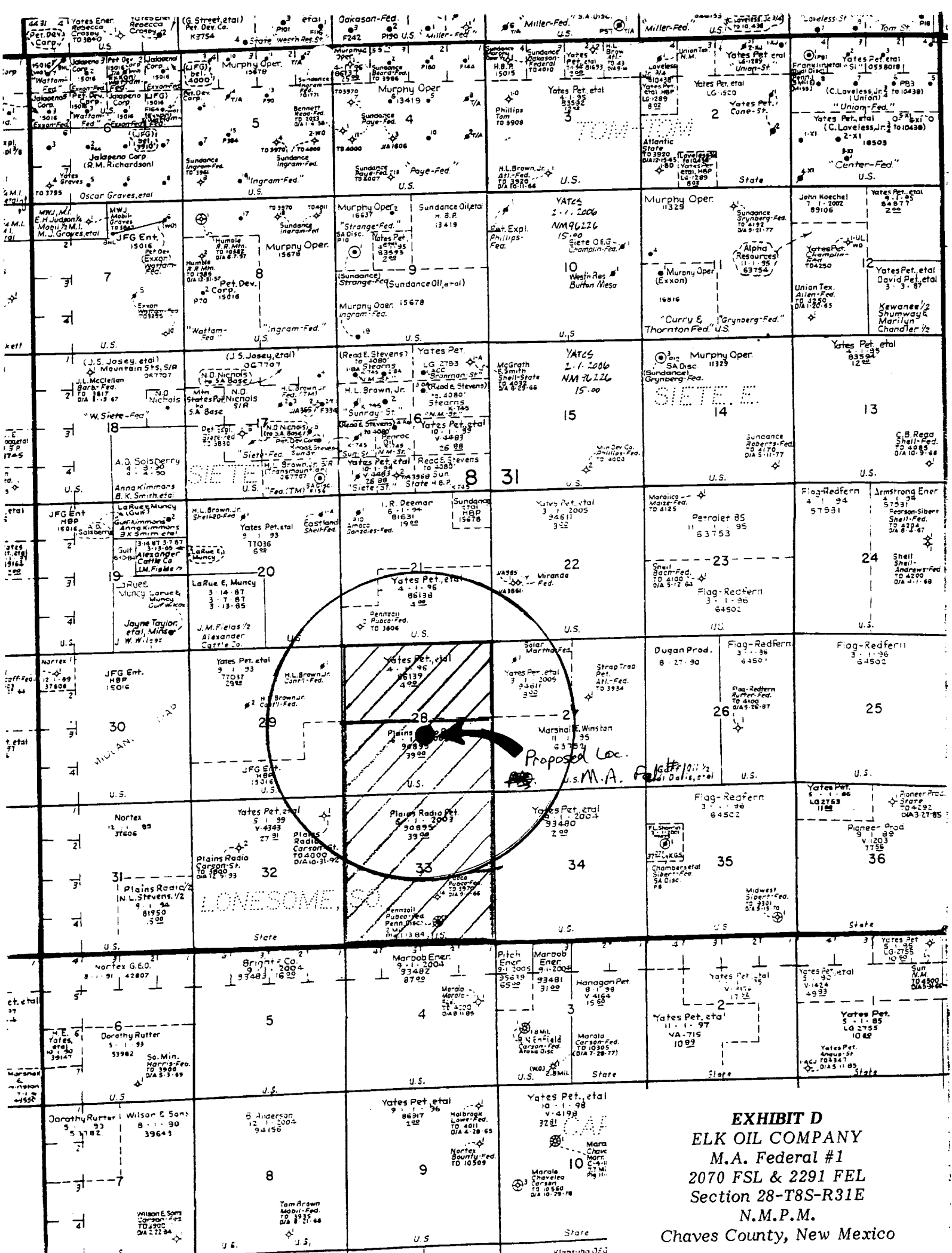
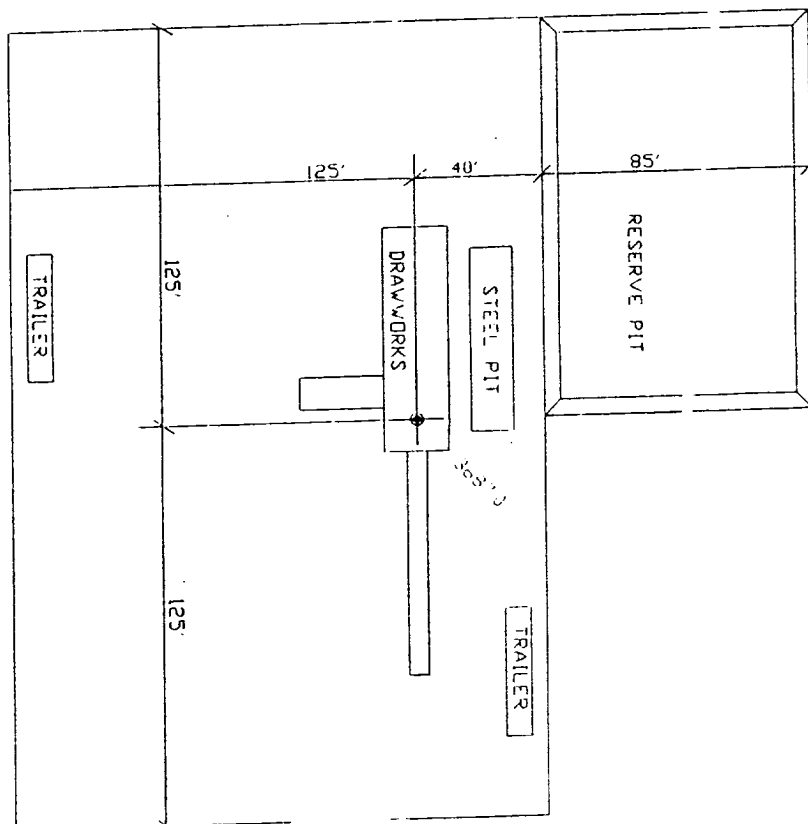


EXHIBIT C
ELK OIL COMPANY
M.A. Federal #1
2070 FSL & 2291 FEL
Section 28-T8S-R31E
N.M.P.M.
Chaves County, New Mexico





Access Rd

EXHIBIT E
 ELK OIL COMPANY
 M.A. Federal #1
 2070 FSL & 2291 FEL
 Section 28-T8S-R31E
 N.M.P.M.
 Chaves County, New Mexico