EXXON COMPANY, U.S.A.
POST OFFICE BOX 1600 • MIDLAND, TEXAS 79702-1600

November 12, 1996

Application for Fluid Injection
A. J. Adkins Well No. 11
Lea County, New Mexico

State of New Mexico
Energy and Minerals Department
Oil and Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87504

Exxon Corporation respectfully requests approval of the enclosed application for fluid injection into the A. J. Adkins #11. In support of this request, Form C-108 and its attachments are enclosed. Copies of this application are being sent by certified mail to the leasehold operator and surface owners within a 1/2 mile radius of proposed injection well. Proof of Notice will be forwarded to you as soon as I receive it.

This matter is set for hearing at the New Mexico Oil and Conversation Division in Santa Fe, New Mexico on December 5, 1996, at 8:15 a.m. Leasehold operators and surface owners should notify the NMOCD if planning to attend the hearing.

If you have any questions concerning this application, please call me at (915) 688-7899.

Sincerely,

Selena Nunez

/sqn
Enclosures

c: New Mexico OCD
District I Office
Attn: Jerry Sexton
P. O Box 1980
Hobbs, NM 88240

Offset Operators
Surface Owners

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108
Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: [X] Secondary Recovery [ ] Pressure Maintenance [ ] Disposal [ ] Storage
Application qualifies for administrative approval? [ ] yes [ ] no

II. Operator: Exxon Company, U.S.A.

Address: P. O. Box 1600

Contact party: Selena Nunez Phone: (915) 688-7899

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? [ ] yes [X] no
If yes, give the Division order number authorizing the project _____.

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of an injection or disposal well showing location of wells and dates samples were take

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Selena Nunez Title Sr. Office Assistant

Signature: Selena Nunez Date: 11/12/96

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office.

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

(1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

(2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;

(3) the formation name and depth with expected maximum injection rates and pressures; and

(4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

SUPPLEMENT TO APPLICATION FOR AUTHORIZATION TO INJECT
A. J. ADKINS #11

VII. Proposed Operations

1. During the first year of the project we intend to inject an average of 1600 BWPD (maximum 2500 BWPD) in order to reach fill-up quickly; the injection rate is anticipated to drop to an average of 1300 BWPD in the second year, 800 BWPD in the third, and 400 BWPD in the fourth and subsequent years. Total injection over the life of the project is estimated at 3500 KBW.

2. The planned injection system is a closed system.

3. Average injection pressure is expected to be approximately 800 psi, and maximum pressure will not exceed 1200 psi (0.2 psi/ft at a depth of 6000' to the bottom perforation).

4. In addition to re-injecting our produced water, we intend to use make-up water from Chevron's Eunice Monument South Unit waterflood. Water compatibility tests were performed to determine scaling tendencies between produced water from the Blinebry and the San Andres source (see attachment). Although the tests indicated a tendency for barite to precipitate, the amount will be very small. This minor precipitation, should it occur, can be remediated by standard acid stimulation techniques.

5. Not applicable.

VIII. The reservoir into which water will be injected occurs in the Blinebry Formation, a Permian carbonate encountered at a depth of approximately 5800 feet on the subject lease. The Blinebry reservoir interval is approximately 200 feet in thickness, and is composed predominantly of dolomite with average porosities of 10-15% and average permeabilities of 1-10 md.

The only underground source of drinking water in the vicinity is the Ogalalla Formation, a Tertiary unit consisting of caliche, sand and gravel which extends from the surface to a depth of approximately 200'.

IX. The planned completion program for the injection well includes the perforating approximately 100 net feet, acidizing the perfs, and applying a small proppant fracture (~20K gallons of fluid and ~50K pounds of sand) for the purpose of stimulating the near-wellbore region.

X. As the well has not yet been drilled no logs are available. We intend to run a basic suite of open-hole logs which will be forwarded to the state upon completion of the well. We will not conduct any production tests, as the sole purpose of the well is water injection.

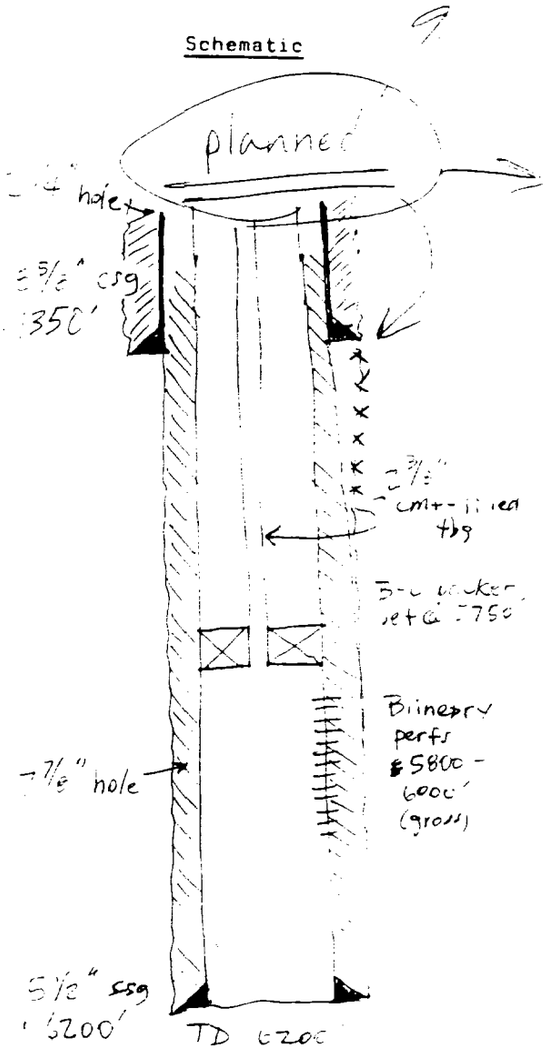
XI. Analyses are being obtained and will be submitted at the hearing.

XII. There are no indications of open faults or other hydrological connections between the proposed injection interval and the shallower fresh water zones.

INJECTION WELL DATA SHEET

Exxon Company, U.S.A.	A. J. Adkins			
OPERATOR	LEASE			
11	2300' FWL 1600'FNl	10	T-21-S	R-36-E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Schematic



Tabular Data

Surface Casing

Size 8-5/8 " Cemented with _____ sx.

TOC surface feet determined by _____

Hole size 12-1/4

Intermediate Casing

Size _____ " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 5-1/2 " Cemented with _____ sx.

TOC surface feet determined by _____

Hole size 7-7/8

Total depth 6200'

Injection interval

5800 feet to 6000 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8 lined with cement (material) set in a

Baker-Lockset (brand and model) packer at 5750' feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Blinebry

2. Name of Field or Pool (if applicable) Oil Center Blinebry

3. Is this a new well drilled for injection? [X] Yes [ ] No

   If no, for what purpose was the well originally drilled? _____

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used)

   No

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

   Grayburg - oil - 3800'

   Eumont (Yates, Seven River, Queen) - gas - 2800'

WELLS WITHIN 1/2 MILE RADIUS OF
PROPOSED ADKINS/KNOX (BLBY) INJECTORS
LEA CO, NEW MEXICO

API #	OPERATOR	WELL NAME	ST	SEC #	FOOTAGE	DATE DRILLED	DEPTH		COMPLETION (PERFS)	CSG	DEPTH (FT)	CMT (SX)
T-21-S, R-36-E												
30025-20007	Sun Oil	J A Akens #8	Oil	3	890' FSL, 2289' FEL	6/17/63	6300	00	5859-6092	8-5/8"	1296	500
								01	5859-6184	4-1/2"	6300	650
30025-26069	Oryx Energy	J A Akens #10	Gas	3	660' FSL, 1650' FWL	11/1/78	6319	00	5874-6259	8-5/8"	1304	600
								01	2983-3060	5-1/2"	6300	1450
30025-30099	Sun Exploration	J A Akens #16	Oil	3	928 FSL, 1980' FWL	2/3/88	7000	00	6590-6913	13-3/8"	1363	1425
										8-5/8"	4900	1650
										5-1/2"	7000	1270
30025-20166	Exxon Corp	John D Knox #9	Oil	10	330' FNL, 990' FEL	10/29/63	6220	00	5875-5893	7-5/8"	1331	450
								01	5875-6059	4-1/2"	6200	500
								02	5225-5308			
30025-20262	Exxon Corp	Blinebry Oil Com No 1 #1	Oil	10	330' FNL, 2310' FWL	7/26/63	6180	00	5906-5916	7-5/8"	1347	450
								01	5906-6110	4-1/2"	6180	500
30025-20306	Exxon Corp	John D Knox #11	TA	10	2310' FSL, 330' FEL	11/23/63	6225	00	5812-5945	7-5/8"	1329	575
										4-1/2"	6225	500
30025-20331	Exxon Corp	John D Knox #10	Oil	10	1650' FNL, 1752' FEL	10/31/63	6230	00	5897-5949	7-5/8"	1323	700
								01	5871-6090	4-1/2"	6230	500
30025-20700	Exxon Corp	A J Adkins #8	Oil	10	2310' FSL, 2260' FWL	8/13/64	6050	00	5881-5887	7-5/8"	1364	625
								00	5849-5887	4-1/2"	6050	600
									5805-5887			
30025-20701	Exxon Corp	A J Adkins #9	SI	10	1650' FNL, 990' FWL	10/26/64	5960	00	5832-5926	7-5/8"	1363	450
										4-1/2"	5960	600
30025-20706	Exxon Corp	John D Knox #12	Gas	10	990' FSL, 1652' FEL	6/24/64	6020	00	5890-5896	7-5/8"	1353	450
								01	5890-5944	4-1/2"	6020	525
								02	2778-3306			
								03	5890-5896			
30025-20591	Atlantic Richfield	State L #6	Oil	11	1650' FNL, 330' FWL	11/15/64	6200	00	5760-5864	8-5/8"	1313	660
										5-1/2"	6199	473

PETROLITE

Water Analysis Report from Petrolite Corporation

Mixes at 100°F and 0 psi

Predictions of Saturation Index and Amount of Scale in lb/1000bbl

Mix Waters		CO2	Calcite CaCO3		Gypsum CaSO4.2H2O		Anhydrite CaSO4		Celestite SrSO4		Barite BaSO4	
16196	16197	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
0%	100%	7.64	0.48	127	-0.20		-0.20		N/A		1.28	0.28
10%	90%	7.19	0.59	149	-0.09		-0.08		N/A		1.05	0.24
20%	80%	6.69	0.63	144	-0.04		-0.03		N/A		0.88	0.20
30%	70%	6.14	0.63	132	-0.01		0.01	25	N/A		0.73	0.16
40%	60%	5.54	0.63	117	0.02	47	0.04	82	N/A		0.59	0.12
50%	50%	4.90	0.62	101	0.04	94	0.07	125	N/A		0.45	0.09
60%	40%	4.21	0.60	85	0.06	128	0.09	157	N/A		0.29	0.05
70%	30%	3.48	0.58	69	0.07	154	0.11	181	N/A		0.12	0.02
80%	20%	2.71	0.56	55	0.08	173	0.12	199	N/A		-0.10	
90%	10%	1.89	0.55	42	0.09	186	0.14	212	N/A		-0.45	
100%	0%	1.03	0.60	31	0.10	196	0.15	222	N/A		N/A	

Note 1 When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered

Note 2 Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.

Note 3 CO2 Pressure is absolute pressure. Total Pressure is gauge pressure

Adkins-Knox Waterflood Project

New Mexico EOR Tax Incentive Application

Geologic Summary

See Form C-108, Item VIII.

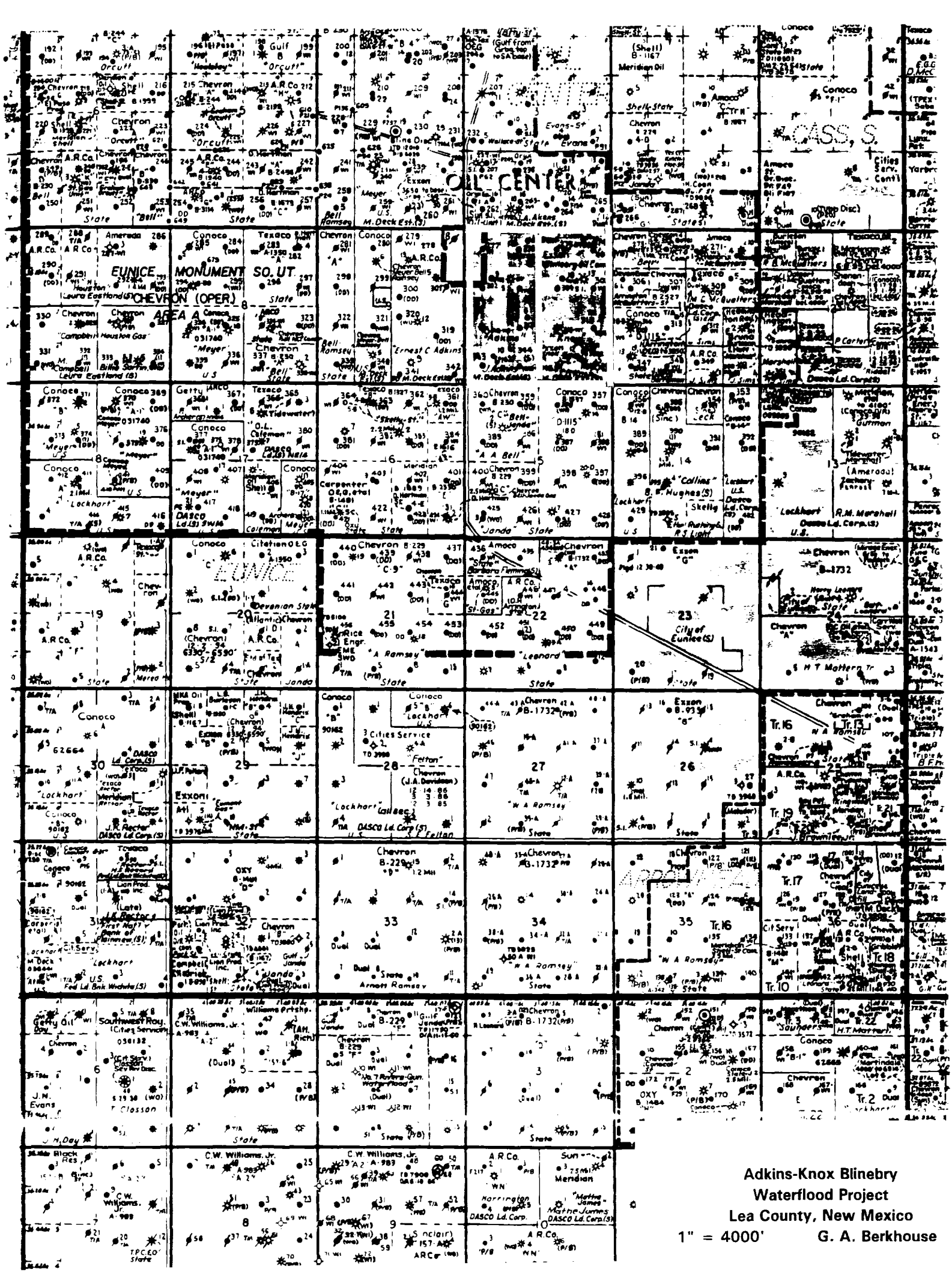
Project summary

The proposed Adkins-Knox Waterflood Project consists of the drilling of two water injection wells, one on the A. J. Adkins lease and the other on the J. D. Knox lease, both operated by Exxon, in order to form two contiguous inverted (i. e., injector-centered) "five-spot" patterns; given this arrangement, the injectors will support a total of six producers. All injection will occur in the Blinebry Formation at an average depth of 5800' and an average thickness of 200'. The two injectors will be served from a single facility located on the Knox lease.

Of the intended six producers, three are currently producing from the Blinebry, one is temporarily abandoned (also completed in the Blinebry), and two are currently producing from the Eunice gas zone, having previously produced from the Blinebry. The one TA'd well and the two plugged-back producers will be returned to Blinebry production as soon as response is seen in those wells currently producing.

Make-up water for the purpose of reservoir fill-up will be obtained from either Chevron's Eunice Monument South Unit, or from Rice Engineering, depending on economic viability and reservoir compatibility. Peak make-up water usage of approximately 4000 BWPD will occur in the first year of the project in order to achieve fill-up as soon as possible, and will subsequently diminish to approximately 300 BWPD in the fourth year.

We anticipate a project life of approximately 15 years, with total produced reserves of 500 KBO. Project implementation will incur capital investments of approximately $1M.


OIL CENTER
EUNICE
MONUMENT
SO. UT.
CHEVRON (OPER.)
AREA A
Adkins-Knox Blinebry
Waterflood Project
Lea County, New Mexico
1" = 4000'
G. A. Berkhouse

A. J. Adkins Well No. 11
Lea County, New Mexico

Copies of NMOCD Form C-108 were sent to the following by Certified Mail on November 12, 1996.

Surface Owner

Milard Deck
c/o Nations Bank Texas
1777 NE Loop 410, Suite 1250
San Antonio, TX 78217

Offset Operators

Arco Permian
P. O. Box 1610
Midland, TX 79702

David H. Arrington Oil & Gas, Inc.
214 West Texas, Suite 400
Midland, TX 79701

Chevron, U.S.A. Incorporated
P. O. Box 1150
Midland, TX 79702

Conoco Inc.
10 Desta Drive West
Midland, TX 79705

Devon Energy Corporation
20 North Broadway
Suite 1500
Oklahoma City, OK 73102

Oryx Energy
P. O. Box 2880
Dallas, TX 75221

Texaco E&P
P. O. Box 3109
Midland, TX 79702

Texas Crude Inc.
P. O. Box 56586
Houston, TX 77256-6586

Exxon Corp.

Selena Nunez

Selena Q. Nunez
Regulatory Compliance - Permits

BEFORE THE NEW MEXICO OIL CONSERVATION DIVISION

APPLICATION OF EXXON CORPORATION FOR APPROVAL OF A WATERFLOOD PROJECT AND TO QUALIFY THE PROJECT FOR THE RECOVERED OIL TAX RATE, LEA COUNTY, NEW MEXICO **CASE NO._____**

APPLICATION

Exxon Corporation ("Exxon") hereby applies for an order approving a waterflood project, and to qualify the project for the recovered oil tax rate. In support thereof, Exxon states:

1. Exxon is the operator of Section 10, Township 21 South, Range 36 East, N.M.P.M., which comprises 640 acres of fee land. Said acreage is comprised of: the E½ of Section 10, which is Exxon's John D. Knox Lease; the SW¼ and S½NW¼ of Section 10, which is part of Exxon's A.J. Adkins Lease; and the N½NW¼ of Section 10, which is dedicated to the Exxon-operated Blinebry Oil Comm. Well No. 1.

2. Exxon proposes to institute a cooperative waterflood project on the above-described acreage. Exxon will be the operator of the proposed waterflood project, designated the Knox-Adkins Waterflood Project, and its address is P.O. Box 1600, Midland, Texas 79702.

3. By drilling two injection wells, Exxon proposes to inject produced water into the Blinebry formation (Oil Center-Blinebry Pool). The project area comprises all of Section 10. A plat outlining the project area, and showing the location of the initial injection and producing wells, is attached hereto as Exhibit A.

4. Exxon requests that the Knox-Adkins Waterflood Project be

qualified for the recovered oil tax rate pursuant to the Enhanced Oil Recovery Act (L. 1992, Ch. 38) and Division Order No. R-9708. Project data includes:

(a) Number of initial producing wells: 6.

(b) Number of initial injection wells: 2.

(c) Capital cost of additional facilities: $1,000,000.

(d) Estimated total project cost: $1,000,000.

(e) Estimated total value of incremental production recovered from the project: $10,000,000 (@ $20/barrel).

(f) Anticipated injection commencement date: February 15, 1997.

(g) Type of fluid injected: Produced water.

(h) Anticipated injection volumes: 5000 BWPD maximum; 3200 BWPD average for first year, decreasing thereafter.

5. The projected primary plus secondary production from the project area is shown on Exhibit B attached hereto.

6. Attached hereto as Exhibits C and D are the Form C-108's regarding the two initial injection wells for the proposed waterflood project.

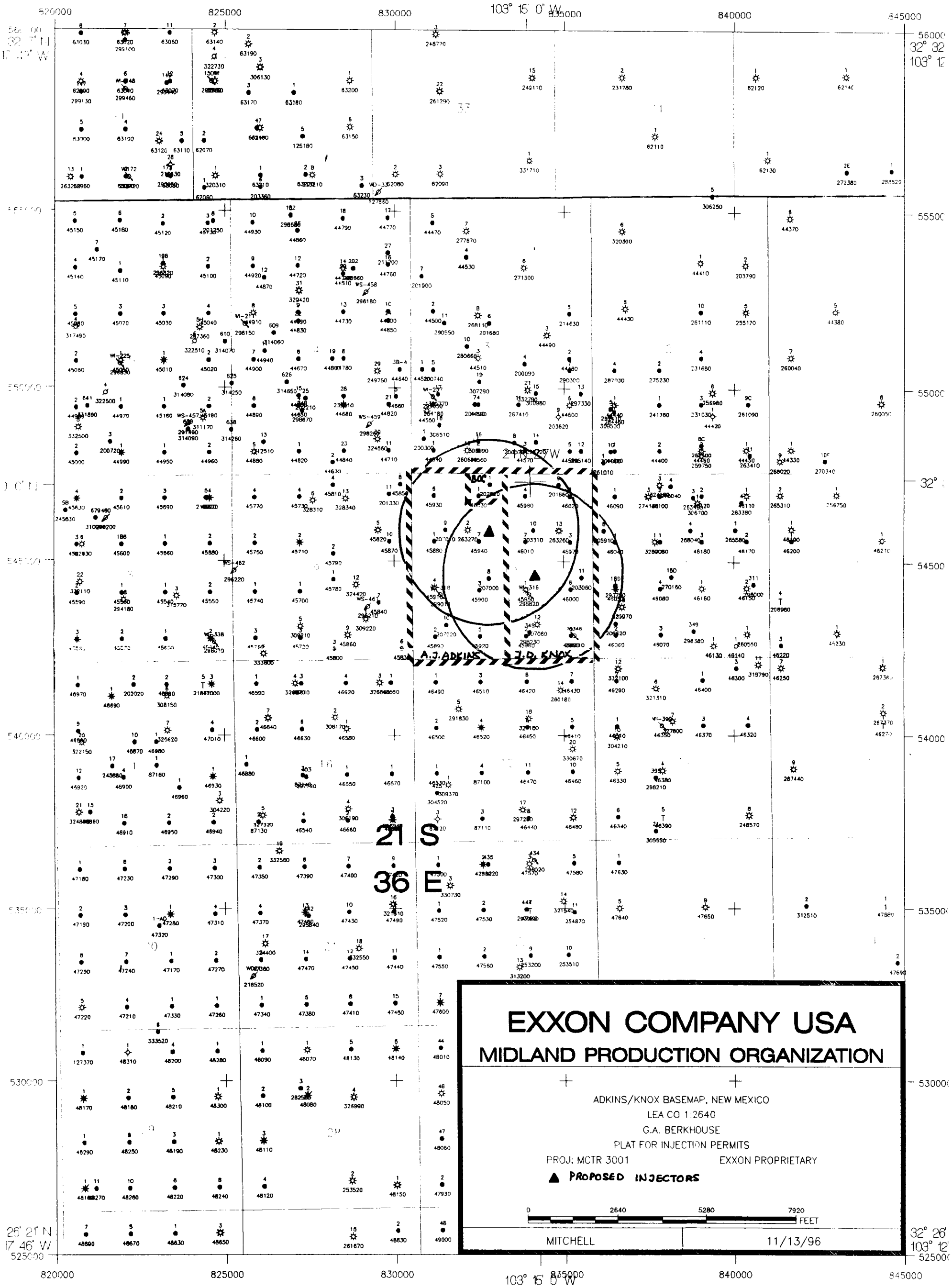
WHEREFORE, Applicant requests that, after hearing, the Division approve the injection application and the Knox-Adkins Waterflood Project, qualify the project as an enhanced oil recovery project, and certify the project for the recovered oil tax rate.

Respectfully submitted,

HINKLE, COX, EATON, COFFIELD
& HENSLEY, L.L.P.

James Bruce
P.O. Box 2068
Santa Fe, New Mexico 87504
(505) 982-4554

Attorneys for Exxon Corporation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535000
530000
525000
32° 32'
32° 26'
103° 12'
21 S
36 E
A.J. ADKINS
J.D. KNOX
EXXON COMPANY USA
MIDLAND PRODUCTION ORGANIZATION
ADKINS/KNOX BASEMAP, NEW MEXICO
LEA CO 1:2640
G.A. BERKHOUSE
PLAT FOR INJECTION PERMITS
PROJ: MCTR 3001
EXXON PROPRIETARY
▲ PROPOSED INJECTORS
0
2640
5280
7920
FEET
MITCHELL
11/13/96

MCTR 3001