

LARGE FORMAT  
EXHIBIT HAS  
BEEN REMOVED  
AND IS LOCATED  
IN THE NEXT FILE

OIL CENTER-BLINEBRY POOL  
Lea County, New Mexico

SPECIAL RULES AND REGULATIONS  
FOR THE OIL CENTER-BLINEBRY POOL

Order No. R-2408, Adopting Temporary Operating Rules for the Oil Center-Blinebry Pool, Lea County, New Mexico, January 16, 1963, Made Permanent by Order No. R-2408-A, January 29, 1964.

Application of Continental Oil Company for establishment of Special Rules and Regulations for the Oil Center-Blinebry Pool, Lea County, New Mexico.

CASE NO. 2727  
Order No. R-2408

ORDER OF THE COMMISSION

BY THE COMMISSION: This cause came on for hearing at 9 o'clock a.m. on January 3, 1963, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission", in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 16th day of January, 1963, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Nutter, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Continental Oil Company, seeks the promulgation of Special Rules and Regulations for the Oil Center-Blinebry Pool in Township 21 South, Range 36 East, NMPM, Lea County, New Mexico, to provide for 80-acre spacing units and uniform well spacing in said pool.

(3) That the information presently available concerning the reservoir characteristics of the Oil Center-Blinebry Pool indicates that the pool can be efficiently and economically drained on 80-acre proration units.

(4) That the evidence concerning reservoir characteristics justifies the establishment of 80-acre proration units for a temporary one-year period.

(5) That all wells previously drilled in the Oil Center-Blinebry Pool will conform to a uniform spacing pattern and that continued development of the pool with uniform spacing of wells will result in a more efficient depletion of the reservoir, thereby preventing waste and protecting correlative rights.

(6) That during the one-year period in which this order will be in effect, all operators in the subject pool should gather all available information relative to drainage and recoverable reserves.

(7) That this case should be reopened at an examiner hearing in January, 1964, at which time the operators in the subject pool should be prepared to appear and show cause why the pool should not be developed on 40-acre proration units.

IT IS THEREFORE ORDERED:

(1) That Special Rules and Regulations for the Oil Center-Blinebry Pool are hereby promulgated as follows:

RULE 1. Each well completed or recompleted in the Oil Center-Blinebry Pool or in the Blinebry formation within one mile of the Oil Center-Blinebry Pool and not nearer to or within the limits of another designated Blinebry pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. Each well shall be located on a standard unit containing 80 acres, more or less, consisting of two governmental quarter-quarter sections, or lots, joined by a common bordering side and lying within a single governmental quarter-section; or, in irregular sections, lying within a single governmental quarter-section or within the northeast 160 acres or the northwest 160 acres of the irregular section.

RULE 3. The Secretary-Director may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit. All operators offsetting the proposed non-standard unit shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application if, after a period of 30 days, no offset operator has entered an objection to the formation of the unit. No non-standard unit containing less than 80 acres shall be enlarged to form a standard size unit except after notice and hearing.

RULE 4. (a) In Township 21 South, all wells on an 80-acre proration unit shall be located in either the NE/4 or SW/4 of a governmental quarter-section; or, in irregular governmental sections, on an odd-numbered lot.

(b) In Township 20 South, all wells on an 80-acre proration unit shall be located in either the NW/4 or SE/4 of a governmental quarter-section.

RULE 5. No well shall be located nearer than 330 feet to the boundary line of the quarter-quarter section or lot on which it is situated.

RULE 6. An 80-acre proration unit (79 through 81 acres) shall be assigned an 80-acre proportional factor of 2.33 for allowable purposes, effective February 1, 1963. The allowable assigned to any unit containing less than 79 or more than 81 acres shall bear the same ratio to a standard 80-acre allowable as the acreage in such unit bears to 80 acres. If a proration unit contains more than one well, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

(2) That this case shall be reopened at an examiner hearing in January, 1964, at which time the operators in the subject pool may appear and show cause why the Oil Center-Blinebry Pool should not be developed on 40-acre proration units.

(3) That any operator desiring to dedicate 80 acres to a well in the Oil Center-Blinebry Pool shall file a new Form C-128 showing thereon the acreage to be dedicated to the well and a Form C-116 for a re-test of said well at a daily rate not to exceed 105 barrels of oil per day with the Commission on or before January 31, 1963.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

Exhibit No. 2  
Exxon Corporation  
Case No. 11665  
Hrg. Date: December 5, 1996

OIL CENTER-BLINEBRY POOL  
(Gas-Oil Ratio)  
Lea County, New Mexico

Order No. R-3912, Adopting a Gas-Oil Ratio Rule for the Oil Center-Blinebry Pool, Lea County, New Mexico, March 1, 1970.

Application of Humble Oil & Refining Company for a Special Gas-Oil Ratio Limitation, Lea County, New Mexico.

CASE NO. 4276  
Order No. R-3912

ORDER OF THE COMMISSION

BY THE COMMISSION: This cause came on for hearing at 9:30 a.m. on December 17, 1969, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 20th day of January, 1970, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Humble Oil & Refining Company, seeks an exception to Rule 506 of the Commission Rules and Regulations to provide for a limiting gas-oil ratio of 6000 cubic feet of gas per barrel of oil in the Oil Center-Blinebry Pool, Lea County, New Mexico.

(3) That the reservoir characteristics of the subject pool presently available indicate the establishment of a gas-oil ratio limitation of 6000 cubic feet of gas per barrel of oil would be excessive.

(4) That the reservoir characteristics of the subject pool presently available justify the establishment of a gas-oil ratio limitation of 4000 cubic feet of gas per barrel of oil.

(5) That in order to afford to the owner of each property in the Oil Center-Blinebry Pool the opportunity to produce his just and equitable share of the oil and gas in the subject pool and for this purpose to use his just and equitable share of the reservoir energy, a limiting gas-oil ratio of 4000 cubic feet of gas per barrel of oil should be established for the subject pool.

(6) That approval of the subject application will prevent waste and protect correlative rights, provided the flaring or venting of gas in the Oil Center-Blinebry Pool is prohibited.

(7) That in order to assure the protection of correlative rights, the operator of each well in the Oil Center-Blinebry Pool should file a new gas-oil ratio test with the Commission's Hobbs District Office on or before February 15, 1970.

IT IS THEREFORE ORDERED:

(1) That, effective March 1, 1970, the limiting gas-oil ratio in the Oil Center-Blinebry Pool, Lea County, New Mexico, shall be 4000 cubic feet of gas for each barrel of oil produced; that effective March 1, 1970, each proration unit in the Oil Center-Blinebry Pool shall produce only that volume of gas equivalent to 4000 multiplied by top unit oil allowable for the pool.

(2) That the operator of each well in the Oil Center-Blinebry Pool shall file a new gas-oil ratio test with the Commission's Hobbs District Office on or before February 15, 1970, and shall furnish a schedule of test dates to the Commission's Hobbs District Office in order that the tests may be witnessed.

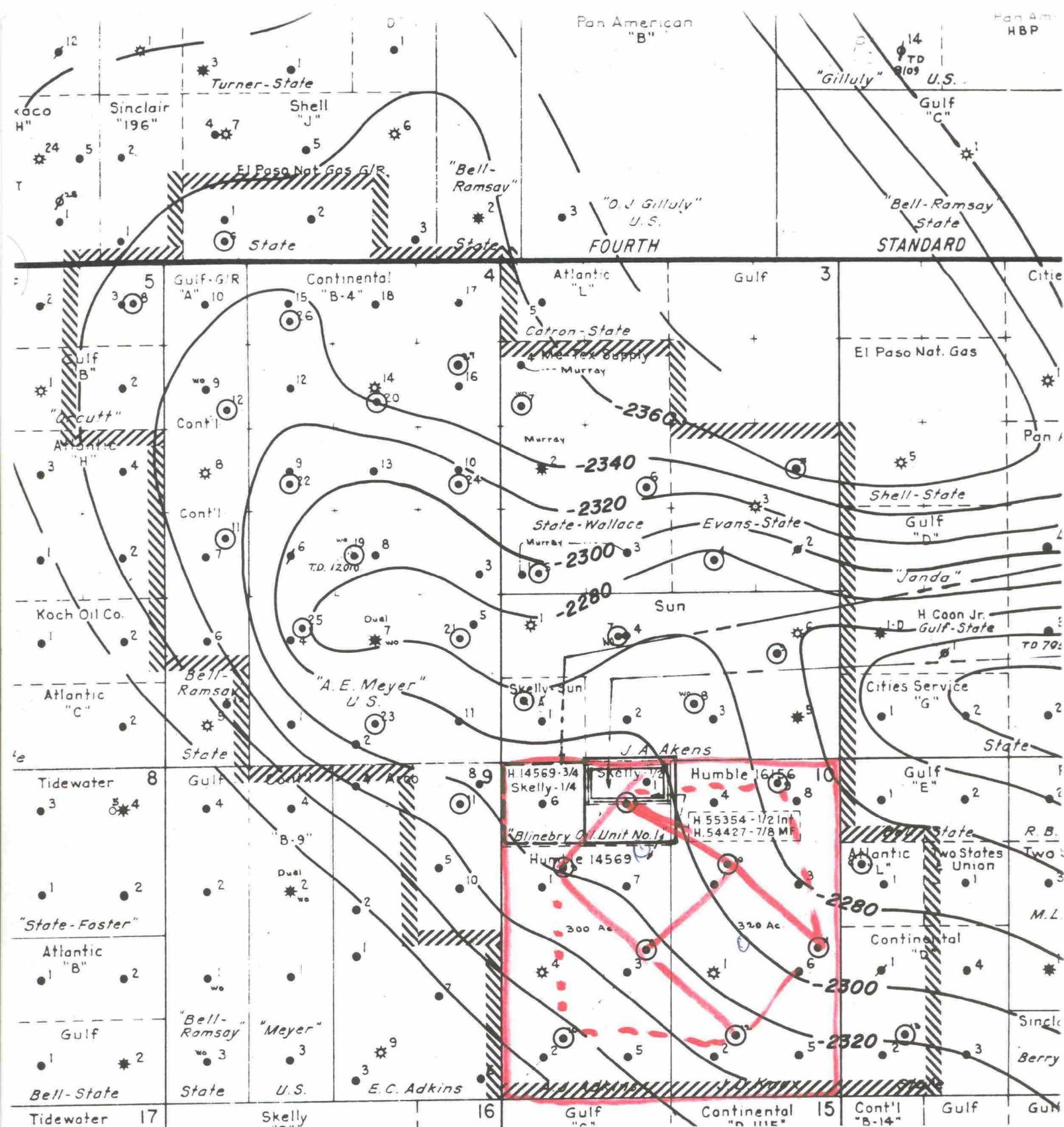
(3) That no gas shall be flared or vented in the Oil Center-Blinebry Pool more than 60 days after a well begins to produce or 60 days after the effective date of this order, whichever is later. Any operator desiring to obtain an exception to this provision shall submit to the Secretary-Director of the Commission an application for such exception with a statement setting forth the facts and circumstances justifying it. The Secretary-Director is hereby authorized to approve such an application if he determines that the exception is necessary to prevent waste. If the Secretary-Director declines to grant administrative approval of the requested exception, the matter shall be set for hearing if the operator so requests.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

*M. F. ...*

Exhibit No. 3  
Exxon Corporation  
Case No. 11665  
Hrg. Date: December 5, 1996



HUMBLE OIL & REFINING COMPANY  
 Midcontinent Division  
 Production Department      Andrews District

Oil Center Blinebry Pool  
 Lea County, New Mexico

Structure - Top of Blinebry

Exhibit No. 4  
 Exxon Corporation  
 Case No. 11665  
 Hrg. Date: December 5, 1996

Figure 4

Reservoir Parameters

Depth	5900'
Permeability	2.5 m.d.
Avg. Porosity	7.2%
Connate Water Sat.	30% Estimated
Avg. Effective Thickness	60'
Total Productive Area	Approx. 2700 Acres
Temperature	101° F

Fluid Parameters

	<u>Bubble Point</u>	<u>1000 Psia</u>
Formation Vol. Factor (Res.bbl./STB)	1.483	1.295
Viscosity	.38	.59
GOR (SCF/bbl.STO)	981	527
Sp. Gravity (°A.P.I.)	44°*	

\*Residual oil @ 60° F.

Exhibit No. 5  
Exxon Corporation  
Case No. 11665  
Hrg. Date: December 5, 1996



Acoustic-Gamma-Caliper Log

FILE NO.

COMPANY HUMBLE OIL & REFINING COMPANY

WELL A. J. ADKINS # 8

FIELD OIL CENTER BLINEBRY

COUNTY LEA STATE NEW MEXICO

LOCATION:

2310 FSL & 2260 FWL

Other Services

SEC 10 TWP 21-S RGE 36-E

Permanent Datum	G.L.	Elev.	3585	Elevations
Log Measured from	K.B.	11 Ft. Above Permanent Datum		KB 3596
Drilling Measured from	K.B.			DF 3595
				GL 3585

Date 7-11-64

Run No. ONE

Total Depth Driller 6050

Total Depth PGAC 6043

Bottom Logged Interval 6039

Casing Driller 1364

Casing PGAC 1363

Footage Logged 5939

Mud Type SALT GEL

Density 8.8 Visc. 38

Max. Temp. (°F) 121°

Rec. To Rec. Spacing 1'

Trans. To Rec. Spcg. 4'

Logging Instrument T3-178-AS91

Equip. No. ES-114

Recorded By CAREY

Witnessed By MR. COOK

REC'D BY PROD. GEOL.

JUL 16 1964

WELL FILE

CENTRAL FILE

BORE HOLE RECORD

Bit Size	From	To	Csg. Size	Csg. Wt.	From	To
1 1/2	SURF	1367	7 5/8		SURF	1364
6 3/4	1367	6050				

CASING RECORD

Humble A. J. Adkins #8  
 2310' FSL, 2260 FWL, Sec 10 TWP 21-S, RGE 36-E  
 Lea County, New Mexico  
 D&C 7-8/64  
 IPR: 90 BOPD, 0 BWPD, 115 MCFGD  
 through perforations 5881-57

Add pay 8/65: 5848-54'  
 FRW: F 84 BOPD, 7 BWPD

Add pay 4/66: 5805-40', frac new perforations only  
 FRW: F 188 BOPD, 20 BWPD, 60 MCFGD

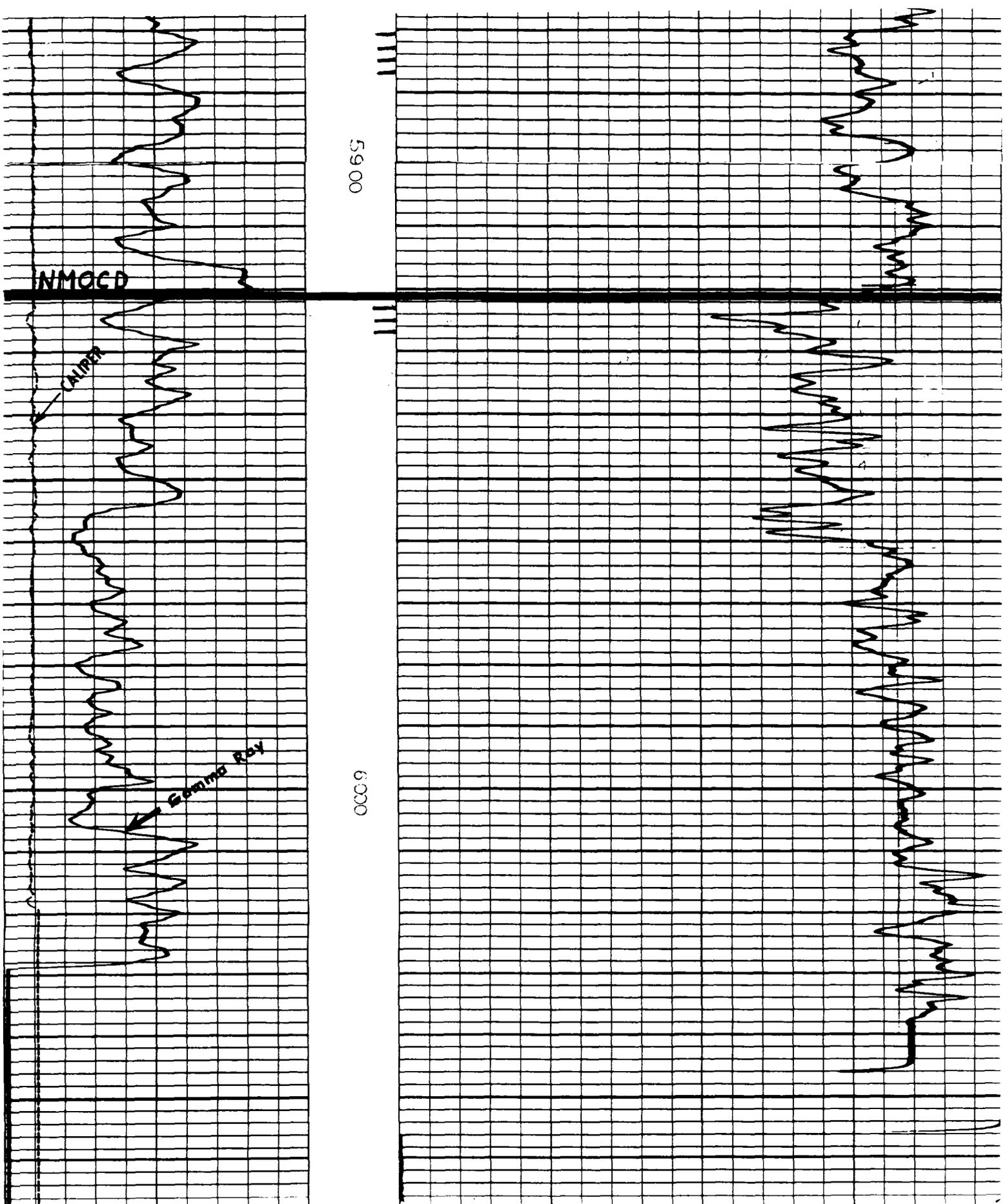
Re-frac 10/93: all perforations  
 FRW: P 30 BOPD, 1 BWPD, 190 MCFGD

Current production (9/96):  
 7 BOPD, 25 MCFGD, 0 BWPD  
 Cumulative production through 9/96:  
 359 MBO, 1109 MMCFG, 66 MBW

0089

00

Exhibit No. 6  
 Exxon Corporation  
 Case No. 11665  
 Hrg. Date: December 5, 1996



C API GAMMA RAY UNITS 100

100 GAMMA RAY 200

HOLE SIZE - INCHES  
7 8 9 10 11 12 13 14 15

CALIPER LOG

DEPTHS

100 — 85 70 55 40  
Dual Receiver Linear Time In Microseconds Per Foot

----- DUAL RECEIVER R<sub>1</sub>R<sub>2</sub> = 1'

----- SINGLE RECEIVER TR<sub>1</sub> = 4'

ACOUSTIC

COMPANY HUMBLE OIL & REFINING COMPANY

WELL A. J. ADKINS # 8

FIELD OIL CENTER BLINEBRY

DEPTH DRIR 6050  
DEPTH P G A C 6043  
BTM LOG INTERVAL 6039

*Bothwell*  
*are* *submitt*

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose:  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  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 any injection or disposal well showing location of wells and dates samples were taken.
- 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.

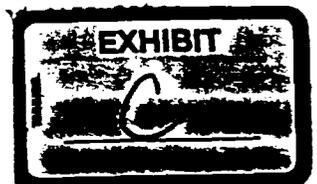
Name: Selena Nunez Title Sr. Office Assistant

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 need not be resubmitted.

DISTRIBUTION: Original and one copy to SA  
District Office

Exhibit No. 7  
Exxon Corporation  
Case No. 11665  
Hrg. Date: December 5, 1996



## 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 Blinbry 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 Blinbry Formation, a Permian carbonate encountered at a depth of approximately 5800 feet on the subject lease. The Blinbry 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.

0657007  
JAN 1937  
6%

0680358  
DEC 1937  
31

0680631  
MAY 1936  
29

0071616  
MAY 1936  
200

0657011  
JUN 1937  
13%

0657010  
AUG 1936  
19

0014569  
28

0014569  
28

0014569  
28

0037722  
11-22-38  
100% +  
23

127378 4834

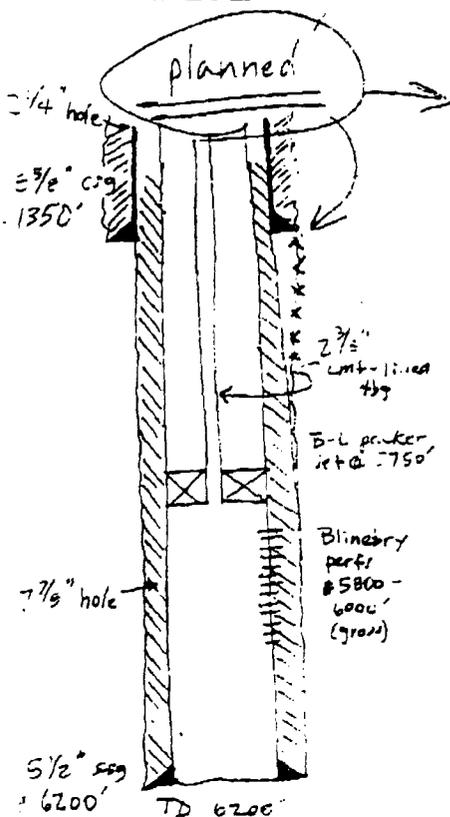
INJECTION WELL DATA SHEET

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



Tubular Data

Surface Casing

Size 8-5/8 " Cemented with \_\_\_\_\_ sx.

TDC surface feet determined by \_\_\_\_\_

Hole size 12-1/4

Intermediate Casing

Size \_\_\_\_\_ " Cemented with \_\_\_\_\_ sx.

TDC \_\_\_\_\_ feet determined by \_\_\_\_\_

Hole size \_\_\_\_\_

Long string

Size 5-1/2 " Cemented with \_\_\_\_\_ sx.

TDC 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)

3500  
2  
116 G.O.

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

(material)

Baker-Lockset packer at 5750' feet

(brand and model)

(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?  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 (BIBBY) INJECTORS  
LEA CO, NEW MEXICO

API #	OPERATOR	WELL NAME	ST	SEC #	FOOTAGE	DATE DRILLED	DEPTH	COMPLETION (PERFS)	CSG	DEPTH (FT)	CMT (SD)	
<b>T-2T-S, #38-E</b>												
30025-20007	Sun Oil	J A Akers #8	Oil	3	890' FSL, 2288' FEL	8/17/63	6300	00 01	5858-6092 5858-6184	8-5/8" 4-1/2"	1286 6300	500 850
30025-28069	Oryx Energy	J A Akers #10	Gas	3	880' FSL, 1850' FWL	11/1/78	6318	00 01	5874-6258 2883-3080	8-5/8" 5-1/2"	1304 6300	600 1450
30025-30088	Sun Exploration	J A Akers #18	Oil	3	928 FSL, 1880' FWL	2/3/88	7000	00	6590-6813	13-3/8" 8-5/8" 5-1/2"	1383 4800 7000	1425 1650 1270
30025-20166	Exxon Corp	John D Knox #9	Oil	10	330' FNL, 990' FEL	10/28/63	6220	00 01 02	5875-6883 5875-6089 6225-5308	7-5/8" 4-1/2"	1331 6200	450 500
30025-20282	Exxon Corp	Bibbry Oil Com No 1 #1	Oil	10	330' FNL, 2310' FWL	7/26/63	6180	00 01	5906-5818 5908-6110	7-5/8" 4-1/2"	1347 6180	450 600
30025-20306	Exxon Corp	John D Knox #11	TA	10	2310' FSL, 330' FEL	11/23/63	6225	00	5812-6945	7-5/8" 4-1/2"	1328 6225	575 500
30025-20331	Exxon Corp	John D Knox #10	Oil	10	1650' FNL, 1752' FEL	10/31/63	6230	00 01	5887-5948 5871-6080	7-5/8" 4-1/2"	1323 6230	700 500
30025-20700	Exxon Corp	A J Adkins #8	Oil	10	2310' FSL, 2280' FWL	8/13/64	6050	00 00	5881-5887 5848-5887 5805-5887	7-5/8" 4-1/2"	1364 6050	625 600
30025-20701	Exxon Corp	A J Adkins #9	Sl	10	1650' FNL, 990' FWL	10/28/64	5980	00	6832-6926	7-5/8" 4-1/2"	1363 5860	450 600
30025-20708	Exxon Corp	John D Knox #12	Gas	10	990' FSL, 1632' FEL	6/24/64	6020	00 01 02 03	5880-5896 5880-5944 2778-3306 5890-5886	7-5/8" 4-1/2"	1353 6020	450 525
30025-20581	Atlantic Richfield	Stana L #8	Oil	11	1650' FNL, 330' FWL	11/15/64	6200	00	5760-5884	8-5/8" 5-1/2"	1313 6188	680 473



## 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		Gypsum		Anhydrite		Celestite		Barite	
			CaCO3	CaCO3	CaSO4.2H2O	CaSO4	SrSO4	BaSO4				
16196	16197	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
0%	100%	7.84	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%	4.80	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	188	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

## **Adkins-Knox Waterflood Project**

### **New Mexico EOR Tax Incentive Application**

#### Geologic Summary

See Form C-108, Item VIII.

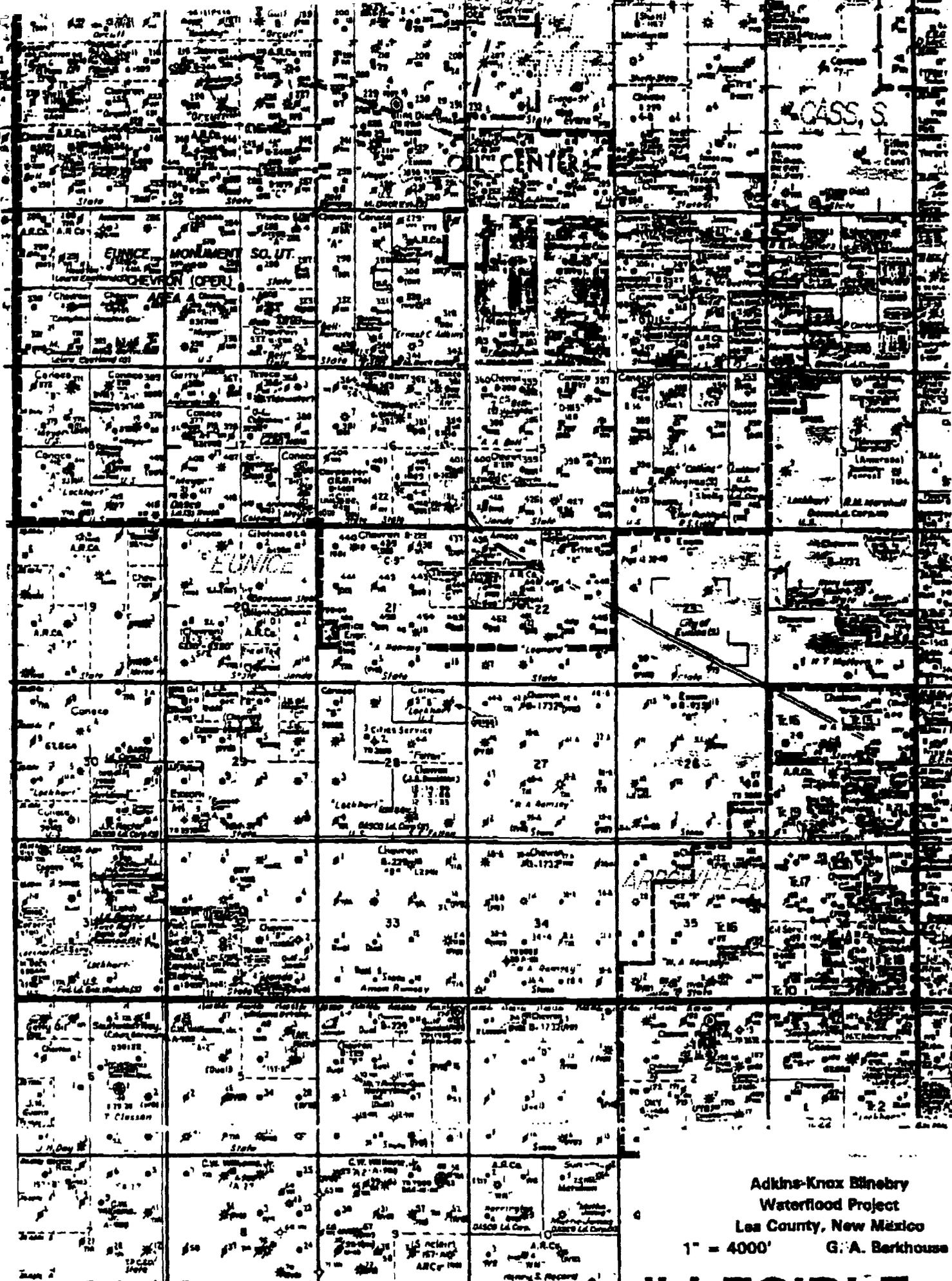
#### Project summary

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.



Adkins-Knox Binebry  
 Waterflood Project  
 Lea County, New Mexico  
 1" = 4000' G. A. Barkhouse

ILLEGIBIF 10

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 Q. Nunez  
Selena Q. Nunez  
Regulatory Compliance - Permits

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose:  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  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 any injection or disposal well showing location of wells and dates samples were taken.

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 of the earlier submittal.

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate 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 any 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  
J. D. KNOX #13**

**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 Blinbry 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 Blinbry Formation, a Permian carbonate encountered at a depth of approximately 5800 feet on the subject lease. The Blinbry 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.

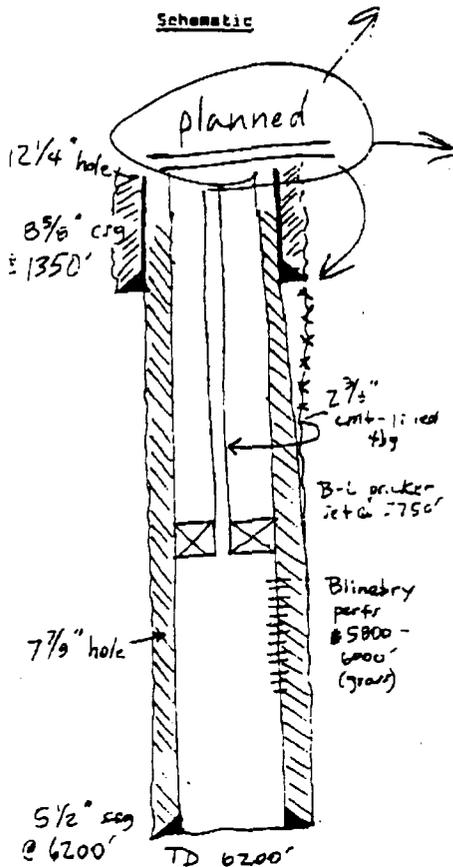
INJECTION WELL DATA SHEET

Exxon Company, U.S.A.

J. D. Knox

OPERATOR	LEASE			
13	2300' FSL 1600 FEL	Section 10	T-21-S	R-36-E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Schematic



Tubular 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)

11600 feet

Tubing size 2-3/8 lined with cement (material) set in a  
Baker-Lockset packer at 5750' feet  
 (brand and model)  
 (or describe any other casing-tubing seal).

Other Data

- Name of the injection formation Blinebry
- Name of Field or Pool (if applicable) Oil Center Blinebry
- Is this a new well drilled for injection?  Yes  No  
 If no, for what purpose was the well originally drilled? \_\_\_\_\_
- 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
- 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)	CSD	DEPTH (FT)	CMT (SQ)	
<b>T-21-3, P-30-8</b>												
30025-20007	Sun Oil	J A Adams #8	Oil	3	880' FSL, 2289' FEL	8/17/83	8300	00 01	5858-8092 5859-6184	8-5/8" 4-1/2"	1298 8300	500 850
30025-26088	Oryx Energy	J A Adams #10	Gas	3	880' FSL, 1650' FWL	11/1/78	6319	00 01	5874-8259 2883-3060	8-5/8" 5-1/2"	1304 8200	600 1450
30025-30098	Sun Exploration	J A Adams #16	Oil	3	828' FSL, 1860' FWL	2/3/88	7000	00	6580-8813	13-3/8" 8-5/8" 5-1/2"	1353 4900 7000	1425 1850 1270
30025-20186	Exxon Corp	John D Knox #9	Oil	10	330' FNL, 990' FEL	10/28/83	6220	00 01 02	5875-5883 5875-6058 5225-6308	7-5/8" 4-1/2"	1331 8200	450 500
30025-20282	Exxon Corp	Binsley Oil Com No 1 #1	Oil	10	330' FNL, 2310' FWL	7/28/83	6180	00 01	5906-5916 5906-6110	7-5/8" 4-1/2"	1347 6180	450 500
30025-20308	Exxon Corp	John D Knox #11	TA	10	2310' FSL, 330' FEL	11/23/83	8225	00	5812-5945	7-5/8" 4-1/2"	1328 8225	575 500
30025-20331	Exxon Corp	John D Knox #10	Oil	10	1650' FNL, 1752' FEL	10/31/83	8230	00 01	5887-5949 5871-6080	7-5/8" 4-1/2"	1323 8230	700 500
30025-20700	Exxon Corp	A J Adkins #8	Oil	10	2310' FSL, 2280' FWL	8/13/84	6050	00 00	5881-5887 5849-5887 5803-5887	7-5/8" 4-1/2"	1364 8080	825 500
30025-20701	Exxon Corp	A J Adkins #9	SI	10	1850' FNL, 990' FWL	10/28/84	5960	00	5832-5928	7-5/8" 4-1/2"	1353 5880	450 500
30025-20706	Exxon Corp	John D Knox #12	Gas	10	880' FSL, 1652' FEL	6/24/84	6020	00 01 02 03	5880-5896 5890-5944 2778-3308 5890-6898	7-5/8" 4-1/2"	1353 8020	450 525
30025-20891	Atlantic Richfield	State L #5	Oil	11	1850' FNL, 330' FWL	11/15/84	6200	00	5760-5864	8-5/8" 5-1/2"	1313 6189	660 473



## Water Analysis Report from Petrolite Corporation

Mixed at 100°F and 0 psi

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

Mix Waters		CO2 psi	Calcite CaCO3		Gypsum CaSO4.2H2O		Anhydrite CaSO4		Celestite SrSO4		Barite BaSO4	
			Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
16196	16197											
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	0.83	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	0.80	85	0.06	128	0.09	167	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	0.58	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	0.80	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.



J. D. Knox Well No. 13  
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

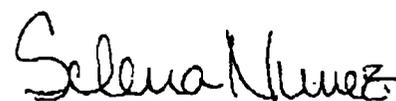
Devon Energy Corporation  
20 North Broadway  
Suite 1500  
Oklahoma City, OK 73102

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 Q. Nunez**  
**Regulatory Compliance - Permits**



Laboratory Services, Inc.

1331 Tasker Drive  
Hobbs, New Mexico 88240  
Telephone: (505) 397-3713

Water Analysis

COMPANY Exxon Company USA  
Sampled At Windmill Southwest Of A. J. Adkins  
SAMPLE Adjacent To Highway 8 On West Side.  
SAMPLED BY Jimmy McBee

DATE TAKEN \_\_\_\_\_  
REMARKS \_\_\_\_\_

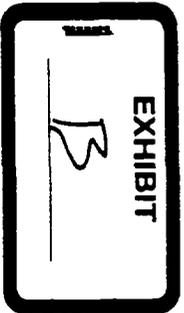
Barium as Ba	0	
Carbonate alkalinity PPM	12	
Bicarbonate alkalinity PPM	292	
pH at Lab	6.48	
Specific Gravity @ 60°F	Not enough sample to run gravity	
Magnesium as Mg	267	
Total Hardness as CaCO3	460	
Chlorides as Cl	304	
Sulfate as SO4	145	
Iron as Fe	0	
Potassium	0.19	
Hydrogen Sulfide	0	
Resistivity Ohms	1.61	22.5 C
Total Dissolved Solids	800	
Calcium as Ca	193	
Nitrate	0	

Results reported as Parts per Million unless stated

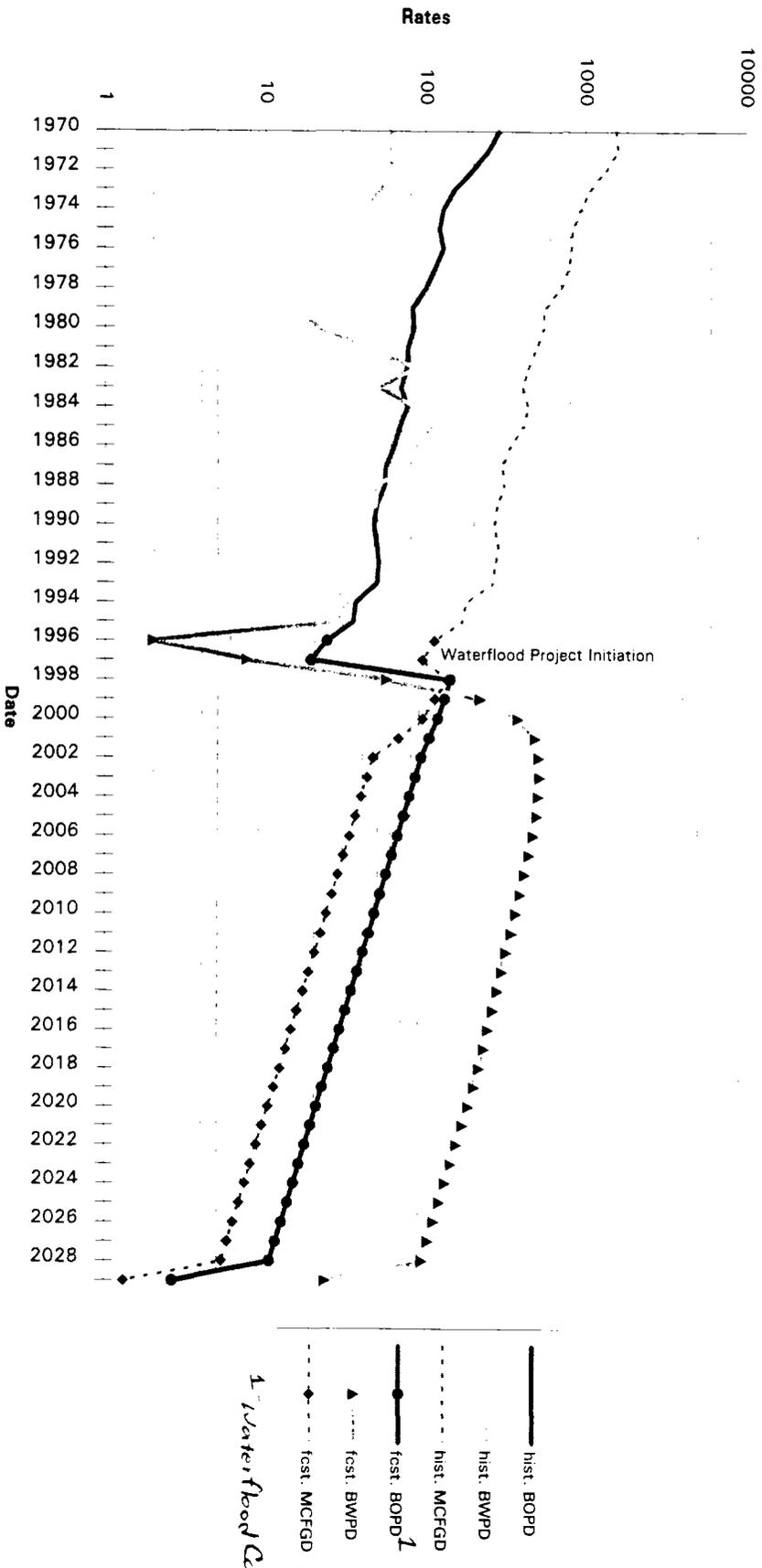
Langelier Saturation Index -0.72

Analysis by: Rolland Perry  
Date: 11/16/96

Exhibit No. 8  
Exxon Corporation  
Case No. 11665  
Hrg. Date: December 5, 1996



Adkins-Knox Flood: Historical and Forecast Production



District I  
PO Box 1980, Hobbs, NM 88241-1980

District II  
PO Drawer DD, Artesia, NM 88211-0719

District III  
1000 Rio Brasos 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  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1	API Number	2	Pool Code	3	Pool Name
4	Property Code	5	Property Name	6	Well Number 11
7	OGRID No.	8	Operator Name Exxon Company, U.S.A.	9	Elevation 3589

<sup>10</sup>Surface Location

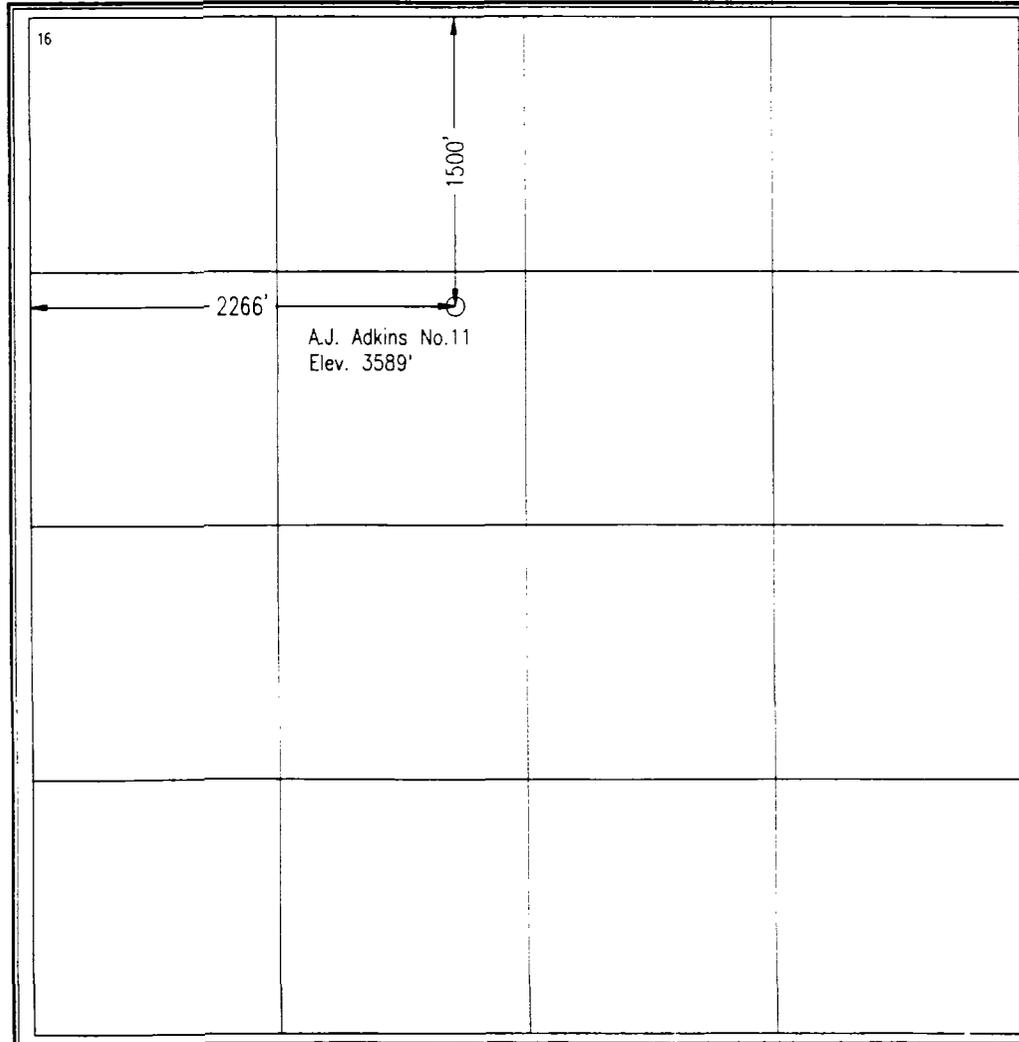
UL or lot no. F	Section 10	Township 21 S	Range 36 E	Lot Idn	Feet from the 1500	North/South line North	Feet from the 2266	East/West line West	County Lea
--------------------	---------------	------------------	---------------	---------	-----------------------	---------------------------	-----------------------	------------------------	---------------

<sup>11</sup>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
---------------	---------	----------	-------	---------	---------------	------------------	---------------	----------------	--------

<sup>12</sup> Dedicated Acres 40	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
-------------------------------------	-------------------------------	----------------------------------	-------------------------

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNIT. ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

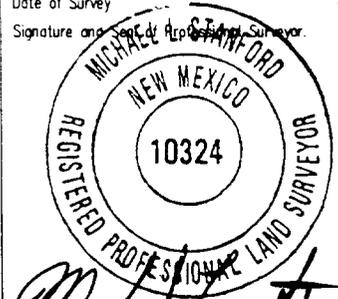


<sup>17</sup> OPERATOR CERTIFICATION  
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Exhibit No. 10  
Exxon Corporation  
Case No. 11665  
Hrg. Date: December 5, 1996

<sup>18</sup> 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 12, 1996

Date of Survey  
Signature and Seal of Approving Surveyor



*Michael L. Stanford*  
Certificate Number 10324

BEFORE THE NEW MEXICO OIL CONSERVATION DIVISION

APPLICATION OF EXXON CORPORATION FOR APPROVAL OF A WATERFLOOD PROJECT AND TO QUALIFY SAID PROJECT FOR THE RECOVERED OIL TAX RATE, LEA COUNTY, NEW MEXICO.

Case No. 11665

AFFIDAVIT REGARDING NOTICE

STATE OF NEW MEXICO )  
COUNTY OF SANTA FE ) ss.

William T. Duncan, Jr., being duly sworn upon his oath, deposes and states:

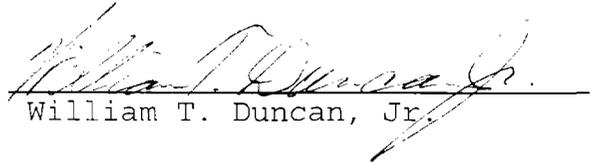
1. I am over the age of 18, and have personal knowledge of the matters stated herein.

2. I am an employee of Applicant.

3. Applicant has conducted a good faith, diligent effort to find the names and correct addresses of the interest owners entitled to receive notice of the Application filed herein.

4. Notice of the Application was provided to said interest owners at their correct addresses by mailing each of them, by certified mail, a copy of the Application. Copies of the notice letters and certified return receipts are attached hereto as Exhibit A.

5. Applicant has complied with the notice provisions of Division Rule 1207 and Form C-108.

  
William T. Duncan, Jr.

SUBSCRIBED AND SWORN TO before me this 4th day of December, 1996, by William T. Duncan, Jr.



My Commission Expires:

10-29-99

NEW MEXICO  
OIL CONSERVATION DIVISION  
Exxon EXHIBIT 11  
CASE NO. 11665

**EXXON** COMPANY, U.S.A.

POST OFFICE BOX 1800 • MIDLAND, TEXAS 79702-1600

November 12, 1996

MIDLAND PRODUCTION ORGANIZATION  
OPERATIONS INTEGRITY

Application for Fluid Injection  
J. D. Knox Well No. 13  
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 J. D. Knox #13. 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 Conservation 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,

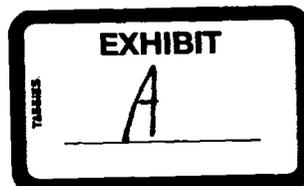


Selena Nunez

/sqn  
Enclosures

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

Offset Operators  
Surface Owners



**EXXON** COMPANY, U.S.A.  
POST OFFICE BOX 1800 • MIDLAND, TEXAS 79702-1800

MIDLAND PRODUCTION ORGANIZATION  
OPERATIONS INTEGRITY

November 12, 1996

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

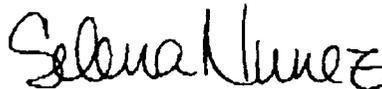
State of New Mexico  
Energy and Minerals Department  
Oil and Conservation Division  
P. O. Box 2088  
Santa Fe, New Mexico 87504

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

**SENDER:**  
 Complete items 1 and/or 2 for additional services.  
 Complete items 3, 4a, and 4b.  
 Print your name and address on the reverse of this form so that we can return this card to you.  
 Attach this form to the front of the mailpiece, or on the back if space does not permit.  
 Write "Return Receipt Requested" on the mailpiece below the article number.  
 The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):  
 1.  Addressee's Address  
 2.  Restricted Delivery  
 Consult postmaster for fee.

3. Article Addressed to:  
 Milard Deck  
 c/o Nations Bank Texas  
 1777 NE Loop 410, Suite 1250  
 San Antonio, TX 78217

4a. Article Number  
 2 740 404 502

4b. Service Type  
 Registered  Certified  
 Express Mail  Insured  
 Return Receipt for Merchandise  COD

7. Date of Delivery  
 11-15-96

5. Received By: (Print Name)

6. Signature: (Addressee or Agent)  
 X *M. Milard*

PS Form 3811, December 1994 Domestic Return Receipt

**SENDER:**  
 Complete items 1 and/or 2 for additional services.  
 Complete items 3, 4a, and 4b.  
 Print your name and address on the reverse of this form so that we can return this card to you.  
 Attach this form to the front of the mailpiece, or on the back if space does not permit.  
 Write "Return Receipt Requested" on the mailpiece below the article number.  
 The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):  
 1.  Addressee's Address  
 2.  Restricted Delivery  
 Consult postmaster for fee.

3. Article Addressed to:  
 NEW MEXICO OCD  
 DISTRICT 1 OFFICE  
 ATTN: JERRY SEXTON  
 P.O. BOX 1980  
 HOBBS, NM 88240

4a. Article Number

4b. Service Type  
 Registered  Certified  
 Express Mail  Insured  
 Return Receipt for Merchandise  COD

7. Date of Delivery  
 11-14-96

5. Received By: (Print Name)

6. Signature: (Addressee or Agent)  
 X *Kay W. Wink*

PS Form 3811, December 1994 Domestic Return Receipt

**SENDER:**  
 Complete items 1 and/or 2 for additional services.  
 Complete items 3, 4a, and 4b.  
 Print your name and address on the reverse of this form so that we can return this card to you.  
 Attach this form to the front of the mailpiece, or on the back if space does not permit.  
 Write "Return Receipt Requested" on the mailpiece below the article number.  
 The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):  
 1.  Addressee's Address  
 2.  Restricted Delivery  
 Consult postmaster for fee.

3. Article Addressed to:  
 David H. Arrington Oil & Gas, Inc.  
 214 West Texas, Suite 400  
 Midland, TX 79701

4a. Article Number  
 2 740 404 408

4b. Service Type  
 Registered  Certified  
 Express Mail  Insured  
 Return Receipt for Merchandise  COD

7. Date of Delivery  
 11-14-96

5. Received By: (Print Name)

6. Signature: (Addressee or Agent)  
 X *Shane Courtney*

PS Form 3811, December 1994 Domestic Return Receipt

**SENDER:**  
 Complete items 1 and/or 2 for additional services.  
 Complete items 3, 4a, and 4b.  
 Print your name and address on the reverse of this form so that we can return this card to you.  
 Attach this form to the front of the mailpiece, or on the back if space does not permit.  
 Write "Return Receipt Requested" on the mailpiece below the article number.  
 The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):  
 1.  Addressee's Address  
 2.  Restricted Delivery  
 Consult postmaster for fee.

3. Article Addressed to:  
 Arco Permian  
 P. O. Box 1610  
 Midland, TX 79702

4a. Article Number  
 2 740 404 501

4b. Service Type  
 Registered  Certified  
 Express Mail  Insured  
 Return Receipt for Merchandise  COD

7. Date of Delivery  
 NOV 14 1996

5. Received By: (Print Name)  
 X *[Signature]*

6. Signature: (Addressee or Agent)  
 X *[Signature]*

PS Form 3811, December 1994 Domestic Return Receipt

**SENDER:**  
 Complete items 1 and/or 2 for additional services.  
 Complete items 3, 4a, and 4b.  
 Print your name and address on the reverse of this form so that we can return this card to you.  
 Attach this form to the front of the mailpiece, or on the back if space does not permit.  
 Write "Return Receipt Requested" on the mailpiece below the article number.  
 The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):  
 1.  Addressee's Address  
 2.  Restricted Delivery  
 Consult postmaster for fee.

3. Article Addressed to:  
 Conoco Inc.  
 10 Desta Drive West  
 Midland, TX 79705

4a. Article Number  
 2 740 404 500

4b. Service Type  
 Registered  Certified  
 Express Mail  Insured  
 Return Receipt for Merchandise  COD

7. Date of Delivery  
 NOV 14 1996

5. Received By: (Print Name)

6. Signature: (Addressee or Agent)  
 X *[Signature]*

PS Form 3811, December 1994 Domestic Return Receipt

**SENDER:**  
 Complete items 1 and/or 2 for additional services.  
 Complete items 3, 4a, and 4b.  
 Print your name and address on the reverse of this form so that we can return this card to you.  
 Attach this form to the front of the mailpiece, or on the back if space does not permit.  
 Write "Return Receipt Requested" on the mailpiece below the article number.  
 The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):  
 1.  Addressee's Address  
 2.  Restricted Delivery  
 Consult postmaster for fee.

3. Article Addressed to:  
 Chevron, U.S.A. Incorporated  
 P. O. Box 1150  
 Midland, TX 79702

4a. Article Number  
 2 740 404 499

4b. Service Type  
 Registered  Certified  
 Express Mail  Insured  
 Return Receipt for Merchandise  COD

7. Date of Delivery  
 NOV 14 1996

5. Received By: (Print Name)

6. Signature: (Addressee or Agent)  
 X *[Signature]*

PS Form 3811, December 1994 Domestic Return Receipt

**SENDER:**  
 Complete items 1 and/or 2 for additional services.  
 Complete items 3, 4a, and 4b.  
 Print your name and address on the reverse of this form so that we can return this card to you.  
 Attach this form to the front of the mailpiece, or on the back if space does not permit.  
 Write "Return Receipt Requested" on the mailpiece below the article number.  
 The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):  
 1.  Addressee's Address  
 2.  Restricted Delivery  
 Consult postmaster for fee.

3. Article Addressed to:  
 Oryx Energy  
 P O Box 2880  
 Dallas, TX 75221

4a. Article Number  
 2 740 407 544

4b. Service Type  
 Registered  Certified  
 Express Mail  Insured  
 Return Receipt for Merchandise  COD

7. Date of Delivery  
 NOV 8 1996

5. Received By: (Print Name)

6. Signature: (Addressee or Agent)  
 X *[Signature]*

PS Form 3811, December 1994 Domestic Return Receipt

**SENDER:**  
 Complete items 1 and/or 2 for additional services.  
 Complete items 3, 4a, and 4b.  
 Print your name and address on the reverse of this form so that we can return this card to you.  
 Attach this form to the front of the mailpiece, or on the back if space does not permit.  
 Write "Return Receipt Requested" on the mailpiece below the article number.  
 The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):  
 1.  Addressee's Address  
 2.  Restricted Delivery  
 Consult postmaster for fee.

3. Article Addressed to:  
 Devon Energy Corporation  
 20 North Broadway  
 Suite 1500  
 Oklahoma City, OK 73102

4a. Article Number  
 2 740 404 497

4b. Service Type  
 Registered  Certified  
 Express Mail  Insured  
 Return Receipt for Merchandise  COD

7. Date of Delivery  
 11-15-96

5. Received By: (Print Name)  
 Lucy Bank

6. Signature: (Addressee or Agent)  
 X *[Signature]*

PS Form 3811, December 1994 Domestic Return Receipt

Exhibit No. \_\_\_\_\_  
 Exxon Corporation  
 Case No. 11665  
 Hrg. Date: December 5, 1996

Is your RETURN ADDRESS completed on the reverse side?

**SENDER:**

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- 1.  Addressee's Address
- 2.  Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

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

4a. Article Number

Z 740 407 542

4b. Service Type

- Registered  Certified
- Express Mail  Insured
- Return Receipt for Merchandise  COD

7. Date of Delivery

NOV 18 1994

5. Received By: (Print Name)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature: (Addressee or Agent)

X *[Signature]*

PS Form 3811, December 1994

Domestic Return Receipt

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

**SENDER:**

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- 1.  Addressee's Address
- 2.  Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

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

4a. Article Number

Z 740 407 543

4b. Service Type

- Registered  Certified
- Express Mail  Insured
- Return Receipt for Merchandise  COD

7. Date of Delivery

NOV 14 1994

5. Received By: (Print Name)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature: (Addressee or Agent)

X *[Signature]*

PS Form 3811, December 1994

Domestic Return Receipt

Thank you for using Return Receipt Service.