

11,271/11,278

ExxonMobil Production Company
U.S. West
P.O. Box 4697
Houston, Texas 77210-4697



February 28, 2002

Bureau of Land Management
Roswell District Office
Attention: Mr. Les Babyak
2509 N. 2nd
Roswell, NM 88201

Avalon (Delaware) Unit
Eddy County, New Mexico
Review of 2001 Operations and
Plan of Development for 2002

Gentlemen:

Exxon Mobil Corporation, Unit Operator of the Avalon (Delaware) Enhanced Recovery Unit, submits for your approval the attached Review of 1999-2001 Operations and Plan of Development for 2002.

We respectfully request your approval for the proposed Plan of Development for 2002. Should you have any questions or require additional information, please do not hesitate to contact the undersigned at (713) 431-1470.

Very truly yours,


L. W. Coppedge
Land Representative

/vmk
Enclosures (Originals + 3 copies)

February 28, 2002

Avalon (Delaware) Enhanced Recovery Unit
Eddy County, New Mexico

CC: New Mexico Oil Conservation Division
Roy Johnson
1220 South St. Francis Drive
Santa Fe, NM 87505

State of New Mexico
Commissioner of of Public Lands
310 Old Santa Fe Trail
Santa Fe, NM 87501

ExxonMobil Production Company:
Ricky Pena, Reservoir Engineer – 618 West Greens Rd., Houston, TX
Randy Hanselka, Operations Supt. – 1240 West Greens Rd., Houston, TX
Land File

Avalon Delaware Unit

Review of Operations 1999-2001

1999:

- Converted additional unit wells ADU 401, 433, 816, and 916 to source water make-up wells
- Converted a pre-producer (ADU#523) to injection

2000:

- Installed Double Eagle freshwater line and secured freshwater for injection.
- Conducted step-rate tests to optimize injection pressures.
- Completed preliminary Geologic and Reservoir Modeling.
- Submitted Application to certify the ADU Waterflood Project for a positive production response pursuant to the New Mexico Enhanced Oil Recovery Act. Application was approved on October 30, 2001.

2001:

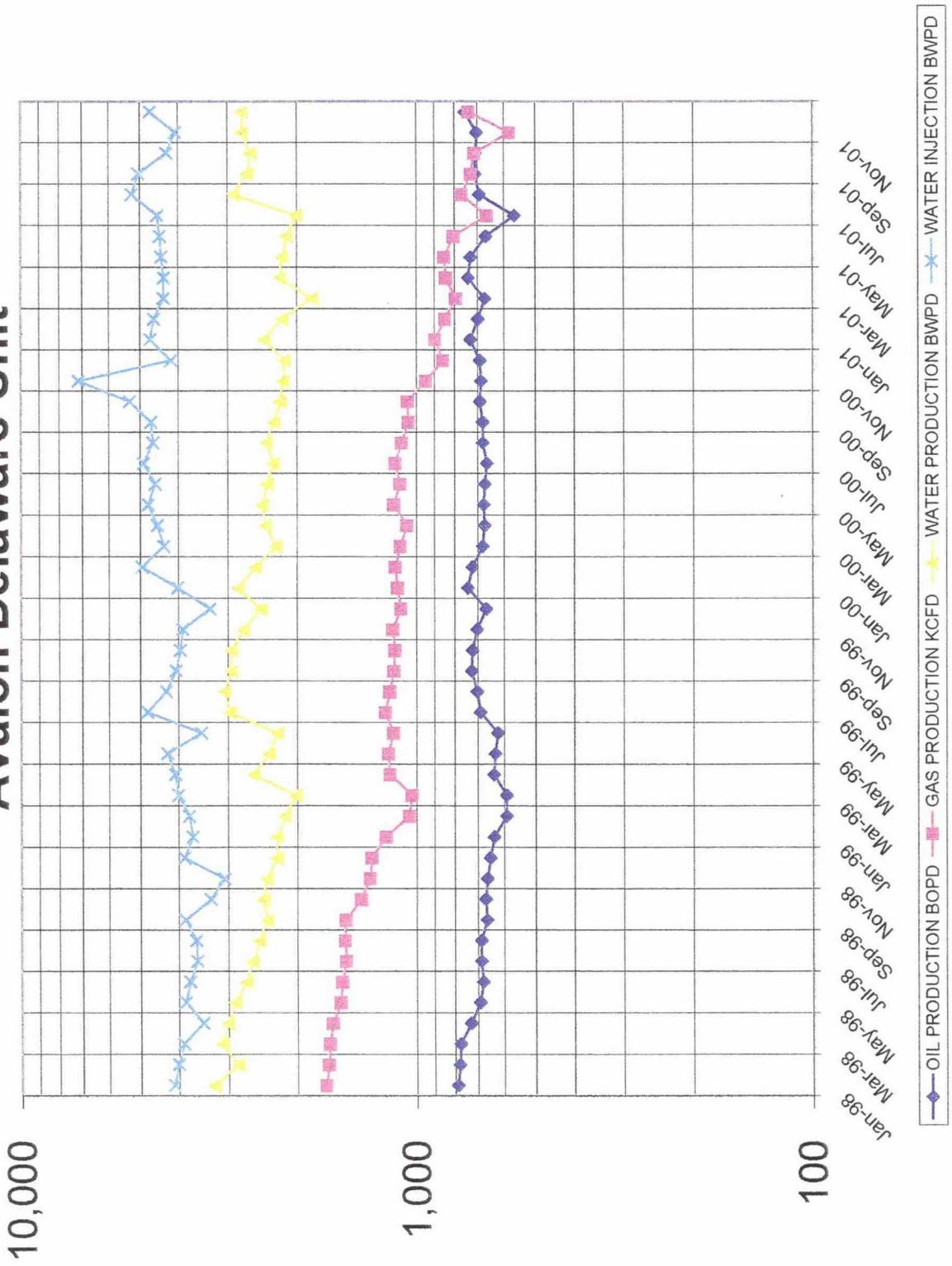
- Converted ADU 364 to source water well
- Converted a pre-producer, ADU 516, to water injection well
- Added perforations in ADU 514 to improve conformance

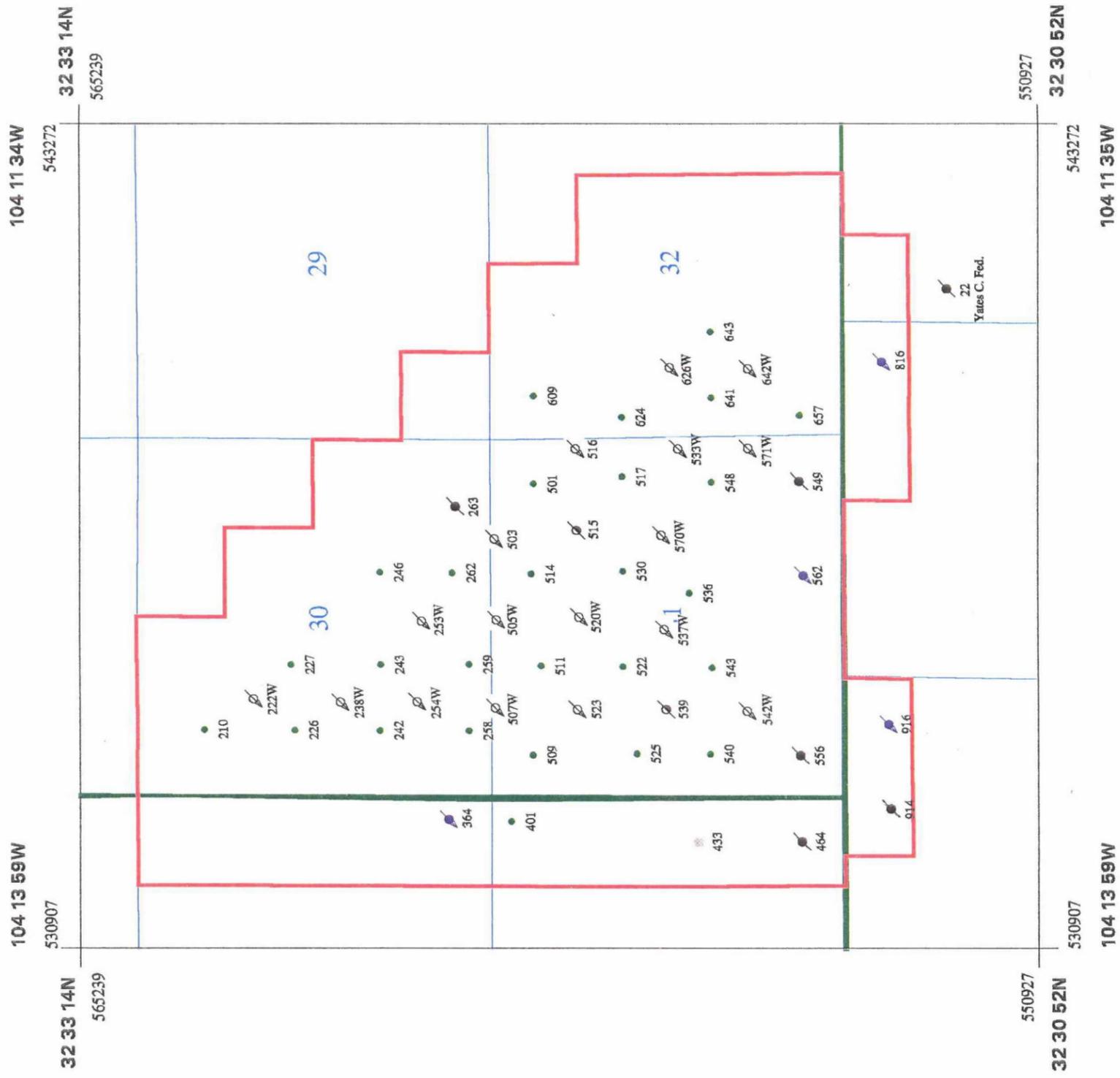
Plan of Development

2002:

- Convert pre-producer ADU 539
- Identify additional wells for conversion to Make-Up Source Water
- Conduct an Infill Drilling Potential Evaluation

Avalon Delaware Unit





Legend

Well Status Symbols

- Oil Producer
- ⊕ Water Injector
- ⊖ Pre-Producing Injector
- ⊗ Make-Up Source Water
- ⊘ TA'd Producer
- ⊙ Disposal
- ⊚ Shut-In Oil Producer

Grid North

Scale: 1" = 2000'

Scale Ratio - 1:24000

0 1000 2000 Feet

Avalon Delaware Unit

Eddy County, NM

Well Status

By: R Pena / J C Young

Date: 01/28/02

COMMISSIONER'S OFFICE

Phone (505) 827-5760

Fax (505) 827-5766

ADMINISTRATION

Phone (505) 827-5700

Fax (505) 827-5853

GENERAL COUNSEL

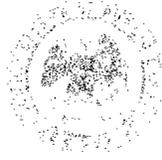
Phone (505) 827-5713

Fax (505) 827-4262

PUBLIC AFFAIRS

Phone (505) 827-1245

Fax (505) 827-5766



COMMERCIAL RESOURCES

Phone (505) 827-5724

Fax (505) 827-6157

MINERAL RESOURCES

Phone (505) 827-5744

Fax (505) 827-4739

ROYALTY MANAGEMENT

Phone (505) 827-5772

Fax (505) 827-4739

SURFACE RESOURCES

Phone (505) 827-5793

Fax (505) 827-5711

**New Mexico State Land Office
Commissioner of Public Lands
Ray Powell, M.S., D.V.M.**

March 11, 2002

ExxonMobil Production Company
U.S. West
P.O. Box 4697
Houston, Texas 77210-4697

Attn: Mr. L. W. Coppedge

Re: 2002 Plan of Development
Avalon (Delaware) Unit
Eddy County, New Mexico

Dear Mr. Coppedge:

The Commissioner of Public Lands has, of this date, approved the above-captioned Plan of Development. Our approval is subject to like approval by all other appropriate agencies.

The possibility of drainage by wells outside of the unit area and the need for further development of the unit may exist. You may be contacted at a later date regarding these possibilities.

If you have any questions or if we may be of further help, please contact Pete Martinez at (505) 827-5791.

Very truly yours,

RAY POWELL, M.S., D.V.M.
COMMISSIONER OF PUBLIC LANDS

BY:


JAMI BAILEY, Director
Oil, Gas and Minerals Division
(505) 827-5744

RP/JB/cpm

xc: Reader File

OCD

BLM



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
BETTY RIVERA
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

ADMINISTRATIVE ORDER NO. WFX-783

***APPLICATION OF EXXON MOBIL CORPORATION TO EXPAND ITS AVALON
DELAWARE UNIT WATERFLOOD PROJECT IN THE AVALON-DELAWARE POOL IN
EDDY COUNTY, NEW MEXICO***

**ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION**

Under the provisions of Division Order No. R-10460-B as amended, Exxon Mobil Corporation has made application to the Division on May 3, 2002 for permission to expand its Avalon Delaware Unit Waterflood Project in the Avalon-Delaware Pool in Eddy County, New Mexico.

THE DIVISION DIRECTOR FINDS THAT:

- (1) The application has been filed in due form.
- (2) Satisfactory information has been provided that all offset operators have been duly notified of the application.
- (3) No objection has been received within the waiting period as prescribed by Rule 701(B).
- (4) The proposed injection well is eligible for conversion to injection under the terms of Rule 701.
- (5) The proposed expansion of the above referenced waterflood project will not cause waste nor impair correlative rights.

IT IS THEREFORE ORDERED THAT:

The applicant, Exxon Mobil Corporation, is hereby authorized to inject water into the Delaware formation at 2516 feet to 3626 feet through 2 3/8-inch plastic lined tubing set in a packer located within 100 feet of the uppermost injection perforations in the following described well for purposes of secondary recovery:

Avalon Delaware Unit Well No. 539 (API No. 30-015-28682)
2600' FSL & 1322' FWL Unit L, Section 31, Township 20 South, Range 28 East, NMPM
Maximum Surface Injection Pressure: 504 PSI

IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

Prior to commencing injection operations into the well, the casing shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing or packer.

The injection well or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection wells to 0.2 psi per foot of depth to the uppermost injection perforations.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the Delaware formation. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Artesia district office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity tests so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Artesia District office of the Division of the failure of the tubing, casing or packer in this well and shall take such steps as may be timely and necessary to correct such failure or leakage.

The subject well shall be governed by all provisions of Division Order No. R-10460-B and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

PROVIDED FURTHER THAT, jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh water or (2) consistent with the requirements in this order, whereupon the Division may, after notice and

Administrative Order WFX-783
Exxon Mobil Corporation
May 21, 2002
Page 3

hearing, terminate the injection authority granted herein.

The injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject well, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

DONE at Santa Fe, New Mexico, on this 21st day of May 2002.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


LORI WROTENBERY
Director

SEAL

LW/WVJ

cc: Oil Conservation Division - Artesia
Case File No. 11298
File-WFX-783

11297

EXXON COMPANY, U.S.A.
POST OFFICE BOX 4697 • HOUSTON, TEXAS 77210-4697

PRODUCTION DEPARTMENT
HOUSTON PRODUCTION ORGANIZATION

February 25, 1999

Avalon (Delaware) Unit
Eddy County, New Mexico
Review of Operations 1996-1998
Plan of Development for 1999

Bureau of Land Management
Roswell District Office
2509 North 2nd
Roswell, New Mexico

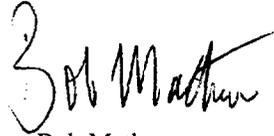
Attention: Tony Ferguson
Assistant District Manager of Minerals

Gentlemen:

Exxon Corporation, Unit Operator of the Avalon (Delaware) Enhanced Recovery Unit, submits for your approval the attached Review of Operations, 1996-1998, and Plan of Development for 1999.

We respectfully request your approval of the proposed Plan of Development for 1999.

Very truly yours,



Bob Mathew
(713) 431-1029

Enclosures
MPM:jbe
ADUpod.doc

c: New Mexico Oil Conservation Division
Attention: Roy Johnson
P. O. Box 2088
Santa Fe, NM 87501

State of New Mexico
Commissioner of Public Lands
~~P. O. Box 1148~~
Santa Fe, NM 87504-1148



Avalon Delaware Unit

Review of Operations 1996-1998

1996:

- Initiated injection on 2 of the first 4 drill wells
- Drilled 14 more injection wells
- Performed workovers on existing 18 unit wells:
 - ADU 501, 549 - Returned wells to pump ("RWTP")
 - ADU 515 - Removed BP's, RWTP
 - ADU 914 - TA
 - ADU 916 - TA
 - ADU 522, 514, 262, 263, 242, 243, 226, 227, 536, 548
 - 643, 657, & 641 - added pays
- Completed installation of water injection facilities and began fieldwide water injection

1997:

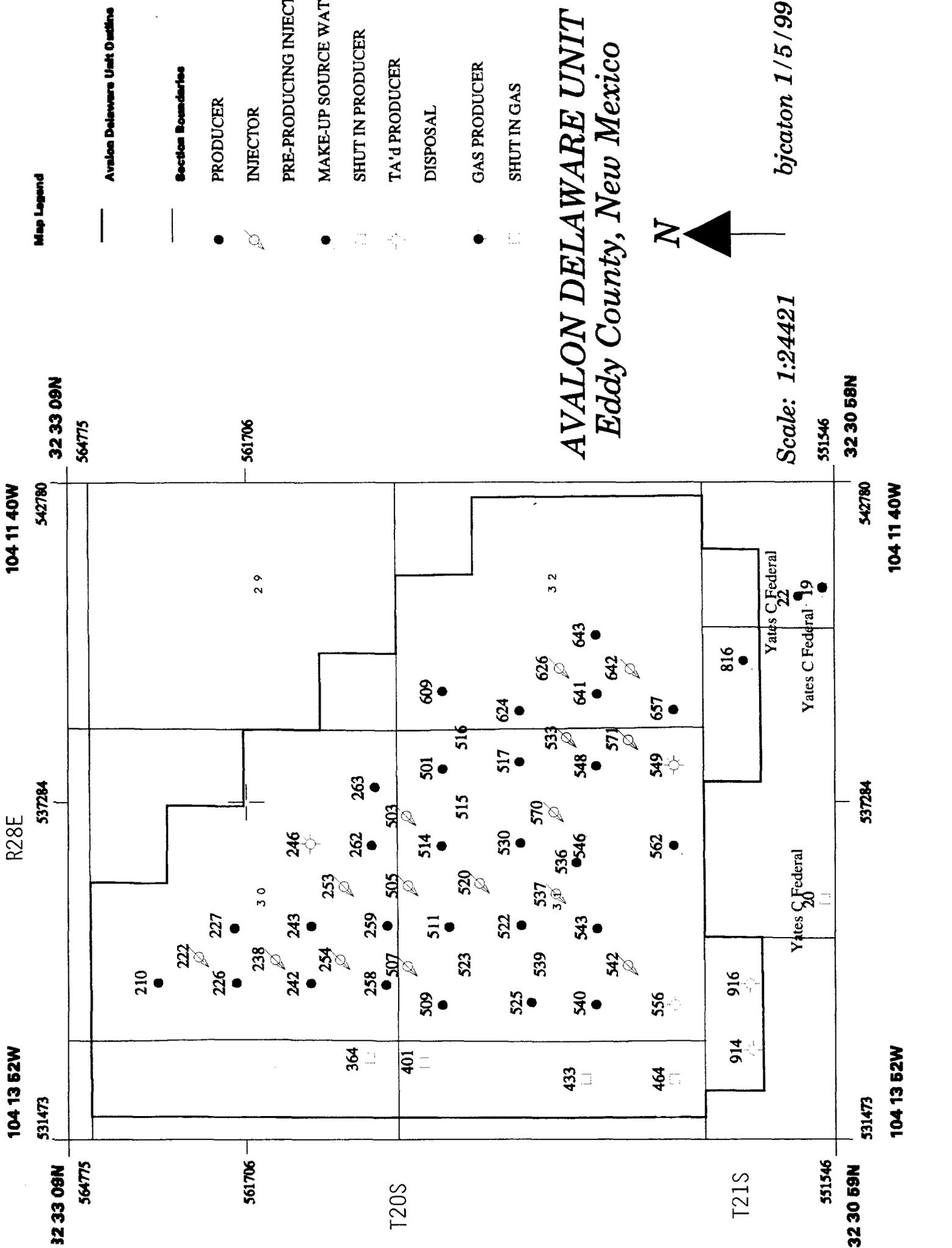
- Installed additional facilities for injection water quality improvements
- Converted ADU 562 and Yates "C" Federal #22 to source water make-up wells

1998:

- Performed field injectivity test to determine the percentage of fresh water which can be diluted with produced water

Plan of Development for 1999:

- Continue unit operations
- Convert additional unit wells ADU 916, 433, and 401 to source water make-up wells and pursue other potential sources of make-up water
- Upon obtaining additional make-up water, convert 4 remaining pre-producers to injection



Map Legend

Avalon Delaware Unit Outline

Section Boundaries

● PRODUCER

○ INJECTOR

○ PRE-PRODUCING INJECTOR

● MAKE-UP SOURCE WATER

□ SHUT IN PRODUCER

⊕ TA'D PRODUCER

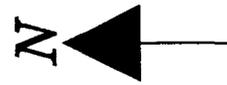
□ DISPOSAL

● GAS PRODUCER

□ SHUT IN GAS

AVALON DELAWARE UNIT

Eddy County, New Mexico



bjcaton 1/5/99

Scale: 1:24421

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32 30 59N

104 11 40W

542780

32 33 09N

564775

R28E

537284

104 13 52W

531473

32 33 09N

564775

29

561706

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561706

T20S

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Yates C Federal 22

Yates C Federal 19

Yates C Federal 20

Yates C Federal 19

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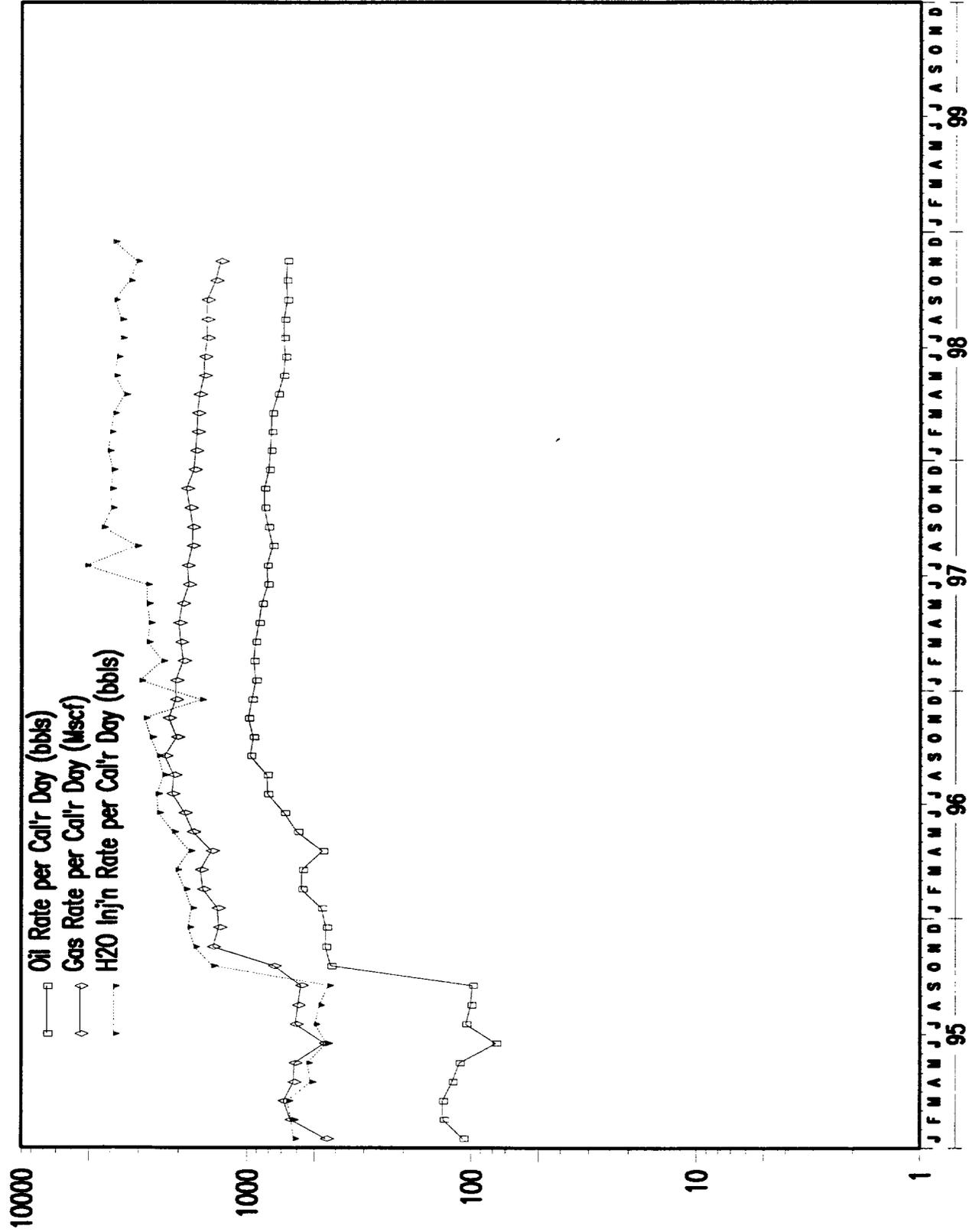
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Avalon (Delaware) Unit

Production



KELLAHIN AND KELLAHIN

ATTORNEYS AT LAW

EL PATIO BUILDING

117 NORTH GUADALUPE

POST OFFICE BOX 2265

SANTA FE, NEW MEXICO 87504-2265

W. THOMAS KELLAHIN*

*NEW MEXICO BOARD OF LEGAL SPECIALIZATION
RECOGNIZED SPECIALIST IN THE AREA OF
NATURAL RESOURCES-OIL AND GAS LAW

JASON KELLAHIN (RETIRED 1991)

TELEPHONE (505) 982-4285

TELEFAX (505) 982-2047

July 28, 1995

HAND DELIVERED

Mr. Michael E. Stogner
Hearing Examiner
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

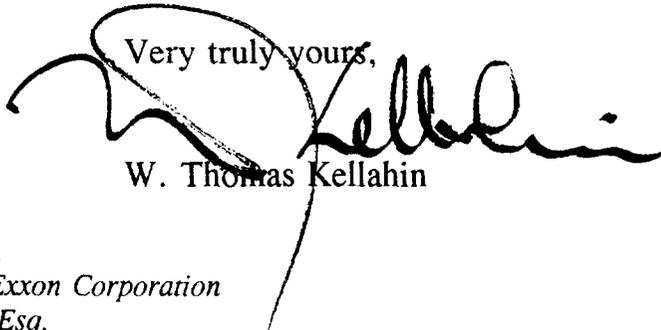
Re: PROPOSED AVALON UNIT STATUTORY UNITIZATION
NMOCD Case 11297
Application of Exxon Corporation for
a Waterflood Project and EOR Qualification
Eddy County, New Mexico

NMOCD Case 11298
Application of Exxon Corporation for
Statutory Unitization
Eddy County, New Mexico

Dear Mr. Stogner:

On behalf of Premier Oil & Gas, Inc., please find enclosed our proposed order for your consideration in this matter which was presented to you at the hearing held on June 29, 1995.

Very truly yours,


W. Thomas Kellahin

cc: James Bruce, Esq.
Attorney for Exxon Corporation
cc: William F. Carr, Esq.
Attorney for Yates Petroleum Corporation
cc: Premier Oil & Gas, Inc.
Attn: Kenneth Jones

**STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:**

**APPLICATION OF EXXON CORPORATION CASE NO. 11297
FOR A WATERFLOOD PROJECT AND EOR
QUALIFICATION, EDDY COUNTY, NEW MEXICO**

**APPLICATION OF EXXON CORPORATION CASE NO. 11298
FOR STATUTORY UNITIZATION,
EDDY COUNTY, NEW MEXICO**

**PREMIER OIL & GAS, INC.'S PROPOSED
ORDER OF THE DIVISION**

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on June 29, 1995, at Hobbs, New Mexico, before Examiner Michael E. Stogner.

NOW, on this ____ day of July, 1995, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

- (1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.
- (2) Division Case Nos. 11297 and 11298 were consolidated at the time of the hearing for the purpose of testimony.

(3) The applicant, Exxon Corporation ("Exxon"), seeks the statutory unitization, pursuant to the "Statutory Unitization Act", Sections 70-7-1 through 70-7-21, N.M.S.A. (1978), of 2,140.14 acres, more or less, being a portion of the Delaware Mountain Group of the Avalon-Delaware Pool, Eddy County, New Mexico, said portion to be known as the Avalon Delaware Unit; the applicant further seeks approval of the Unit Agreement and the Unit Operating Agreement which were submitted in evidence as applicant's Exhibit Nos. 2 and 3 in this case.

(4) Exxon proposes that the horizontal limits of said unit area would be comprised of the following described Federal, State and Fee lands in Eddy County, New Mexico:

Tract 1: SW/4 Sec 29, T20S, R28E
Tract 2: Sec 31, T20S, R28E
Lot 4(NW/4NW/4) Sec 4 T21S, R27E
Lots 1&2 (N/2NE/4) Sec 5 T21S, R27E
Tract 3-A: Lot 1 (NW/4NW/4) Sec 30, T20S, R28E
Tract 3-B: Lot 2 (SW/4NW/4) Sec 30, T20S, R28E
Tract 3-C: NE/4NW/4 Sec 30, T20S, R28E
Tract 3-D: SE/4NW/4 Sec 30, T20S, R28E
Tract 3-E: SW/4NE/4 Sec 30, T20S, R28E
Tract 4-A: NW/4SE/4 Sec 30, T20S, R28E
Tract 4-B: NE/4SE/4 Sec 30, T20S, R28E
Tract 5-A: Lot 3 (NW/4SW/4) Sec 30, T20S, R28E
Tract 5-B: Lot 4 (SW/4SW/4) Sec 30, T20S, R28E
Tract 5-C: NE/4SW/4 Sec 30, T20S, R28E
Tract 5-D: SE/4SW/4 Sec 30, T20S, R28E
Tract 5-E: SW/4SE/4 Sec 30, T20S, R28E
Tract 5-F: SE/4SE/4 Sec 30, T20S, R28E
Tract 6: E/2E/2 Sec 25, T20S, R27E
Tract 7: E/2NE/4 Sec 36, T20S, R27E
Tract 8: E/2SE/4 Sec 36, T20S, R27E
Tract 9: Lots 1 & 2 (N/2NE/4) Sec 6, T21S, R27E
Tract 10: W/2W/2, NE/4NW/4, SE/4SW/4 Sec 32, T20S, R28E
Tract 11: SE/4NW/4 & NE/4SW/4 Sec 32, T20S, R28E
Tract 12: E/2SE/4, SW/4NW/4 Sec 32, T20S, R28E

(5) Exxon proposes that the vertical limits of said unit area would comprise that interval which includes the "Upper Cherry Canyon Reservoir" ("UCC") and the "Lower Cherry Canyon/Upper Brushy Canyon Reservoir" ("LCC-UBC") and extends from an upper limit between 100 feet above the base of the Goat Seep Reef to the top of the Bone Springs formation to a lower limit of the base of the Brushy Canyon formation which are defined at all points under the unit area correlative to a depth of 2,378 feet and 4,880 feet, respectively, as identified on the Compensated Neuron/Litho density/Gamma Ray Log dated September 14, 1990 for the Exxon Yates "C" Federal Well No. 36, located in Unit A of Section 31, T20S, R28E, NMPM, Eddy County, New Mexico.

(6) Exxon, with approximately 61 percent of the unit acreage and Yates Petroleum Corporation ("Yates") with approximately 13-1/2 percent of the unit acreage appeared and presented evidence in support of approval of the unit.

(7) Premier Oil & Gas Inc. ("Premier"), the operator of Tract 6 with 7.6 percent of the unit acreage and 4.16% of the total remaining reserves (by Exxon's calculation--See Exxon Exhibit 10 (G-19) **but credited by Exxon with only 1.0192% of unit production** appeared and presented evidence in opposition to including Tract 6 with the unit.

EXXON PROPOSAL

(8) Exxon proposes to:

(a) institute a Secondary Recovery Project for recovery of oil by waterflooding an interior portion of the unit which will be surrounded by an outer ring of 40-acre tract which will not contain producing wells nor contain or be offset by injection wells. (See Exxon Exhibit 39); and

(b) possibly at an undetermined time in the future to convert the Secondary Recovery Project to a Tertiary Recovery Project by expanding the original waterflood project area by drilling additional injection wells and producing wells and commencing the injection of carbon dioxide ("CO2") at which point the outer ring tracts will contain producing and adjacent injection wells.

(9) Exxon contends that, based upon its Technical Report (Exxon Exhibit 10 G-14), the reserves for the Tracts in the Unit should be allocated as follows (reserve data units is in thousands of barrels of oil):

TRACT	OPERATOR	REMAINING PRIMARY RESERVES*	SECONDARY WATERFLOOD RESERVES*	TERTIARY CO2 RESERVES*
1	YATES	0.00	0.00	203.90
2	EXXON	741.80	4,368.20	18,995.00
3-A	YATES	0.00	345.10	530.60
3-B	YATES	43.40	403.60	1,693.00
3-C	YATES	0.00	0.80	446.70
3-D	YATES	33.40	373.30	1,045.90
3-E	YATES	0.00	0.00	362.50
4-A	YATES	0.00	0.00	852.50
4-B	YATES	0.00	0.00	247.40
5-A	YATES	53.40	368.10	1,425.90
5-B	YATES	19.30	174.50	1,189.70
5-C	YATES	33.80	741.50	2,177.20
5-D	YATES	40.30	698.40	2,009.30
5-E	YATES	20.20	157.50	966.20
5-F	YATES	0.00	69.30	481.00
6	PREMIER	0.00	0.00	1,626.00
7	OXY-YATES	0.00	0.00	427.60
8	MWJ PROD.	0.70	0.00	165.80
9	MERIT	0.00	0.00	444.30
10	EXXON	202.80	499.40	3,350.90
11	EXXON	3.10	69.70	1,050.50
12	EXXON	0.00	0.00	191.10
TOTAL		1,192.20	8,269.40	39,883.00

PREMIER'S OBJECTIONS

(10) Premier contends that its Tract 6 should be **excluded** because:

(a) Exxon proposes to include a column of 40-acre tracts including four 40-acre tracts (Tract 6) operated by Premier within the western boundary the Avalon Unit but does not intend to attempt to recovery from those tracts any remaining primary oil or any secondary oil by waterflooding;

(b) Exxon basis its plan upon a Technical Report dated August, 1992 (Exxon Exhibit 10) which was prepared exclusively by Exxon personnel and submitted to Yates and the other working interest owners on November 25, 1992;

(c) the Secondary Recovery Project ("waterflooding") is the reason for the Unit, while the Tertiary Recovery Project ("CO2") has only some probability of happening/not happening (See Exxon Exhibit 7--letter dated 10/10/94);

(d) on June 17, 1994, the working interests owners met to discuss the Exxon Technical Report and unanimously agreed to **exclude** Premier's Tract 6 from both the Secondary Recovery and Tertiary Recovery project in the Avalon Unit and Exxon has made no change in its Technical Report to now justify including the Premier Tract in the Unit;

(e) under the Exxon analysis the inclusion of the Premier Tract 6 is **not necessary** in order to effectively carry on the Secondary Recovery Project and that it is **premature** to include this Tract 6 for a Tertiary Recovery Project

(f) under the Exxon analysis there is **no increase** in ultimate recovery of secondary oil from the unit by including the Premier Tract 6;

(g) the Exxon analysis of the CO₂ potential is speculative and not been the subject of any scientific study to determine its feasibility and therefore any forecasted increase in ultimate recovery of tertiary oil from the unit by including the Premier Tract 6 is speculative;

(h) Exxon operates or owns working interests in all tracts except Tracts 6, 7, and 8, seeks to include the Premier Tract 6 only as a "protection buffer" and assigns no "contributing value" for secondary oil recovery; See Section 70-7-4(J) NMSA 1978;

(i) Because Premier, as owner of all of Section 25, T20S, R27E, is not receiving any "contributing value" for primary or secondary oil, it does not want to divide its property for Exxon's satisfaction.

(j) that Premier's Tract 6 can be excluded in accordance with the New Mexico Statutory Unitization Act.

(11) In the alternative, Premier contends that if Tract 6 is to be included in the unit, then and in that event, the application for unitization must be **denied** because:

(a) the horizontal and vertical limits of said unit have **not** been reasonably defined by development;

(b) Exxon's Technical Report is flawed because it incorrectly correlates the top of the Upper Cherry Canyon-Downlap Unit and the base of the Upper Cherry Canyon Reservoir in Premier's FV #3 Well located as (Unit Well 1709) within Premier's Tract 6. This results in Exxon mistakenly only attributing 55 feet of net thickness to the UCC reservoir which in turn affects the contouring of the various geologic maps, including the "TOTAL NET RESERVOIR HYDROCARBON THICKNESS AT RESV COND MAP" from which Exxon concludes that Premier's Tract 6 acreage has no remaining primary oil potential;

(c) Premier's FV #3 Well when correctly correlated indicates a net porosity thickness in the Upper Cherry Canyon Reservoir of 137 feet which is some 82 feet more than attributed by Exxon; (See Premier Exhibit 2)

(d) Exxon has determined that 131 feet of net pay thickness is the average for wells in the UCC reservoir but only credits Premier's FV #3 Well with 55 feet; (See Exxon Exhibit 10 B-1)

(e) Premier's hydrocarbon pore volume map shows that there is substantial recoverable oil remaining under Premier's Tract 6.

(f) Exxon's Technical Report in assigning "relative value" to each tract, determined that based upon logged derived water saturations ($S_w=0.46$) there are 2,320,00 barrels of waterflood target oil to be recovered from the Premier Tract 6 (See Premier's Exhibit 8) but then arbitrarily eliminated all of that incremental oil by increasing the water saturation ($S_w=0.60$) based upon water production volumes reported by Gulf when it operated the Premier FV-3 Well; (See Exxon Exhibit 10 G-19)

(g) Premier has determined that SW should be derived from log analysis and not actual water production because the actual water production from the FV-3 Well is attributed to water encroachment from above the Upper Cherry Canyon Reservoir;

(h) Exxon over credits Yates' EP #6 Well (1113) with net pay thickness;

(i) Exxon gives workover reserves in the UCC reservoir to Yates' Tracts 1111, 1311, 1313, 1511 but excludes workover reserves for Premier's Tract 6 which has the same reservoir parameters with identical S_w values (See Exxon Exhibit 10 Map 19);

(j) Exxon is biased in distributing waterflood reserves;

(k) Exxon has incorrectly mapped the UBC reservoir's gross thickness on Premier's acreage;

BACKGROUND-UNITIZATION NEGOTIATIONS

(12) On May 21, 1991, Exxon commenced unitization plans for the Avalon Area and announced its schedule to commence waterflood operations by June, 1992.

(13) In November, 1991 Exxon issued its first Technical Report, but progress towards unitization was delayed until August, 1992 when Exxon issued its Second Technical Report (Exxon Exhibit 10) and circulated that report to the working interest owners.

(14) The Exxon technical Report was undertaken exclusively by Exxon without requesting participation or involvement by Premier.

(15) On November 25, 1992, David Boneau on behalf of Yates advised Exxon that:

(a) Yates considered the engineering work in the August-1992 Technical Report to have "cut a few corners" and expressed concern that the modeling work required that permeability be increased by a factor of two or more and "cast doubt on the shaly-sand analysis of the logs which reduced log porosity and indirectly log permeability. Maybe a different log analysis would have given permeabilities that fit the computer model without modification. Probably you all believe there is no change that the basic geologic picture can be wrong." See Yates Exhibit 6 (2-A).

(b) Yates expressed concern that the areas outside the wells where primary production has been established in the UCC-LBC may not be developed economically by CO₂.

(c) Yates questioned Exxon's workover reserve credited to Yates' Tracts 111, 1311, 1313, 1511 and 1513 but states "Since the assumed workover reserves benefit Yates, we are willing to believe the Exxon explanation and leave the workover reserves in the Engineering Report (ie, Exxon Exhibit 10 part 2).

(16) On December 22, 1992, Exxon advises Yates that Exxon has increased the primary reserves credited to Yates Wells EP-5 (Unit E-Sec 30), Well EP-8 (Unit F-Sec 30) and C-36 (Unit A-Sec 31).

(17) By January 7, 1993 Yates has withdrawn its concerns about the Exxon Technical Report, but continues to express concerns over Exxon's AFEs, Exxon's participation formula and states "Exxon's voting procedures stinks."

(18) On April 8, 1994, Exxon with a working interest owner with 73.92 % of the unit area and the proposed unit operator proposed to Yates other major working interest owner with 12.01 % of the unit area, the formation of the subject unit utilizing a Two Phase Tract Participation Formula whereby for Phase I remaining primary oil per tract was weighted by 62.34%; waterflood reserves which included workover potential per tract was weighted by 37.56% and tertiary reserves were weighted by -0-% and then a Phase Two were the weighted percentages were 23.45%, 20.6375% and 55.9073% respectively.

(19) Under the Exxon participation formula Exxon would receive 79.71 % of Phase One oil recovery and 72.529% of Phase Two oil recovery while Yates would receive 9.837% of Phase One oil recovery and 11.55% of Phase Two oil recovery with Premier receiving -0-% of Phase One oil recovery and 2.279% of Phase Two oil recovery.

(20) On January 18, 1995, Exxon and Yates agreed to a single phase Participation Formula whereby primary oil is weighted by 25%, secondary oil and workover potential is weighted by 50% and tertiary oil is weighted by 25% which results in Exxon receiving 73.92% of unit production, Yates receiving 12.01% of unit production and Premier receiving 1.0192% of unit production.

(21) Exxon/Yates proposed formula is predicated upon the intention to allow each tract to recovery its percentage of remaining primary oil, its percentage of secondary oil and workover oil potential and its percentage of tertiary oil potential by a weighted formula of 25 % primary, 50 % secondary/workover and 25 % tertiary.

THE EXXON-PREMIER DISPUTE

EXXON'S TECHNICAL DATA:

(22) Exxon in support of its contention that neither the Premier FV-3 nor FV-1 is productive of primary oil in the UCC reservoir and that addition west-side injectors are probably not appropriate presented the following geologic/engineer evidence:

(a) that the UCC reservoir reveals that the hydrocarbon distribution is a function of both structure, which controls the downdip, southern and eastern limits of production and stratigraphy which controls the updip pinchout of the reservoir quality sands into tight carbonates on the northern and western sides of the reservoir; (Exxon Exhibit 10-Vol 1)

(b) that there is no apparent updip closure of structural contours in the north and west portions of the proposed unit;

(c) that the "relative value" of Premier tract on the western boundary of the reservoir is Based upon its log analysis of the Premier FV-3 Well, Exxon has determined that there is a total gross thickness of 179 feet based upon picking the top of the Upper Cherry Canyon Downlap at 2589 feet in depth and the base of the Upper Cherry Canyon at 2768 feet in depth;

(d) Based upon a 10% percent Gamma Ray porosity and a 75 API Gamma Ray unit cutoffs, the Premier FV #3 Well has a total net thickness of 55 feet;

(e) When its interpretation of net thickness for the Premier FV-3 well is integrated into its hydrocarbon pore volume map (Exxon Exhibit 10 map 22) and its volumetric calculations (Exxon Exhibit 10-Vol 1 Exhibit E-4), Premier's FV #3 Well has:

<i>Original oil in place:</i>	<i>1,580,000 BO</i>
<i>Remaining Primary Oil:</i>	<i>-0-</i>
<i>Waterflood Target Oil:</i>	<i>580,000 BO</i>
<i>Workover Target Oil:</i>	<i>-0-</i>
<i>CO2 Target Oil:</i>	<i>1,320,000 BO</i>

See Exxon Exhibit 10 Vol 1 Exhibit E-6

(f) Exxon concluded that the average Water saturation for the UCC Reservoir by log calculations was 44% and by watercut was 46% but for the Premier FV-3 well that Sw factor should be adjusted to 60% because Gulf reported higher water production in that well than the averages; See Exxon Exhibit 10, Vol 1 Exhibit D-12,D-13, D-14)

(g) By increasing the Sw factor, Exxon calculated the Premier Tract to have only 360,000 barrels of oil in place and that based upon a total cumulative recovery by the FV-3-Well of 5,100 barrels of oil Tract 6 has no remaining primary oil to be recovered;

(h) Based upon its analysis of Premier's FV #3 Well, Exxon further determined that Premier's Tract 6 had no potential for waterflood target oil by applying a weighted factor of 50% to Tract 6 and further determined it had only 1.626 million barrels of CO2 target oil by applying a weighted factor of 25%. See Exxon Exhibit 10- Vol. 1 Exhibit E-7 and E-6)

(i) Finally, based upon decline curve analysis (Exxon Exhibit 10 Vol 1 Exhibit G-9), and an 85% watercut, Exxon concluded that the Premier Tract 6 had no workover Target oil. See Exxon Exhibit 10 Vol 1 Exhibit G-19).

PREMIER'S TECHNICAL DATA:

(23) Premier, the owner/operator in Tract 6, appeared in opposition to the case.

(24) Premier contends that the revised Exxon proposed unit shape, reservoir parameters and participation formula fail to provide "relative value" to Tract 6 as required by Section 70-7-4(J) NMSA (1978), as amended, and unless corrected by the Division will be violated.

(25) Premier provided geologic and petroleum engineer evidence which demonstrates that:

(a) based upon log correlations prepared by Gerrald Harrington, its expert geologic consultant, including log analysis of the Premier FV-3 Well, Premier has determined that the Premier FV-3 Well has a total gross thickness of 308 feet based upon picking the top of the Upper Cherry Canyon Downlap at 2544 feet in depth and the base of the Upper Cherry Canyon at 2852 feet in depth. (See Premier Exhibits 1, 2, and 3)

(b) Mr. Harrington concludes that:

1. the correct correlations will also increase reservoir quality and quantity for Premier location 1509 and that additional UCC reservoir potential exists in Premier's Section 25 (See Premier Exhibit 1)

2. that attributing the correct net thickness to the FV #3 Well changes the contouring of the "UPPER CHERRY CANYON HYDROCARBON THICKNESS MAP" which results in a significantly larger areal extent of the UCC reservoir extending to the north and northwest than that which the Exxon Technical Report attributes to the Premier's Section 25. (See Premier Exhibits 4, 4A, 6, and 6A)

3. that the FV-2 Well log demonstrates potential for UCC reservoir extending westward into other acreage in Section 25 which Exxon excluded from the unit.

4. additional log correlations demonstrate that Exxon has incorrectly attributed a substantially greater net reservoir thickness and subsequently more hydrocarbon reserves to the Yates "EP" #6 Well (Unit Well 1113) than the Premier analysis and correlations indicate. As a result of this application of incorrect data, Exxon has attributed substantially more recoverable hydrocarbon reserves to Yates' Tract 3-C and its offsetting unit tracts than is warranted.

5. that the Yates EP #6 Well should have been credited with only 40-42 feet of net pay thickness instead of the 99.5 feet credited by Exxon to this well; (See Premier Exhibit 3)

6. that Exxon has incorrectly correlated the log of the Premier FV #3 Well and as a result had failed to give the Premier FV #3 Well its correct total net thickness of UCC reservoir and failed to properly value the reservoir quality and quantity for Premier's Tract 6;

(c) Stuart Hanson, another expert geologic consultant retained by Premier, conducted an independent geologic study which included calibrating and scaling the mudlog for the Premier FV #3 Well and to correlate the Mudlog with the Compensated Neutron Density Gamma Ray Log for that same well and concluded that:

1. the Premier FV #3 Well had an untested portion from 2777 feet to 2791 feet of the UCC reservoir which correlate to a productive portion from 2717 feet to 2730 feet in the offsetting WM

#4 Well (Unit M) Section 30, (See Premier's Exhibit 7) and which, in terms of core analysis and log derived water saturations, showed this interval to be consistent with UCC primary production in the Unit area.

2. that Exxon had incorrectly correlated these wells and in doing so have failed to properly credit the Premier Well with sufficient reservoir thickness.

3. concurred with the conclusions of Mr. Harrington that based upon a 10 % percent porosity and a 75 API unit cutoffs, the Premier FV #3 Well has a total net thickness of 137 feet;

4. when Premier's interpretation of net thickness for the Premier FV-3 well is integrated into its hydrocarbon pore volume map (Premier Exhibit 6) and its volumetric calculations, Premier's VF #3 Well has an estimated 2,910,000 barrels of oil in place, 860,000 barrels of waterflood target oil and 2,380,000 barrels of CO2 target oil.

(d) Premier concludes that the average water saturation ("Sw") for the Premier FV-3 Well should be 39.1 % because it is incorrect to use actual water production which is attributed to a poor cement job acid/frac height and water production from a squeezed zone and therefore Sw should not be increased to 59.9% as Exxon did.

(e) By using the proper Sw factor, Premier concludes that the Premier's FV #3 Well has 2,910,000 barrels of oil in place and that based upon a total cumulative recovery by Premier's FV #3 Well of 5,100 barrels of oil, Tract 6 still has remaining primary oil to be recovered;

(f) Based upon Exxon's own report, Mr. Paul White, Premier's expert petroleum engineering witness, concluded that:

1. Mr. Hanson and Mr. Harrington had correctly correlated the Premier's FV #3 Well;
2. the Premier Tract 6 has UCC waterflood target oil of 2,320,000 barrels of oil in place, that Yates operated tracts bordering Premier's tracts have 2,680,000 barrels of UCC waterflood target oil (See Premier Exhibit 8) and **therefore** the Exxon Report is biased when it attributed "-0-" waterflood reserves to the Premier Tract 6 (See Exxon Exhibit 10 G-19);
3. that Exxon should have extended the "outer ring-buffer" to include an additional column of 40-acre tracts in Section 25 in order to be consistent with Exxon's inclusion of the Exxon owned tracts in the Southeastern corner of the Unit which contain little or no waterflood target oil;
4. that the waterflood reserves improperly favored both Yates and Exxon as working interest owners in Section 30 to the disadvantage of Premier.
5. that he did not believe the amount of UCC workover target oil Exxon credited to Tracts 1111, 1311, 1313, 1511 and 1513 because the Yates EP #7 Well (1111) had an estimated workover potential of 266,600 barrels (Exxon Exhibit 10 G-19) but the well has only produced 2,000 barrels to date. Therefore these reserves further biased the Exxon report in favor of Exxon and Yates who are both working interest owners in Section 30.

(g) Mr. Kenneth Jones, Premier's owner/operator, testified that he had no confidence in the accuracy of the Exxon Technical Report, because, among other things, Exxon's counting method for the Upper Brushy Canyon was flawed because Exxon gives

Premier's FV #1 Well, 185 feet of gross thickness (Exxon Exhibit 10-Map 4) when in fact it has 215 feet (Exxon Exhibit 10-Appendix C-1) for the proposed new well on tract 1309, which is 330 feet eastward from Premier's FV #1 Well to which Exxon attributes 212 gross feet of UBC reservoir. This results in Exxon incorrectly contouring the lines on Map 4 and will also reduce the volumetric for Tracts 1109 1309 and thereby reduce original oil in place and recoverable oil from these tracts. (note: the correct gross footage should be approximately 238-242 feet)

DIVISION FINDINGS:

(26) The Division finds that:

(a) Section 70-2-33(H) NMSA of the Oil and Gas Act defines Correlative Rights as "...the opportunity afforded, as far as it is practicable to do so, to the owners of each property in a pool to produce without waste his just and equitable share of the oil or gas or both in the pool, being an amount so far as can be practicably determined and so far as can be practicably obtained without waste, substantially in the proportion that the quantity of recoverable oil or gas or both under the property bears to the total recoverable oil or gas or both in the pool and for such purpose, to use his just and equitable share of the reservoir energy;"

(b) Section 70-7-6(B) NMSA of the Statutory Unitization Act states "If the Division determines that the participation formula contained in the unitization agreement does not allocate unitized hydrocarbons on a fair, reasonable and equitable basis, the Division shall determine relative value, from the evidence introduced at the hearing taking into account the separately owned tracts in the unit area, exclusive of physical equipment for development of oil and gas by unit operations, and the production allocated to each tract shall be the proportion that the relative value of each tract so determined bears to the relative value of all tracts in the unit area."

(c) Section 70-7-4 (J) NMSA of the Statutory Unitization Act says "relative value" means the value of each separately owned tract for oil and gas and its contributing value to the unit in relation to like values of other tracts in the unit, taking into account acreage, the quantity of oil and gas recoverable therefrom, location on structure, its probable productivity of oil and gas in the absence of unit operations, the burden of operation to which the tract will or is likely to be subjected, or so many of said factors, or such other pertinent engineering, geological, operating or pricing facts, as may be reasonably susceptible of determination.

(d) Section 70-7-7 NMSA of the Statutory Unitization Act provides that the Division has the authority and obligation to approve or prescribe a plan or unit agreement for unit operation which shall include:

"A.area of the pool or part of the pool to be operated as a unit and the vertical limits to be included,..."

"C. an allocation to the separately owned tracts in the unit area of all the oil and gas that is produced from the unit area..."

(27) The Division further FINDS that:

(a) Exxon proposes to include a column of 40-acre tracts including four 40-acre tracts (Tract 6) operated by Premier within the western boundary the Avalon Unit but does not intend to attempt to recovery from those tracts any remaining primary oil or any secondary oil by waterflooding;

(b) The Secondary Recovery Project ("waterflooding") is the reason for the Unit, while the Tertiary Recovery Project ("CO₂") has only some probability of happening/not happening;

(c) on June 17, 1994, the working interests owners met to discuss the Exxon Technical Report and unanimously agreed to

exclude Premier's Tract 6 from both the Secondary Recovery and Tertiary Recovery project in the Avalon Unit;

(d) Exxon failed to present adequate evidence to demonstrate any substantial change in its Technical Report to now justify including the Premier Tract in the Unit;

(e) under the Exxon analysis the inclusion of the Premier Tract 6 is **not necessary** in order to effectively carry on the Secondary Recovery Project;

(f) Contrary to the testimony of Mr. David Boneau on behalf of Yates that reserves under certain portions of Yates' acreage would remain unrecovered if the Premier acreage were deleted from the unit, the Secondary Recovery Plan as proposed by Exxon provide no means for the recovery of any oil west of the existing Yates' wells.

(g) Since recovery of any such oil is thereby deferred to a tertiary recovery phase for which no commitment has been made, the implication that correlative rights would be impaired and that waste would occur if the Premier acreage were deleted from the proposed unit is groundless.

(h) At such time as firm plans are formulated for a tertiary recovery project, consideration may be given to including the Premier acreage in that CO2 project.

(i) that Exxon's proposed Tertiary Recovery ("CO2") Project is not supported by substantial scientific evidence, is speculative, inadequately studied and is **premature**;

(j) under the Exxon analysis there is **no increase** in ultimate recovery of secondary oil from the unit by including the Premier Tract 6;

(k) the Exxon analysis of the CO2 potential is speculative and not been the subject of any scientific study to determine its feasibility and therefore any forecasted increase in ultimate

recovery of tertiary oil from the unit by including the Premier Tract 6 is speculative;

(l) Exxon seeks to include the Premier Tract 6 only as a "protection buffer" and assigns no "contributing value" for secondary oil recovery; See Section 70-7-4(J) NMSA 1978; and

(m) that Premier's Tract 6 can be excluded in accordance with the New Mexico Statutory Unitization Act.

(28) The Division further finds that Exxon's proposal to include the Premier Tract 6:

(a) fails to conform to the statutory requirements set forth in Paragraph 26 above;

(b) fails to appropriately distribute hydrocarbon pore volume with accurate corresponding reservoir parameters and has not established the appropriate relative value to be attributed to each tract including Tract 6; and

(c) fails to submit an appropriate participation formula to allow the owners of Tract 6 to recover their proportionate share of the total remaining recoverable hydrocarbons underlying the unit.

(d) the horizontal and vertical limits of said unit have **not** been reasonably defined by development;

(e) Exxon's Technical Report is flawed because it incorrectly correlates the top and base of the Upper Cherry Canyon Reservoir in Premier's FV #3 Well located as (Unit Well 1709) within Premier's Tract 6 which results in Exxon assigning 55 feet of net thickness to this well which in turn is used to contour the various geologic maps and ultimate the hydrocarbon pore volume map from which Exxon concludes that Premier Tract 6 has no remaining primary oil potential;

(f) Premier's FV #3 Well when correctly correlated has a net porosity thickness in the Upper Cherry Canyon Reservoir of 137 feet which is some 82 feet more than assigned by Exxon;

(g) Premier's hydrocarbon pore volume map establishes that there are substantial additional recoverable oil remaining under Premier's Tract 6.

(h) Exxon's Technical Report in assigning "relative value" to each tract, determined that based upon logged derived water saturations ($S_w=0.46$) there are 2,320,000 barrels of waterflood target oil to be recovered from Premier's Tract 6 **but** then arbitrarily eliminated all of that incremental oil by increasing the water saturation ($S_w=0.60$) based upon water production volumes reported by Gulf when it operated the Premier FV-3 Well;

(i) Premier accurately determined that SW should be derived from log analysis and not actual water production because the actual water production from the FV-3 Well is attributed to water encroachment below the Upper Cherry Canyon Reservoir;

(29) The proposed Secondary Recovery ("waterflood") Project, with the deletion of Premier Tract 6, should result in the additional recovery of approximately 8,269,400 barrels of oil.

(30) The unitized management, operation and further development of the Avalon Unit Area, as modified by this Order, is reasonably necessary to effectively carry on secondary recovery operations and will substantially increase the ultimate recovery of oil and gas from the unitized portion of the pool.

(31) The unitized method of operation as applied to the Avalon Unit Area (with the deletion of the Premier Tract 6) is feasible and will result with reasonable probability in the increased recovery of substantially more oil and gas from the unitized portion of the pool than would otherwise be recovered without unitization.

(32) The estimated additional costs of such operations will not exceed the estimated value of the additional oil so recovered plus a reasonable profit.

(33) Such unitization and adoption of a unitized method of operation will benefit the working interest owners and royalty owners of the oil and gas rights within the Avalon Unit Area.

(34) The granting of the application with the deletion of Tract 6 as proposed by Premier in this case will have no adverse effect upon the Delaware formation.

(35) The deletion of Premier's Tract 6 from the Avalon Unit Agreement and the Avalon Unit Operating Agreement provide for unitization and unit operation of the Avalon Unit Area upon terms and conditions that are fair, reasonable and equitable, and include:

- a) an allocation to the separately owned tracts in the unit area of all oil and gas that is produced from the unit area and which is saved, being the production that is not used in the conduct of unit operations or not unavoidably lost;
- b) a provision for the credits and charges to be made in the adjustment among the owners in the unit area for their respective investments in wells, tanks, pumps, machinery, materials and equipment contributed to the unit operations;
- c) a provision governing how the costs of unit operations, including capital investments, shall be determined and charged to the separately owned tracts and how said costs shall be paid, including a provision providing when, how, and by whom, such costs shall be paid, including a provision providing when, how and by whom such costs shall be charged to each owner or the interest of such owner, and how his interest may be sold and the proceeds applied to the payment of his costs;
- d) a provision for carrying any working interest owner on a limited, carried or net-profits basis, payable out of production,

IT IS THEREFORE ORDERED:

(1) The application of Exxon for the Avalon Unit Agreement covering 1971.8 acres, more or less, of Federal, State and Fee lands in the Avalon-Delaware Pool, Eddy County, New Mexico, is hereby approved for statutory unitization pursuant to the "Statutory Unitization Act", Section 70-7-1 through 70-7-21, N.M.S.A. (1978), **SUBJECT** to the following:

That Premier's Tract 6 shall be deleted and the same hereby is deleted from this unit.

(2) The lands covered by said Avalon Unit Agreement shall be designated the Avalon Unit Area and shall comprise the following described acreage in Lea County, New Mexico:

Tract 1: SW/4 Sec 29, T20S, R28E
Tract 2: Sec 31, T20S, R28E
Lot 4(NW/4NW/4) Sec 4 T21S, R27E
Lots 1&2 (N/2NE/4) Sec 5 T21S, R27E
Tract 3-A: Lot 1 (NW/4NW/4) Sec 30, T20S, R28E
Tract 3-B: Lot 2 (SW/4NW/4) Sec 30, T20S, R28E
Tract 3-C: NE/4NW/4 Sec 30, T20S, R28E
Tract 3-D: SE/4NW/4 Sec 30, T20S, R28E
Tract 3-E: SW/4NE/4 Sec 30, T20S, R28E
Tract 4-A: NW/4SE/4 Sec 30, T20S, R28E
Tract 4-B: NE/4SE/4 Sec 30, T20S, R28E
Tract 5-A: Lot 3 (NW/4SW/4) Sec 30, T20S, R28E
Tract 5-B: Lot 4 (SW/4SW/4) Sec 30, T20S, R28E
Tract 5-C: NE/4SW/4 Sec 30, T20S, R28E
Tract 5-D: SE/4SW/4 Sec 30, T20S, R28E
Tract 5-E: SW/4SE/4 Sec 30, T20S, R28E
Tract 5-F: SE/4SE/4 Sec 30, T20S, R28E
Tract 6: **[deleted]**
Tract 7: E/2NE/4 Sec 36, T20S, R27E
Tract 8: E/2SE/4 Sec 36, T20S, R27E
Tract 9: Lots 1 & 2 (N/2NE/4) Sec 6, T21S, R27E
Tract 10: W/2W/2, NE/4NW/4, SE/4SW/4 Sec 32, T20S, R28E
Tract 11: SE/4NW/4 & NE/4SW/4 Sec 32, T20S, R28E
Tract 12: E/2SE/4, SW/4NW/4 Sec 32, T20S, R28E

upon terms and conditions which are just and reasonable, and which allow an appropriate charge for interest for such service payable out of production, upon such terms and conditions determined by the Division to be just and reasonable;

- e) a provision designating the Unit Operator and providing for supervision and conduct of the unit operations, including the selection, removal or substitution of an operator from among the working interest owners to conduct the unit operations;
- f) a provision for a voting procedure for decisions on matters to be decided by the working interest owners in respect to which each working interest owner shall have a voting interest equal to his unit participation; and,
- g) the time when the unit operations shall commence and the manner in which, and the circumstances under which, the operations shall terminate and for the settlement of accounts upon such termination.

(36) Section 70-7-7.F. N.M.S.A. of said "Statutory Unitization Act" provides that any working interest owner who has not agreed in writing to participate in a unit could have relinquished to the Unit Operator all of its operating rights and working interest in and to the unit until his share of the costs has been repaid plus an additional 200 percent thereof as a non-consent penalty.

(37) At the time of the hearing, the applicant requested that no 200% penalty be assessed these working interest owners in said unit who have not committed their interests.

(38) The statutory unitization of the Avalon Unit Area is in conformity with the above findings, and will prevent waste and protect correlative rights of all interest owners within the proposed unit area, and should be approved.

(3) The vertical limits of said unit area shall comprise that interval which includes the "Upper Cherry Canyon Reservoir" ("UCC") and the "Lower Cherry Canyon/Upper Brushy Canyon Reservoir" ("LCC-UBC") and extends from an upper limit between 100 feet above the base of the Goat Seep Reef to the top of the Bone Springs formation to a lower limit of the base of the Brushy Canyon formation which are defined at all points under the unit area correlative to a depth of 2,378 feet and 4,880 feet, respectively, as identified on the Compensated Neuron/Litho density/Gamma Ray Log dated September 14, 1990 for the Exxon Yates "C" Federal Well No. 36, located in Unit A of Section 31, T20S, R28E, NMPM, Eddy County, New Mexico.

(4) The applicant shall institute a waterflood project for the secondary recovery of oil and associated gas, condensate and all associated liquefiable hydrocarbons within and produced from the unit area, and said waterflood project is the subject of Division Case No. 11194.

(5) The applicant's request for approval of a tertiary recovery ("CO2") project is premature and is hereby **denied**.

(6) The Avalon Unit Agreement and the Avalon Unit Operating Agreement, which were submitted to the Division at the time of the hearing as Exhibit Nos. __ and __, respectively, are hereby incorporated by reference into this order.

(7) The Avalon Unit Agreement and the Avalon Unit Operating Agreement provide for unitization and unit operation of a portion of the Delaware formation upon terms and conditions that are fair, reasonable and equitable **PROVIDED** the following amendments are made:

That Premier Tract No 6 shall be deleted

(8) This order shall not become effective unless and until seventy-five percent of the working interest and seventy-five percent of the royalty interest owners in the Unit Area have approved the plan for unit operations as required by Section 70-7-8, N.M.S.A., 1978 Compilation.

(9) If the persons owning the required percentage of interest in the Unit Area as set out in Section 70-7-8, N.M.S.A., 1978 Compilation, do not approve the plan for unit operations within a period of six months from the date of entry of this order, this order shall cease to be of further force and effect and shall be revoked by the Division, unless the Division shall extend the time for ratification for good cause shown.

(10) When the persons owning the required percentage of interest in the Unit Area have approved the plan for unit operations, the interests of all persons in the Unit Area are unitized whether or not such persons have approved the plan or unitization in writing.

(11) Any working interest owner who has not agreed in writing to participate in the unit prior to the effective date of this order shall be deemed to have relinquished to the Unit Operator all of his operating rights and working interest in and to the unit until his share of the costs has been repaid. Such repayment shall not include a non-consent penalty (Section 70-7-7.F N.M.S.A. 1978)

(12) The applicant as Unit Operator shall notify in writing the Division Director of any removal or substitution of said Unit Operator by any other working interest owner within the area.

(13) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY
Director

S E A L

HINKLE, COX, EATON, COFFIELD & HENSLEY

P.L.L.C.*

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July 20, 1995

HAND DELIVERY

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Michael E. Stogner
Oil Conservation Division
State of New Mexico
2040 So. Pacheco Street
Santa Fe, New Mexico 87505

JUL 20 1995

Oil Conservation Division

Re: **Case Nos. 11297 and 11298 (Exxon-Avalon Delaware Unit)**

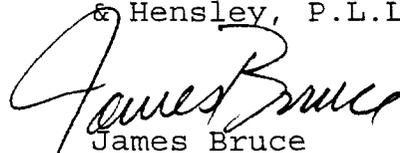
Dear Mr. Stogner:

At the hearing in the above cases, as Exhibits 8 and 9, Exxon presented proof of mailing to all interest owners. As of the date of the hearing, however, the certified return receipts regarding notice to Charles Cline Moore had not been returned. Attached to this letter as Exhibits A and B are copies of the returned envelopes mailed to Mr. Moore. Exhibit A is for Case No. 11297, and Exhibit B is for Case No. 11298. Please note that on Exhibit B the return receipt was removed but never returned to Exxon.

We ask that this letter be placed in the case file as proof of notice. Thank you.

Very truly yours,

Hinkle, Cox, Eaton, Coffield
& Hensley, P.L.L.C., Ltd., Co.



James Bruce

Enclosures

cc: W. Thomas Kellahin (w/encl.)
William F. Carr (w/encl.)
Joe B. Thomas (w/encl.)

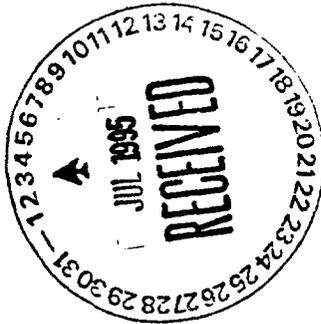
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5.15
6.9
6.13



CHARLES CLINE MOORE
138 HARVARD AVENUE
MILL VALLEY, CA 94941

CON COMPANY, U.S.A.

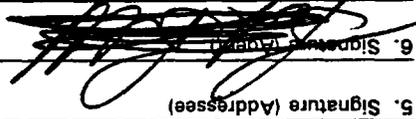
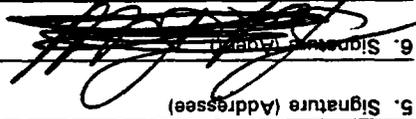
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Slingshot No. 5719

EXHIBIT
A

Thank you for using Return Receipt Service

PS Form 3811, December 1991 *U.S. GPO: 1993-352-714 DOMESTIC RETURN RECEIPT

3. Article Addressed to: CHARLES CLINE MOORE 138 HARVARD AVENUE MILL VALLEY, CA 94941		5. Signature (Address) 
4a. Article Number Z 740 407 731		6. Signature (Address) 
4b. Service Type <input type="checkbox"/> Registered <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Express Mail		8. Addressee's Address (Only if requested and fee is paid)
7. Date of Delivery		9. Signature (Address)

Complete items 3, and 4a & b. 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.

1. Addressee's Address
 2. Restricted Delivery
 Consult postmaster for fee.

Is your RETURN ADDRESS completed on the reverse of this form?

HINKLE, COX, EATON, COFFIELD & HENSLEY
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May 24, 1995

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MAY 24 1995

Oil Conservation Division

HAND DELIVERED

Mr. William LeMay
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87501

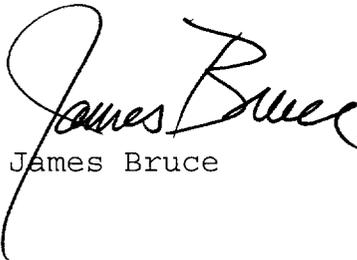
Re: Case Nos. 11,297 and 11,298 (Applications of Exxon Corporation
for Unitization and a Waterflood)

Dear Mr. LeMay:

At the request of Premier Oil & Gas, Exxon has consented to a two week continuance of the above cases. Therefore, Exxon requests that the above cases be continued to the June 15, 1995 Examiner Hearing.

Very truly yours,

HINKLE, COX, EATON, COFFIELD
& HENSLEY, P.L.L.C., Ltd., Co.


James Bruce

cc: William F. Carr, Esq.
W. Thomas Kellahin, Esq.

JB/sp

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September 5, 1995

HAND-DELIVERY

Michael E. Stogner
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87501

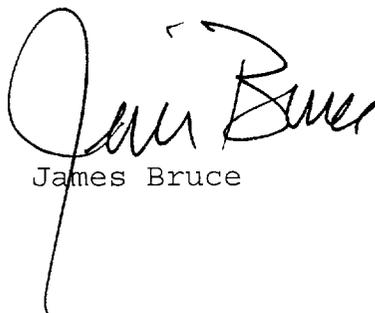
Re: Avalon (Delaware) Unit

Dear Mr. Stogner:

Enclosed, as you requested, is a disk with Exxon's proposed injection order on it (WordPerfect 5.1).

Very truly yours,

HINKLE, COX, EATON, COFFIELD
& HENSLEY, P.L.L.C., Ltd., Co.



James Bruce

Enclosure

JGB/sp
stgnexn.ltr

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June 26, 1995

VIA FAX
(505) 827-8177

Mr. Michael E. Stogner
Oil Conservation Division
Santa Fe, New Mexico

Re: Case Nos. 11297 and ~~11298~~, the applications
of Exxon Corporation for statutory
unitization and approval of a waterflood
project, Eddy County, New Mexico

Dear Mr. Stogner:

Please let this letter serve as a pre-hearing statement:

1. Parties: The parties involved in this case are as follows:

<u>Party</u>	<u>Attorney</u>
Exxon Corporation	James Bruce
Yates Petroleum Corporation	William F. Carr
Premier Oil & Gas, Inc.	W. Thomas Kellahin

2. Statement of the Case: In Case No. 11298 Exxon seeks to statutorily unitize 2140.14 acres of federal, state, and fee land in the designated and undesignated Avalon-Delaware Pool. In Case No. 11297, Exxon seeks (a) approval of a waterflood for the unit, (b) qualification of the project for the recovered oil rate, and (c) 18

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Oil Conservation Division
Page 2

unorthodox well locations.

Tract participation under the Unit Agreement is based on:

25% remaining primary reserves
50% secondary reserves
25% tertiary reserves¹

Exxon asserts that the participation formula is fair and equitable. It is supported by over 95% of working interest owners in the unit. The Commissioner of Public Lands and the Bureau of Land Management, who together own in excess of 90% of the royalty interest in the unit, have preliminarily approved the unit.

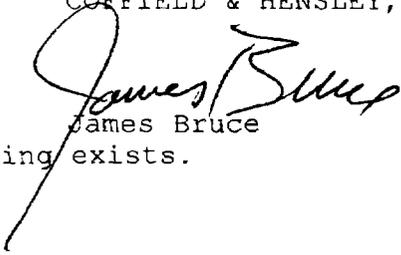
Apparently Premier asserts that its tract contains substantial primary and secondary reserves for which it is not given credit in the technical report, and wants either (a) a higher participation figure for its tract, or (b) to have its tract deleted from the unit.

3. Witnesses: Exxon plans on presenting the following witnesses:

<u>Witness</u>	<u>Time</u>	<u>Exhibits</u>
Joe B. Thomas (landman)	25 minutes	Approx. 10
Dave Cantrell (geologist)	40 minutes	Approx. 10
Gil Beuhler (engineer)	45 minutes	Approx. 15

Very truly yours,

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


James Bruce

¹ A potential for CO₂ flooding exists.

Oil Conservation Division
Page 3

Jbdk

xc: William F. Carr
 FAX (505) 983-6043
 W. Thomas Kellahin
 FAX (505) 982-2047

449

HINKLE, COX, EATON, COFFIELD & HENSLEY

Attorneys at Law

2800 Claydesta Center
P.O. Box 3580
Midland, Texas

Fax (915) 683-6518

FAX COVER SHEET

PLEASE DELIVER THE FOLLOWING PAGE(S) TO:

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COMPANY & LOCATION: Oil Conservation

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FROM: Jim Bruce

DATE: 6/24

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CLIENT/MATTER: _____

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Checked by W.F. Carr (Yates) 11/17/95

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

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July 17, 1995

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MARK C. DOW
FRED W. SCHWENDIMANN
JAMES M. HUDSON

*REGISTERED IN NEW MEXICO
AS HINKLE, COX, EATON,
COFFIELD & HENSLEY, P.L.L.C., LTD., CO.

*NOT LICENSED IN NEW MEXICO
**FORMERLY COMPRISING THE FIRM OF
CULTON, MORGAN, BRITAIN & WHITE, P.C.

HAND-DELIVERY

Michael E. Stogner
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505

**Re: Case No. 11,298, Exxon Application for Statutory Unitization
of the Avalon-Delaware Pool.**

Dear Mr. Stogner:

Enclosed, as you requested at the hearing, are a hard copy and a disk of a proposed Order submitted by Exxon Corporation in Case No. 11,298. Yates Petroleum Corporation has reviewed the proposed Order and joins in this submission.

Very truly yours,

HINKLE, COX, EATON, COFFIELD
& HENSLEY, P.L.L.C., Ltd., Co.

James Bruce
James Bruce



Enclosures

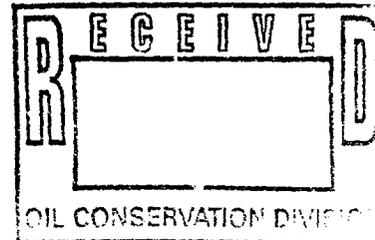
cc: William Carr, Esq.
JB/sp

DRAFT

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 11,298
ORDER NO. R-_____



APPLICATION OF EXXON CORPORATION FOR STATUTORY UNITIZATION, EDDY
COUNTY, NEW MEXICO.

ORDER OF THE DIVISION
(Proposed by Exxon Corporation)

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on June 29, 1995 at Hobbs, New Mexico, before Examiner Michael E. Stogner.

NOW, on this ___ day of July, 1995, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

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

(2) At the time of the hearing, this case was consolidated with Division Case No. 11297 for the purposes of testimony.

(3) The applicant, Exxon Corporation, seeks the statutory unitization, pursuant to the "Statutory Unitization Act," Sections 70-7-1 through 70-7-21 NMSA (1978), for the purpose of establishing a secondary recovery project, of all mineral interests in the designated and undesignated Avalon-Delaware Pool, underlying its proposed Avalon (Delaware) Unit Area, comprising 2118.78 acres, more or less, of State, Federal, and fee lands in Eddy County, New Mexico, said unit to henceforth be known as the Avalon (Delaware) Unit Area; the applicant further seeks approval of the plan of unitization which includes the unit agreement and the unit operating agreement and which were submitted in evidence at the time of the hearing as applicant's Exhibit Nos. 2 and 3.

(4) The applicant proposes that said unit comprise the following described area in Eddy County, New Mexico:

Township 20 South, Range 27 East, NMPM

Section 25: E $\frac{1}{2}$ E $\frac{1}{2}$
Section 36: E $\frac{1}{2}$ E $\frac{1}{2}$

Township 20 South, Range 28 East, NMPM

Section 29: SW $\frac{1}{4}$ SW $\frac{1}{4}$
Section 30: Lots 1-4, E $\frac{1}{2}$ W $\frac{1}{2}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$
Section 31: Lots 1-4, E $\frac{1}{2}$ W $\frac{1}{2}$, E $\frac{1}{2}$ (All)
Section 32: SW $\frac{1}{4}$ NE $\frac{1}{4}$, W $\frac{1}{2}$, W $\frac{1}{2}$ SE $\frac{1}{4}$

Township 21 South, Range 27 East, NMPM

Section 4: Lot 4
Section 5: Lots 1 and 2
Section 6: Lots 1 and 2

(5) The proposed Unit Area includes portions of the designated and undesignated Avalon-Delaware Pool.

(6) The proposed "unitized formation" is that interval underlying the Unit Area described as the Delaware Mountain Group, extending from 100 feet above the base of the Goat Seep Reef to the top of the Bone Spring formation and including, but not limited to, the Cherry Canyon and Brushy Canyon Formations, as identified by the Compensated Neutron/Lithodensity/Gamma Ray Log dated September 14, 1990 run in the Exxon Corporation Yates "C" Federal Well No. 36, located 1305 feet from the North and East lines of Section 31, Township 20 South, Range 28 East, NMPM, Eddy County, New Mexico, with the top of the unitized interval being found in said well at a depth of 2,378 feet below the surface (869 feet above sea level) and the base of the unitized interval being found at a depth of 4,880 feet below the surface (1,633 feet below sea level), or stratigraphic equivalents thereof.

(7) The proposed Unit Area contains twelve separate tracts of land, the working interests in which are owned by forty-eight different persons. The applicant, Exxon

Corporation ("Exxon"), operates five of the twelve tracts, five tracts are operated by Yates Petroleum Corporation ("Yates"), one tract is operated by Premier Oil & Gas, Inc. ("Premier"), and one tract is operated by MWJ Producing Company. There are twenty-four royalty and overriding royalty interest owners in the Unit Area.

(8) At the time of the hearing, the owners of approximately 97.5 percent (97.5%) of the working interest, and the owners of over 95.0 percent (95.0%) of the royalty and overriding royalty interest, had voluntarily joined the Unit. The 95% royalty owner approval includes the U.S. Bureau of Land Management, which has indicated its preliminary approval by designating the unit as logical for conducting secondary recovery operations, and the Commissioner of Public Lands, which has preliminarily approved the unit.

(9) The applicant has conducted negotiations with interest owners within the Unit Area for over four years. Therefore, the applicant has made a good faith effort to secure voluntary unitization within the above-described Unit Area.

(10) All interested parties who have not agreed to unitization were notified of the hearing by applicant. At the hearing in this matter, Yates entered its appearance and presented evidence in support of the application. Unit Petroleum Company and MWJ Producing Company made statements in support of the application. One working interest owner, Premier, entered an appearance and opposed the application, and requested that Tract 6 (operated by Premier) be deleted from the Unit Area.

(11) Exxon is the largest working interest owner in the proposed Unit Area with 80 percent (80%) of current production. A substantial majority of working interest owners, excluding Exxon, requested that Exxon prepare a Technical Report of the Avalon-Delaware Pool. Exxon prepared the Technical Report (**Exxon Exhibit 10, Volumes I and II**) at its own expense.

(12) The applicant proposes to institute a waterflood project for the secondary recovery of oil and associated gas, condensate, and all associated liquefiable hydrocarbons within and to be produced from the proposed Unit Area (being the subject of Division Case No. 11,297). The estimated reserves recoverable from the waterflood project are 8.2 million barrels of oil.

(13) The Unit also has potential as a tertiary (CO₂ injection) project. Evidence presented at the hearing shows that:

- (a) Estimated recoverable tertiary reserves are 39.9 million barrels of oil.
- (b) If such a CO₂ flood is instituted in the proposed Unit Area, it will likely be the first CO₂ project in the area and could facilitate other CO₂ floods.
- (c) The waterflood project will provide additional data which may justify additional secondary recovery waterflood projects in other Delaware pools in New Mexico.
- (d) Institution of the CO₂ flood depends upon waterflood performance, results of future CO₂ injectivity tests, and perception of future oil prices. A minimum of 3 years of water injection would be required to repressure the reservoir prior to commencing a CO₂ injection program.

(14) The primary issue in dispute between Premier and other working interest owners is the geologic pick of the base of the Upper Cherry Canyon reservoir in Premier's FV3 Well, located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 25, Township 20 South, Range 27 East, NMPM, and the effect of that pick on recoverable reserves in Tract 6. Exxon's pick, supported by other interest owners, is 2768 feet subsurface, while Premier's pick is 2852 feet subsurface.

(15) **Exxon presented evidence that:**

- (a) Exxon examined 71 well logs, 4 cores, 13 dipmeters, 35 mud logs, all production data from the Pool, and tied-in to the regional stratigraphic framework in order to determine its geologic picks.
- (b) Exxon's geologic model was calibrated by actual production and verified by a reservoir simulation program.
- (c) Exxon's pick of the base of the Upper Cherry reservoir is consistent with geologic markers found throughout the Avalon-Delaware Pool (**Exxon Exhibits 16, 41, and 42**).

- (d) Premier presented its geologic interpretation to other Avalon Unit Area working interest owners in 1994, but those working interest owners agreed with Exxon's interpretation.
- (e) The waterflood project area includes approximately 1100 acres in the center of the Unit Area. The outer or "fringe" tracts were included in the Unit Area based upon their CO₂ flood potential. The "fringe" tracts will participate in production from inception of the Unit.
- (f) The main productive area in the Pool is in Unit Tracts 2, 3, 5, and 10. Adjoining, or "fringe" tracts (Unit Tracts 1, 4, 6, 7, 8, 9, 11, and 12) have little or no primary or secondary production potential. (See Exxon Exhibit 22).
- (g) Premier's FV3 Well produced 5100 barrels of oil prior to ceasing production. The nearest analogous well to the FV3 Well, the Yates Citadel ZG1 Well, located in the NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 36, Township 20 South, Range 27 East, immediately to the South of the FV3 Well (Unit Tract 7), is expected to produce 6000 barrels of primary oil.
- (h) ~~The Technical Report and the Unit Agreement attribute no remaining primary or waterflood reserves to Tract 6, operated by Premier. Primary production data and geologic markers in the Yates Citadel ZG1 Well, and other offset wells, support the Technical Report's estimate of primary and waterflood reserves in Unit Tract 6.~~
- (i) Premier will own 1% of the Avalon (Delaware) Unit despite the fact that Premier's Tract 6 has produced only 0.1% of the cumulative oil to date. In addition, Premier is likely to receive positive cash flow from the first day of unit operations because of investment adjustments.
- (j) It would be difficult, if Tract 6 were deleted from the Unit, to waterflood or CO₂ flood Tract 6 separately from the Unit. Furthermore, if Tract 6 is not part of the Unit, production of CO₂-laden gas from Tract 6 would present operational difficulties.

(16) **Yates presented evidence that:**

- (a) Deleting Tract 6 from the Unit would substantially reduce recoverable tertiary reserves under Tracts 3, 5, and 7, which are operated by Yates and adjacent to Tract 6.
- (b) Negotiations over the equity formula in the Unit Agreement lasted approximately one year. Deleting Tract 6 from the Unit Area would require additional negotiations among working interest owners, revision of Unit documents, and other delays. Yates' witness testified that if Tract 6 is deleted, unitization may never occur.
- (c) Yates' geologist had done independent work which confirmed Exxon's geologic interpretation in the area contested by Premier.

(17) **Premier presented evidence that:**

- (a) Tract 6 has substantial primary and waterflood reserves, but presented no evidence on the amount thereof, and Premier has never developed or produced such reserves. The only Delaware completion on its tract, the FV3 Well, produced only 5100 barrels of oil. (The analogous offset well, the Yates Citadel ZG1 Well, will produce only an estimated 6000 barrels of oil.)
- (b) Premier was advised in 1993 by its engineering consultant to develop its acreage in order to substantiate its claims.
- (c) Premier has never calculated primary reserves under Tract 6 or made any payout calculations for a well thereon.
- (d) Exxon used incorrect well locations for the Yates EP2 and EP3 Wells in the S $\frac{1}{2}$ SW $\frac{1}{4}$ of Section 19, Township 20 South, Range 28 East, and thus its geologic maps were wrong. (However, an aerial photo submitted by Exxon shows that Exxon's locations were correct and that the locations used by Premier were wrong. (Exxon Exhibit 40.))

- (e) Premier's FV3 Well was drilled and completed by Gulf in 1984, and purchased by Premier in 1990. The interval below the base of the Upper Cherry Canyon reservoir, claimed by Premier to be productive in the FV3 Well, was never perforated by either Gulf or Premier.
- (f) Premier has never drilled or recompleted a Delaware well on its FV lease, which covers 480 acres of land in Section 25, Township 20 South, Range 27 East, although Premier asserted in 1990 (Division Case No. 10145) that it would recomplete a well or wells in 1991.
- (g) Premier's engineering consultant stated that Tract 6 was given credit for waterflood "target" reserves (**Technical Report Exhibit E-6**), which "disappear" in the reserves for equity purposes (**Exhibit D of the Unit Agreement, and Technical Report Exhibit G-24 submitted as Yates Exhibit 6, at Tab 2G**). However, Premier's engineering consultant admitted he did not realize that "target" oil-in-place was a volumetric value used as a starting point in calculating recoverable reserves, on which equity is based. In order to obtain recoverable reserves, the "target oil-in-place" must be reduced by factors such as history matching, well-to-well continuity, sweep efficiency, floodable oil, pattern effects, and development costs. This was done on all tracts, including Premier's Tract 6.

(18) Premier did not present any new tract participation numbers.

(19) **Based upon the foregoing, the Division concludes that:**

- (a) Based on the information and data available, Exxon's Technical Report and reserve estimates are fair and reasonable. Premier's claims are speculative and unsubstantiated; and
- (b) Tract 6 is State of New Mexico land. Deleting Tract 6 from the Unit will adversely affect State interests in Tract 6 and in offsetting State land (Tracts 3 and 5). Deleting Tract 6 from the Unit will result in the waste of tertiary reserves under Tracts 3, 5, and 6.

(20) The proposed unitized method of operation as applied to the Avalon (Delaware) Unit is feasible and will result with reasonable probability in the increased

recovery of substantially more oil and gas from the unitized portion of the Avalon-Delaware Pool than would otherwise be recovered without unitization.

(21) Such unitization and adoption of applicant's proposed unitized method of operation will benefit the working interest owners and royalty owners of the oil and gas rights within the Avalon (Delaware) Unit Area.

(22) The granting of the application in this case will have no adverse effect upon the Avalon-Delaware Pool.

(23) The estimated additional costs of such operations will not exceed the estimated value of the additional oil so recovered plus a reasonable profit.

(24) The applicant's Exhibit Nos. 2 and 3 in this case, being the Unit Agreement and the Unit Operating Agreement, should be incorporated by reference into this order.

(25) The unitized management, operation and further development of the Avalon (Delaware) Unit Area, as proposed, is reasonably necessary to effectively increase the ultimate recovery of oil and gas from the unitized portion of the Avalon-Delaware Pool.

(26) The Avalon (Delaware) Unit Agreement and the Avalon (Delaware) Unit Operating Agreement provide for unitization and unit operation of the Avalon (Delaware) Unit Area upon terms and conditions that are fair, reasonable and equitable, and include:

- (a) a participation formula which will result in fair, reasonable and equitable allocation to the separately owned tracts of the Unit Area of all oil and gas that is produced from the Unit Area and which is saved, being the production that is (i) not used in the conduct of unit operations, or (ii) unavoidably lost;
- (b) a provision for the credits and charges to be made in the adjustment among the owners in the Unit Area for their respective investments in wells, tanks, pumps, machinery, materials and equipment contributed to the unit operators;
- (c) a provision governing how the costs of unit operations including capital investments shall be determined and charged to the separately-owned tracts and how said costs shall be paid, including

- a provision providing when, how and by whom such costs shall be charged to each owner, or the interest of such owner, and how his interest may be sold and the proceeds applied to the payment of his costs;
- (d) a provision for carrying any working interest owner on a limited or carried basis payable out of production, upon terms and conditions which are just and reasonable, and which allow an appropriate charge for interest for such service payable out of production, upon such terms and conditions determined by the Division to be just and reasonable;
 - (e) a provision designating the Unit Operator and providing for supervision and conduct of the unit operations, including the selection, removal and substitution of an operator from among the working interest owners to conduct the unit operations;
 - (f) a provision for a voting procedure for decisions on matters to be decided by the working interest owners in respect to which each working interest owner shall have a voting interest equal to his unit participation; and
 - (g) a provision specifying the time when the unit operation shall commence and the manner in which, and the circumstances under which, the operations shall terminate and for the settlement of accounts upon such termination.

(27) The statutory unitization of the Avalon (Delaware) Unit Area is in conformity with the above findings, and will prevent waste and protect correlative rights of all interest owners within the proposed Unit Area, and should be approved.

IT IS THEREFORE ORDERED THAT:

(1) The application of Exxon Corporation for the Avalon (Delaware) Unit, covering 2118.78 acres, more or less, of State, Federal and fee lands in the Avalon-Delaware Pool, Eddy County, New Mexico, is hereby approved for statutory unitization pursuant to the "Statutory Unitization Act," Sections 70-7-1 through 70-7-21 NMSA (1978).

(2) The Avalon (Delaware) Unit Agreement, as amended, and the Avalon (Delaware) Unit Operating Agreement, which were submitted to the Division at the time of the hearing as Exhibits 2 and 3, are hereby incorporated by reference into this order.

(3) The lands herein designated the Avalon (Delaware) Unit Area shall comprise the following described acreage in Eddy County, New Mexico:

Township 20 South, Range 27 East, NMPM

Section 25: $E\frac{1}{2}E\frac{1}{2}$

Section 36: $E\frac{1}{2}E\frac{1}{2}$

Township 20 South, Range 28 East, NMPM

Section 29: $SW\frac{1}{4}SW\frac{1}{4}$

Section 30: Lots 1-4, $E\frac{1}{2}W\frac{1}{2}$, $SW\frac{1}{4}NE\frac{1}{4}$, $SE\frac{1}{4}$

Section 31: Lots 1-4, $E\frac{1}{2}W\frac{1}{2}$, $E\frac{1}{2}$ (All)

Section 32: $SW\frac{1}{4}NE\frac{1}{4}$, $W\frac{1}{2}$, $W\frac{1}{2}SE\frac{1}{4}$

Township 21 South, Range 27 East, NMPM

Section 4: Lot 4

Section 5: Lots 1 and 2

Section 6: Lots 1 and 2

(4) The vertical limits of the unitized area is that interval underlying the Unit Area described as the Delaware Mountain Group, extending from 100 feet above the base of the Goat Seep Reef to the top of the Bone Spring formation and including, but not limited to, the Cherry Canyon and Brushy Canyon Formations, as identified on the Compensated Neutron/Lithodensity/Gamma Ray Log dated September 14, 1990 run in the Exxon Corporation Yates "C" Federal Well No. 36, located 1305 feet from the North and East lines of Section 31, Township 20 South, Range 28 East, NMPM, Eddy County, New Mexico, with the top of the unitized interval being found in said well at a depth of 2,378 feet below the surface (869 feet above sea level) and the base of the unitized interval being found at a depth of 4,880 feet below the surface (1,633 feet below sea level), or stratigraphic equivalents thereof.

(5) The applicant shall have the right to institute a waterflood project for the secondary recovery of oil and associated gas, condensate and all associated liquefiable hydrocarbons within and produced from the Unit Area and said waterflood project which is the subject of Division Case No. 11,297.

(6) Since the persons owning the required statutory minimum percentage of interest in the Unit Area have approved, ratified, or indicated their preliminary approval of the Unit Agreement and the Unit Operating Agreement, the interests of all persons within the Unit Area are hereby unitized whether or not such persons have approved the Unit Agreement or the Unit Operating Agreement in writing.

(7) The applicant, hereby designated as Unit Operator, shall notify in writing the Division Director of any removal or substitution of said Unit Operator by any other working interest owner within the Unit Area.

(8) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY
Director

S E A L

September 19, 1995

HINKLE, COX, EATON,
COFFIELD & HENSLEY
Attorneys at Law
P. O. Box 2068
Santa Fe, New Mexico 87501

ATTN: Jim Bruce

**RE: CASE NO. 11297 and
CASE NO. 11298
Order No. R-10460**

Dear Sir:

Enclosed herewith are two copies of the above-referenced Division order recently entered in the subject case.

Sincerely,


Sally E. Martinez
Administrative Secretary

cc: BLM - Carlsbad
Pete Martinez - SLO
Taxation & Revenue Dept.
Tom Kellahin
Bill Carr



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Roswell District Office
1717 West Second Street
Roswell, New Mexico 88201-2019

IN REPLY
REFER TO:

NMNM94450X
3180 (06200)

MAY 17 1995

Exxon Company, U.S.A.
Attention: Mr. Joe B. Thomas
P. O. Box 1600
Midland, TX 79702-1600

Gentlemen:

Your application of May 2, 1995, filed with the BLM requests the designation of the Avalon (Delaware) Unit area, embracing 2118.78 acres, more or less, Eddy, County, New Mexico, as logically subject to secondary operations under the unitization provisions of the Mineral Leasing Act as amended.

Pursuant to unit plan regulations 43 CFR 3180, the land requested as outlined on your plat marked Exhibit A, Exxon Company, U.S.A., Avalon (Delaware) Unit, Eddy County, New Mexico, is hereby designated as a logical unit area for the purpose of conducting secondary recovery operations and has been assigned No. NMNM94450X. This designation is valid for a period of one year from the date of this letter.

Waterflooding will be limited to that interval underlying the Unit Area described as, the Delaware Mountain Group, extending from 100 feet above the base of the Goat Seep Reef to the top of the Bone Spring formation and including, but not limited to, the Cherry Canyon and Brushy Canyon formations, as identified by the Compensated Neutron/Lithodensity/Gamma Ray log dated September 14, 1990, run in the Exxon Yates "C" Federal #36, located in the Center of the NW $\frac{1}{4}$ section 31, T. 20 S., R. 28 E., Eddy County, New Mexico, with the top of the Unitized Interval being found in said well at a depth of 2,378 feet below the surface (869 feet above sea level) and the base of the Unitized Interval being found at a depth of 4,880 feet below the surface (1,633 feet below sea level) or stratigraphic equivalents, thereof.

Your basis for allocation of unitized substances and your proposed use of the Form of Agreement are acceptable. Exhibits A and B need to be corrected to show the acreage compiled from the official records of the Bureau of Land Management. The corrections to be made are shown in red on the enclosed Exhibits A and B.

If conditions are such that modification of said standard form is deemed necessary, two copies of the proposed modifications with appropriate justification must be submitted to this office for preliminary approval.

In the absence of any type of land requiring special provisions or any objections not now apparent, a duly executed agreement identical with said form, modified as outlined above, will be approved if submitted in approvable status within a reasonable period of time. However, notice is hereby given that the right is reserved to deny approval of any executed agreement submitted which in our opinion, does not have the full commitment of sufficient lands to afford effective control of operations in the unit area.

When the executed agreement is transmitted to the BLM for final approval, include the latest status of all acreage. In preparation of Exhibits "A" and "B", follow closely the format of the sample exhibits attached to the reprint of the aforementioned form. You will also need to submit a listing of current well names and proposed unit well name changes.

Inasmuch as this unit agreement involves State and Fee land, we are sending a copy of the letter to the Commissioner of Public Lands and the NMOCD. Please contact the State of New Mexico before soliciting joinders regardless of prior contacts or clearances from the state.

Sincerely,

(Orig Sdg) Tony L. Ferguson

Tony L. Ferguson
Assistant District Manager,
Minerals Support Team

Enclosures

cc:
Commissioner of Public Lands, Santa Fe
NMOCD, Santa Fe



OIL CONSERVATION DIVISION
MAY 15 1995 10 52

RAY POWELL, M.S., D.V.M.
COMMISSIONER

State of New Mexico
Commissioner of Public Lands

310 OLD SANTA FE TRAIL P.O. BOX 1148

SANTA FE, NEW MEXICO 87504-1148

(505) 827-5760
FAX (505) 827-5766

May 15, 1995

Exxon Company USA
P.O. Box 1600
Midland, Texas 79702-1600

Attention: Mr. Joe Thomas

Re: Request for Preliminary Approval
Avalon Delaware Unit
Eddy County, New Mexico

Dear Mr. Thomas:

This office has reviewed the unexecuted copy of the unit agreement for the proposed Avalon Delaware Unit, Eddy County, New Mexico. This agreement meets the general requirements of the Commissioner of Public Lands who has this date granted you preliminary approval as to form and content.

Preliminary approval shall not be construed to mean final approval of this agreement in any way and will not extend any short term leases until final approval and an effective date are given.

When submitting your agreement for final approval, please submit the following:

1. Application for final approval by the Commissioner setting forth the tracts that have been committed and the tracts that have not been committed.
2. Two copies of the Unit Agreement.
3. All ratifications from the Lessees of Record and Working Interest Owners. All signatures should be acknowledged before a notary. One set of ratifications must contain original signatures.
4. Initial Plan of Operation.
5. Order of the New Mexico Oil Conservation Division. Our approval will be conditioned upon subsequent favorable approval by the New Mexico Oil Conservation Division.
6. A copy of the Unit Operating Agreement.

Exxon Company USA

Page 2

May 11, 1995

7. Per your telephone conversation with Pete Martinez of this office, please revise Exhibit "A" & "B" to coincide with the BLM's survey plats. The following unit acreage should be changed: Federal Acreage, State Acreage, Fee Acreage and Total Acreage.
8. In Unit Agreement Page 3, Section 2(a), the acreage should be changed to 2,118.78.
9. Please date the unit agreement on Page 1.
10. A redesignation of all well names and numbers. The list should include the OCD property name, property number, pool name , pool code and API number.

If you have any questions, or if we may be of further help, please contact Pete Martinez at (505) 827-5791.

Very truly yours,

RAY POWELL, M.S., D.V.M.
COMMISSIONER OF PUBLIC LANDS



BY:

JAMI BAILEY, Deputy Director
Oil/Gas and Minerals Division
(505) 827-5745

RP/IB/cpm

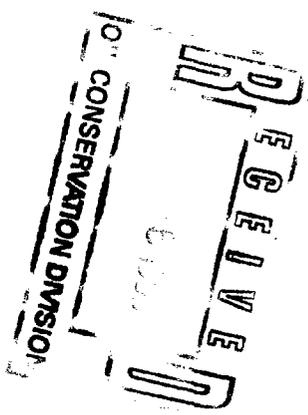
Enclosure

cc: Reader File

BLM-Roswell--Attention: Mr. Armando Lopez

OCD-Santa Fe--Attention: Mr. Roy Johnson

STATUTORY UNITIZATION
 UNIT NAME: AVALON (DELAWARE) UNIT
 OPERATOR: EXXON CORPORATION
 COUNTY: EDDY



DATE	OCC CASE NO.	TOTAL	ACREAGE	STATE	FEDERAL	FEE	SEGREGATION	TERM
APPROVED	OCC ORDER NO.						CLAUSE	
EFFECTIVE	11297--R-10460	2118.78	1146.91	771.87	200.00	MODIFIED	SO LONG AS	
10-1-95	11298--R-10460							

APPROVALS

SLO--9-29-95
 BLM--9-28-95
 OCD--9-18-95

TOWNSHIP 20 SOUTH, RANGE 27 EAST

Section 25: E/2E/2
 Section 36: E/2E/2

TOWNSHIP 20 SOUTH, RANGE 28 EAST

Section 29: SW/4SW/4
 Section 30: Lots 1, 2, 3, 4, SW/4NE/4, E/2W/2, SE/4
 Section 31: Lots 1, 2, 3, 4, E/2, E/2W/2
 Section 32: SW/4NE/4, W/2, W/2SE/4

TOWNSHIP 21 SOUTH, RANGE 27 EAST

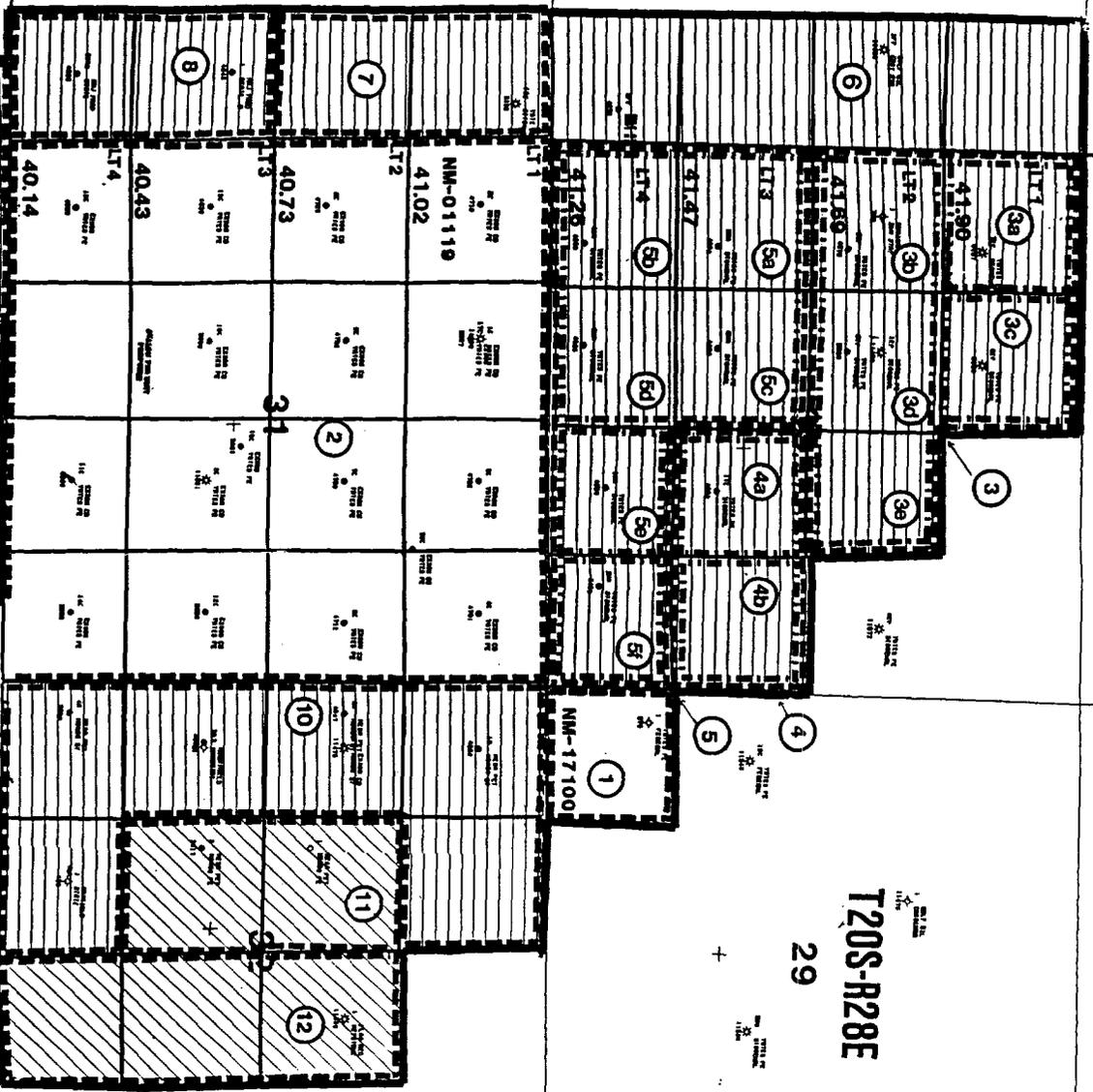
Section 4: Lot 4
 Section 5: Lots 1, 2
 Section 6: Lots 1, 2

T20S-R27E
25

T20S-R28E
29

T21S-R27E

T21S-R27E



○ = TRACT #

-  PUBLIC LAND
-  STATE LAND
-  PATENTED LAND

EXXON COMPANY USA
 PRODUCTION DEPARTMENT
 SOUTHWESTERN DIVISION
EXHIBIT "A"
 AVALON IMPROVED RECOVERY PROJECT
 EDDY COUNTY, NEW MEXICO

6
5
4

EXHIBIT "B"
 SCHEDULE OF OWNERSHIP
 SCHEDULE SHOWING ALL LANDS AND LEASES
 WITHIN THE AVALON (DELAWARE) UNIT
 EDDY COUNTY, NM

Tract NO	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL NUMBER AND EXPIRATION DATE OF LEASE	BASIC ROYALTY & PERCENTAGE	LESSEE OF RECORD & PERCENTAGE	OVERRIDING ROYALTY	PERCENTAGE	WORKING INTEREST	PERCENTAGE
1	T20S R28E Section 29: SWSW	40.00	NMNM-17100 (Out of NMNM-0401842) HBP	U.S.A.- All (12.5% Royalty)	Mary H. Ard- 33.34 William A. Hudson II- 33.33% Edward R. Hudson, Jr.- 33.33%	Oxy Energy Company Pennzoil Exploration and Production Company Mark D. Wilson Robert E. Boling Est Robert Michael Boling Per Rep Janet Lynn Richardson Per Rep Mary L. Boling	3.056570 0.566210 2.000000 1.000000 1.000000 1.000000 1.000000 7.622780	Yates Petroleum Corporation Yates Drilling Company Abo Petroleum Corporation Myco Industries, Inc. Claremont Corporation Mary H. Ard William A. Hudson II Edward R. Hudson, Jr. Exxon Corporation Kerr-McGee Corporation Rosalind Redfern John J. Redfern III, (Indep Exec) Est of John J. Redfern, Jr. Martin Living Trust R. Ken Williams Edward H. Judson Devon Energy Corporation (NV) Ernie Bello Mrs. Frances B. Bunn Gendron Family Revocable Tr David Goodnow Joseph R. Hodge Santford J. Hodge, III E. G. Holden Testamentary Tr Isaac A. Kawasaki Betsy H. Keller Charles Cline Moore Agnes Cluibe Oliver Tr William B. Oliver Tr Adolph P. Schuman Mart Tr Space Building Corp. J. F. Van Vranken, Jr. Unit Petroleum Whiting Petroleum Corporation Tipperary Oil & Gas Corporation Hayes Partners I	9.444760 9.444760 3.148260 9.444760 0.724340 3.863200 3.863200 6.250000 0.698350 0.338970 0.338970 0.482903 0.482903 0.482904 2.382880 0.024701 0.024701 0.037052 0.024701 0.004117 0.004117 0.012351 0.024701 0.012351 0.061753 0.024701 0.024701 0.024701 0.061753 0.024701 10.505708 2.818810 2.818810 8.052840

EXHIBIT "B"
SCHEDULE OF OWNERSHIP
SCHEDULE SHOWING ALL LANDS AND LEASES
WITHIN THE AVALON (DELAWARE) UNIT
EDDY COUNTY, NM

Tract NO	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL NUMBER AND EXPIRATION DATE OF LEASE	BASIC ROYALTY & PERCENTAGE	LESSEE OF RECORD & PERCENTAGE	OVERRIDING ROYALTY	PERCENTAGE	WORKING INTEREST	PERCENTAGE
3a	(As to Lot 1) (Stonewall EP State #7)					Robert E. Boling Est Robert Michael Boling Per Rep Janet Lynn Richardson Per Rep Mary L. Boling	1.000000) 1.000000 1.000000		
						<u>Total ORR</u>	<u>8.140320</u>		
						Yates Petroleum Corporation		10.083120	
						Yates Drilling Company		10.083120	
						Abo Petroleum Corporation		3.361040	
						Mycro Industries, Inc.		10.083120	
						Claremont Corporation		0.773310	
						Mary H. Ard		4.124310	
						William A. Hudson II		4.124310	
						Edward R. Hudson, Jr.		4.124310	
						Exxon Corporation		27.973850	
						Kerr-McGee Corporation		0.745550	
						Rosalind Redfern		0.361880	
						John J. Redfern III, Indep Exec		0.361880	
						Est of John J. Redfern, Jr.)			
						Martin Living Trust		0.515540	
						R. Ken Williams		0.515540	
						Edward H. Judson		0.515540	
						Devon Energy Corporation (NV)		2.300800	
						Ernie Bello		0.007911	
						Mrs. Frances B. Bunn		0.007911	
						Gendron Family Revocable Tr		0.011867	
						David Goodnow		0.007911	
						Joseph R. Hodge		0.001318	
						Sanford J. Hodge, III		0.001318	
						E. G. Holden Testamentary Tr		0.003956	
						Isaac A. Kawasaki		0.007911	
						Betsy H. Keller		0.003956	
						Charles Cline Moore		0.019779	
						Agnes Cluthe Oliver Tr		0.007911	
						William B. Oliver Tr		0.007911	
						Adolph P. Schuman Marri Tr		0.007911	

EXHIBIT "B"
 SCHEDULE OF OWNERSHIP
 SCHEDULE SHOWING ALL LANDS AND LEASES
 WITHIN THE AVALON (DELAWARE) UNIT
 EDDY COUNTY, NM

TRACT NO	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL NUMBER AND EXPIRATION DATE OF LEASE	BASIC ROYALTY & PERCENTAGE	LESSEE OF RECORD & PERCENTAGE	OVERRIDING ROYALTY	PERCENTAGE	WORKING INTEREST	PERCENTAGE
								Gendron Family Revocable Tr	0.029667
								David Goodnow	0.019778
								Joseph R. Hodge	0.003296
								Sanford J. Hodge, III	0.003296
								E. G. Holden Testamentary Tr	0.009899
								Isaac A. Kawasaki	0.019778
								Betsy H. Keller	0.009889
								Charles Cline Moore	0.049445
								Agnes Cluthe Oliver Tr	0.019778
								William B. Oliver Tr	0.019778
								Adolph P. Schuman Mart Tr	0.019778
								Space Building Corp.	0.049445
								J. F. Van Vranken, Jr.	0.019778
								Unit Petroleum	12.925834
								Claremont Corporation	0.579982
								Mary H. Ard	3.093233
								William A. Hudson II	3.093232
								Edward R. Hudson, Jr.	3.093232
								Exxon Corporation	20.980388
								Kerr-McGee Corporation	0.559163
								Rosalind Redfern	0.271410
								John J. Redfern III, Indep Execj of Est of John J. Redfern, Jr. }	0.271410
								Martin Living Trust	0.386655
								R. Ken Williams	0.386655
								Edward H. Judson	0.386655
								Yates Petroleum Corporation	1.725600
								Devon Energy Corporation (NV)	1.725600
								Pennzoil Exploration & Production Company	25.000000
								Total this sub-tract	100.000000

5 T20S-R28E 242.73 K-6854-2 HBP STATE OF NEW MEXICO EXXON CORPORATION-100% Oryx Energy Company 3.493220
 Section 30, Lots 3,4 ALL (12.5% Royalty) Pennzoil Exploration 0.647100
 E/2SW; S/2SE and Production Company

EXHIBIT "B"
 SCHEDULE OF OWNERSHIP
 SCHEDULE SHOWING ALL LANDS AND LEASES
 WITHIN THE AVALON (DELAWARE) UNIT
 EDDY COUNTY, NM

Tract NO	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL NUMBER AND EXPIRATION DATE OF LEASE	BASIC ROYALTY & PERCENTAGE	LESSEE OF RECORD & PERCENTAGE	OVERRIDING ROYALTY	PERCENTAGE	WORKING INTEREST	PERCENTAGE
						Mark D. Wilson	2.000000		10.083120
						Robert E. Boling Est	1.000000		10.083120
						Robert Michael Boling Per Rep	}		3.361040
						Janet Lynn Richardson Per Rep	}		10.083120
						Mary L. Boling	1.000000		0.026371
						Total ORR	8.140320		

5a (As to Lot 3)
 (Stonewall "WM" State #6)

Yates Petroleum Corporation	10.083120
Yates Drilling Company	10.083120
Abco Petroleum Corporation	3.361040
Mycro Industries, Inc.	10.083120
Ernie Bello	0.026371
Mrs. Frances B. Bunn	0.026371
Gendron Family Revocable Tr	0.039556
David Goodnow	0.026371
Joseph R. Hodge	0.004394
Sanford J. Hodge, III	0.004394
E. G. Holden Testamentary Tr	0.013184
Isaac A. Kawasaki	0.026371
Betsy H. Keller	0.013185
Charles Clune Moore	0.065927
Agnes Clune Oliver Tr	0.026371
William B. Oliver Tr	0.026371
Adolph P. Schuman Marri Tr	0.026371
Space Building Corp.	0.065927
J. F. Van Vranken, Jr.	0.026371
Unit Petroleum	11.394842
Whiting Petroleum Corporation	2.919802
Tipperary Oil & Gas Corporation	2.919801
Claremont Corporation	0.773310
Mary H. Aird	4.124310
William A. Hudson II	4.124310
Edward R. Hudson, Jr.	4.124310
Exxon Corporation	27.973850
Kerr-McGee Corporation	0.745550

EXHIBIT "B"
SCHEDULE OF OWNERSHIP
SCHEDULE SHOWING ALL LANDS AND LEASES
WITHIN THE AVALON (DELAWARE) UNIT
EDDY COUNTY, NM

Tract NO	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL NUMBER AND EXPIRATION DATE OF LEASE	BASIC ROYALTY & PERCENTAGE	LESSEE OF RECORD & PERCENTAGE	OVERRIDING ROYALTY	PERCENTAGE	WORKING INTEREST	PERCENTAGE
								Rosalind Redfern	0.361880
								John J. Redfern III, (Indep Exec)	0.361880
								of Est of John J. Redfern, Jr.}	0.515540
								Martin Living Trust	0.515540
								R. Ken Williams	0.515540
								Edward H. Judson	0.515540
								Devon Energy Corporation (NV)	2.300800
								Yates Petroleum Corporation	2.300800
								Total this sub tract	100.000000
5b	(As to Lot 4) (Stonewall "WM" State #4)							Yates Petroleum Corporation	10.083120
								Yates Drilling Company	10.083120
								Abo Petroleum Corporation	3.361040
								Myco Industries, Inc.	10.083120
								Ernie Bello	0.026371
								Mrs. Frances B. Bunn	0.026371
								Gendron Family Revocable Tr	0.038556
								David Goodnow	0.026371
								Joseph R. Hodge	0.004394
								Sanford J. Hodge, III	0.004394
								E. G. Holden Testamentary Tr	0.013184
								Isaac A. Kawasaki	0.026371
								Betsy H. Keller	0.013185
								Charles Cline Moore	0.065927
								Agnes Cluthe Oliver Tr	0.026371
								William B. Oliver Tr	0.026371
								Adolph P. Schuman Martl Tr	0.026371
								Space Building Corp.	0.065927
								J. F. Van Vranken, Jr.	0.026371
								Unit Petroleum	1.498420
								Whiting Petroleum Corporation	2.868013
								Tipperary Oil & Gas Corporation	2.868012
								Claremont Corporation	0.773310
								Mary H. Ard	4.124310
								William A. Hudson II	4.124310

EXHIBIT "B"
SCHEDULE OF OWNERSHIP
SCHEDULE SHOWING ALL LANDS AND LEASES
WITHIN THE AVALON (DELAWARE) UNIT
EDDY COUNTY, NM

Tract NO	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL NUMBER AND EXPIRATION DATE OF LEASE	BASIC ROYALTY & PERCENTAGE	LESSEE OF RECORD & PERCENTAGE	OVERRIDING ROYALTY	PERCENTAGE	WORKING INTEREST	PERCENTAGE
								E. G. Holden Testamentary Tr	0.009889
								Isaac A. Kawasaki	0.019778
								Betsy H. Keller	0.009889
								Charles Cline Moore	0.049445
								Agnes Clurke Oliver Tr	0.019778
								William B. Oliver Tr	0.019778
								Adolph P. Schuman Martl Tr	0.019778
								Space Building Corp.	0.049445
								J. F. Van Vranken, Jr.	0.019778
								Unit Petroleum	12.925834
								Claremont Corporation	0.579982
								Mary H. Ard	3.093233
								William A. Hudson II	3.093232
								Edward R. Hudson, Jr.	3.093232
								Exxon Corporation	20.980388
								Ker-McGee Corporation	0.559163
								Rosalind Redfern	0.271410
								John J. Redfern III, Indep Exec	0.271410
								of Est of John J. Redfern, Jr.)	
								Martin Living Trust	0.386655
								R. Ken Williams	0.386655
								Edward H. Judson	0.386655
								Yates Petroleum Corporation	1.725600
								Devon Energy Corporation (NV)	1.725600
								Pennzoil Exploration & Production Company	25.000000
								Total this sub-tract	100.000000
51	(As to SESE) (Stonewall "WM" State #21)							Yates Petroleum Corporation	7.562340
								Yates Drilling Company	7.562340
								Abco Petroleum Corporation	2.520780
								Mycro Industries, Inc.	7.562340
								Ernie Bello	0.019778
								Mrs. Frances B. Bunn	0.019778
								Gendron Family Revocable Tr	0.029667
								David Goodnow	0.019778

EXHIBIT "B"
 SCHEDULE OF OWNERSHIP
 SCHEDULE SHOWING ALL LANDS AND LEASES
 WITHIN THE AVALON (DELAWARE) UNIT
 EDDY COUNTY, NM

Tract NO	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL NUMBER AND EXPIRATION DATE OF LEASE	BASIC ROYALTY & PERCENTAGE	LESSEE OF RECORD & PERCENTAGE	OVERRIDING ROYALTY	PERCENTAGE	WORKING INTEREST	PERCENTAGE
								Joseph R. Hodge	0.003296
								Sanford J. Hodge, III	0.003296
								E. G. Holden Testamentary Tr	0.009889
								Isaac A. Kawasaki	0.019778
								Betsy H. Keller	0.009889
								Charles Cline Moore	0.049445
								Agnes Cluthe Oliver Tr	0.019778
								William B. Oliver Tr	0.019778
								Adolph P. Schuman Marj Tr	0.019778
								Space Building Corp.	0.049445
								J. F. Van Vranken, Jr.	0.019778
								Unit Petroleum	8.623816
								Whiting Petroleum Corporation	2.151009
								Tipetary Oil & Gas Corporation	2.151009
								Claremont Corporation	0.579982
								Mary H. Ard	3.093233
								William A. Hudson II	3.093232
								Edward R. Hudson, Jr.	3.093232
								Exxon Corporation	20.980388
								Kerr-McGee Corporation	0.559163
								Rosalind Redfern	0.271410
								John J. Redfern, III, Indep Exec}	0.271410
								of Est of John J. Redfern, Jr.}	0.386655
								Martin Living Trust	0.386655
								R. Ken Williams	0.386655
								Edward H. Judson	1.725600
								Yates Petroleum Corporation	1.725600
								Devon Energy Corporation (INV)	1.725600
								Pennzoil Exploration & Production Company	25.000000
								Total this sub-tract	100.000000

T20S-R27E Section 25: E2E12 160.00 K-6527-14 HBP STATE OF NEW MEXICO ALL (12.5% Royalty) Premier Oil & Gas, Inc. -100% Premier Oil & Gas, Inc. 100.000000

EXHIBIT "B"
 SCHEDULE OF OWNERSHIP
 SCHEDULE SHOWING ALL LANDS AND LEASES
 WITHIN THE AVALON (DELAWARE) UNIT
 EDDY COUNTY, NM

Tract NO	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL AND EXPIRATION DATE OF LEASE	BASIC ROYALTY & PERCENTAGE	LESSEE OF RECORD & PERCENTAGE	OVERRIDING ROYALTY PERCENTAGE	WORKING INTEREST PERCENTAGE	
7	T20S-R27E Section 36: E/2NE (Ch'del' ZG' State # 1)	80.00	K-6261-2 HBP	STATE OF NEW MEXICO ALL (12.5% Royalty)	OXY U.S.A., INC. -100%		50.000000 20.000000 10.000000 10.000000 10.000000	
					OXY U.S.A., INC. Yates Petroleum Corporation Yates Drilling Company Mycos Industries, Inc. Abo Petroleum Corporation		10.000000 10.000000 10.000000 10.000000	
							Tract Total	100.000000
8	T20S-R27E Section 36: E/2SE (GW "A" State #1)	80.00	L-4861 HBP	STATE OF NEW MEXICO ALL (12.5% Royalty)	MWJ Producing Company		22.656250 22.656250 22.656250 2.669270 1.757810 0.781250 0.911460	
					Martin Living Trust R. Ken Williams Edward H. Judson Sigmar, Inc. R. Ken Williams John L. Schlegel Fred A. Fox & D. Marlean Fox Living Trust James L. Martin Jr., Trust Mycos Industries, Inc. John A. Yates S. P. Yates		0.911460 8.333334 8.333333 8.333333 8.333333	
							Tract Total	100.000000
9	T21S-R27E Section 6: Lots 1 & 2	60.59	K-4097-1 HBP	STATE OF NEW MEXICO ALL (12.5% Royalty)	Mobil Production Texas & New Mexico, Inc. -100%		100.000000	
					Exxon Corporation			
10	T20S-R28E Section 32: N/2NW, SWNW, W/2SW, SESW	240.00	L-324-2 HBP	STATE OF NEW MEXICO ALL (12.5% Royalty)	Exxon Corporation -100%		100.000000	
					Exxon Corporation			

Total State Acreage: 1146.91 or 54.13%

EXHIBIT "B"
SCHEDULE OF OWNERSHIP
SCHEDULE SHOWING ALL LANDS AND LEASES
WITHIN THE AVALON (DELAWARE) UNIT
EDDY COUNTY, NM

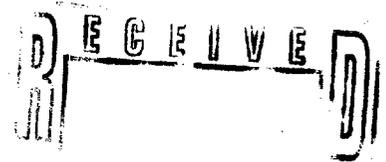
Tract NO	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL NUMBER AND EXPIRATION DATE OF LEASE	BASIC ROYALTY & PERCENTAGE	LESSEE OF RECORD & PERCENTAGE	OVERRIDING ROYALTY	PERCENTAGE	WORKING INTEREST	PERCENTAGE	
11	T205-R28E Section 32: SENW below 1,000 feet): NESW	80.00	FEE-HBP Lease dated 07/15/54	KEYSTONE CORP ET AL Royalty 1/8 (Davis Bros., L.L.C. 6.25%) (Sabine Royalty Tr 3.125%) (Singer Brothers 3.125%) Total Royalty 12.500%	Exxon Corporation-100%			Exxon Corporation	100.000000	
12	T205-R28E Section 32: SWNE, W/2SE	120.00	FEE-HBP Lease dated 08/03/73	Davis Bros., L.L.C. 50.00% Royalty 1/4 (NationsBank of Texas, N. A. Tr of Sabine Royalty Tr) Royalty 3/16 FEE-HBP Lease dated 10/30/72 Singer Bros. Royalty 3/16 FEE-HBP Lease dated 10/31/71 FEE-HBP Lease dated 10/31/71	Exxon Corporation Oxy USA Inc. Seventy-Seven Corporation Unit Petroleum William B. Oliver Trust Agnes Cluthe Oliver Trust Estate of Jack O. McCall Charles Cline Moore TR Oil Corporation Whiting Petroleum Corporation Tipperary Oil & Gas Corporation Yates Drilling Company Los Chicos Mycos Industries, Inc. John A. Yates	62.500000 15.000000 1.666680 4.995246 0.008970 0.008970 0.072580 0.029030 0.870900 1.223812 1.223812 4.166670 2.083330 4.166660 2.083340	of the Delta-Flag Royalty Trust Robert L. Spears Mark D. Wilson Robert E. Boling Est Robert Michael Boling Per Rep Janet Lynn Richardson Per Rep Mary L. Boling Total ORR 5.0351562	3.7500000 0.2851562 0.5000000 0.2500000 0.2500000 0.2500000 0.2500000 0.2500000 0.870900 1.223812 1.223812 4.166670 2.083330 4.166660 2.083340	Exxon Corporation Oxy USA Inc. Seventy-Seven Corporation Unit Petroleum William B. Oliver Tr Agnes Cluthe Oliver Tr Estate of Jack O. McCall Charles Cline Moore TR Oil Corporation Whiting Petroleum Corporation Tipperary Oil & Gas Corporation Yates Drilling Company Los Chicos Mycos Industries, Inc. John A. Yates	62.500000 15.000000 1.666680 4.995246 0.008970 0.008970 0.072580 0.029030 0.870900 1.223812 1.223812 4.166670 2.083330 4.166660 2.083340
Total Fee Acreage:						200.00	or 9.44%			
RECAPITULATION:										
TOTAL FEDERAL ACREAGE		771.87	or 36.43%							
TOTAL STATE ACREAGE		1146.91	or 54.13%							
TOTAL FEE ACREAGE		200.00	or 9.44%							
TOTAL UNIT ACREAGE		2118.78	or 100.00%							



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Roswell District Office
1717 West Second Street
Roswell, New Mexico 88201-2019



IN REPLY REFER TO:
NMNM94450X
3180 (06200)

CONSERVATION DIVISION

SEP 28 1995

Exxon Company, U. S. A.
Attention: Mr. Joe B. Thomas
P. O. Box 1600
Midland, TX 79702-1600

Gentlemen:

One approved copy of the Avalon (Delaware) Unit Agreement, No. NMNM94450X, Eddy County, New Mexico, is enclosed. Such agreement is approved as of the date of approval and will become effective upon submittal of a Certificate of Effectiveness pursuant to Section 24 of the unit agreement.

Approval of the agreement does not warrant or certify that the operator thereof, and other working interest owners hold legal or equitable title to the leases which are committed hereto.

You are requested to furnish all interested principals with appropriate evidence of this approval.

Sincerely,

(Orig Sdg) Tony L. Ferguson

Tony L. Ferguson
Assistant District Manager,
Minerals Support Team

Enclosure

cc:
Commissioner of Public Lands, Santa Fe
MMS, Denver (3110)
NMOCD, Santa Fe

CERTIFICATION--DETERMINATION

Pursuant to the authority vested in the Secretary of the Interior, the Act approved February 25, 1920, 41 Stat. 437, as amended, 30 U.S.C., sec. 181, et seq., and delegated to the Authorized Officer of the Bureau of Land Management, under the authority of 43 CFR 3183, I do hereby:

- A. Approve the attached agreement for the development and operation of the Avalon (Delaware) unit area, State of New Mexico. This approval shall be invalid ab initio if the public interest requirement under §3183.4 (b) of this title is not met.

- B. Certify and determine that the unit plan of development and operation contemplated in the attached agreement is necessary and advisable in the public interest for the purpose of more properly conserving the natural resources.

- C. Certify and determine that the drilling, producing, rental, minimum royalty, and royalty requirements of all Federal leases committed to said agreement are hereby established, altered, changed, or revoked to conform with the terms and conditions of this agreement.

Dated: September 28, 1995

(Orig Sdg) Tony L. Ferguson

(Authorized Officer)
Bureau of Land Management

Contract No: NMNM94450X



11297/11298

NEW MEXICO OIL CONSERVATION DIVISION
RECEIVED

SEP 29 1995

RAY POWELL, M.S., D.V.M.
COMMISSIONER

State of New Mexico
Commissioner of Public Lands

310 OLD SANTA FE TRAIL P.O. BOX 1148

SANTA FE, NEW MEXICO 87504-1148

(505) 827-5760
FAX (505) 827-5766

September 29, 1995

Hinkle, Cox, Eaton, Coffield & Hensley
P. O. Box 2068
Santa Fe, New Mexico 87504-2068

Attn: Mr. James Bruce

Re: Final Approval
Avalon (Delaware) Unit Agreement
Eddy County, New Mexico

Dear Mr. Bruce:

This office is in receipt of your letter of September 26, 1995, requesting final approval of the Avalon (Delaware) Unit Agreement, Eddy County, New Mexico.

Please be advised that the Commissioner of Public Lands has this date granted final approval to the Avalon (Delaware) Unit Agreement, Eddy County, New Mexico. Also, approved on this date, is your initial plan of operation for the above mentioned unit area.

Please submit a copy of the "Certificate of Effectiveness" Pursuant to Article 24 of the Avalon (Delaware) Unit Agreement.

Our approval is subject to like approval by the New Mexico Oil Conservation Division.

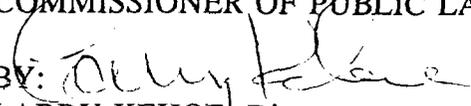
Enclosed are Five (5) Certificates of Approval. Your filing fee in the amount of \$270.00 Dollars has been received.

Hinkle, Cox, Eaton, Coffield & Hensley
September 29, 1995
Page 2

If you have any questions, or if we may be of further help, please contact Pete Martinez at (505) 827-5791.

Very truly yours,

RAY POWELL, M.S., D.V.M.
COMMISSIONER OF PUBLIC LANDS

BY: 
LARRY KEHOE, Director
Oil, Gas and Minerals Division
(505) 827-5744

RP/LK/pm

Encls.

cc: Reader File
BLM-Roswell Attn: Mr. Armando Lopez
OCD-Santa Fe Attn: Mr. Roy Johnson
TRD-Santa Fe Attn: Mr. Valdean Severson
Commissioner's File

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

ATTORNEYS AT LAW

218 MONTEZUMA POST OFFICE BOX 2068
SANTA FE, NEW MEXICO 87504-2068
(505) 982-4554 FAX (505) 982-8623

LEWIS C. COX, JR. (1924-1993)
CLARENCE E. HINKLE (1901-1985)

OF COUNSEL
O. M. CALHOUN* JOE W. WOOD
RICHARD L. CAZZELL* RAY W. RICHARDS*
L. A. WHITE**

AUSTIN AFFILIATION
HOFFMAN & STEPHENS, P.C.
KENNETH R. HOFFMAN*
TOM D. STEPHENS*
RONALD C. SCHULTZ, JR.*
JOSE CANO*

JEFFREY S. BAIRD*
THOMAS E. HOOD**
REBECCA NICHOLE JOHNSON
STANLEY K. KOTCVSKY, JR.
H. R. THOMAS
ELLEN S. CASEY
MARGARET CARTER LUDEWIG
S. BARRY PAISNER
MARTIN MEYERS
WYATT L. BROOKS**
DAVID M. RUSSELL**
ANDREW J. CLOUTIER
STEPHANIE LANDRY
KIRT E. MOELLING**
DIANE FISHER
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CHRISTOPHER N. MOODY

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MARGARET R. MCNETT
LISA K. SMITH*
NORMAN D. EWART
DARREN T. GROCE*
MOLLY MCINTOSH
MARCIA B. LINCOLN
SCOTT A. SHUART*
PAUL G. NASON
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DON L. PATTERSON**
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T. CALDER EZZELL, JR.
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JAMES BRUCE
JERRY F. SHACKELFORD*
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WILLIAM F. COUNTISS**
ALBERT L. PITTS
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JAMES M. HUDSON

*REGISTERED IN NEW MEXICO
AS HINKLE, COX, EATON,
COFFIELD & HENSLEY, P.L.L.C., LTD., CO.

*NOT LICENSED IN NEW MEXICO
†FORMERLY COMPRISING THE FIRM OF
CULTON, MORGAN, BRITAIN & WHITE, P.C.

August 31, 1995

HAND DELIVERED

Michael E. Stogner
Oil Conservation Division
2040 So. Pacheco Street
Santa Fe, New Mexico 87502

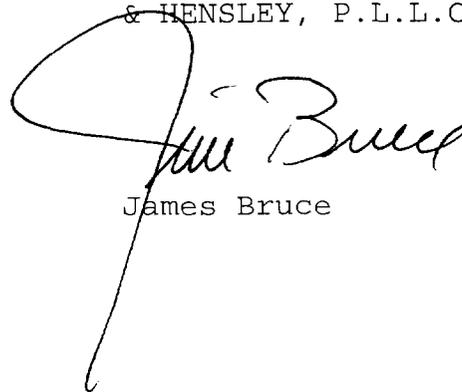
Re: Avalon (Delaware) Unit

Dear Mr. Stogner:

Enclosed, in case it is of any assistance to you, is a proposed order regarding the injection application.

Very truly yours,

HINKLE, COX, EATON, COFFIELD
& HENSLEY, P.L.L.C., Ltd., Co.



James Bruce

Enclosure

cc: W. Thomas Kellahin, Esq. (w/encl.)

RECEIVED

AUG 31 1995

Oil Conservation Division

DRAFT

**STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:**

**CASE NO. 11,297
ORDER NO. R-_____**

**THE APPLICATION OF EXXON CORPORATION FOR A WATERFLOOD PROJECT,
QUALIFICATION FOR THE RECOVERED OIL TAX RATE PURSUANT TO THE "NEW
MEXICO ENHANCED OIL RECOVERY ACT" FOR SAID PROJECT, AND FOR 18
NON-STANDARD OIL WELL LOCATIONS, EDDY COUNTY, NEW MEXICO.**

ORDER OF THE DIVISION
(Proposed by Exxon Corporation)

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on June 29, 1995, at Hobbs, New Mexico, before Examiner Michael E. Stogner.

NOW, on this ___ day of August, 1995, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

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

(2) At the time of the hearing this case was consolidated with Division Case No. 11298 for the purpose of testimony. Case No. 11298 is a companion case concerning statutory unitization.

(3) The applicant, Exxon Corporation, seeks authority to institute a waterflood project in its proposed Avalon (Delaware) Unit Area (Division Case No. 11298), Eddy County, New Mexico, by the injection of water into the Avalon-Delaware Pool, as found in that stratigraphic interval between 2378 feet to 4880 feet as identified by the Compensated Neutron/Lithodensity/Gamma Ray Log dated September 14, 1990 run in the Exxon Corporation Yates "C" Federal Well No. 36, located 1305 feet from the North and East lines (Unit A) of Section 31, Township 20 South, Range 28 East, NMPM, Eddy

County, New Mexico through nineteen certain wells as further described in Exhibit "A" attached hereto and made a part hereof.

(4) The applicant proposed that said unit comprise the following described area in Eddy County, New Mexico:

Township 20 South, Range 27 East, NMPM

Section 25: E $\frac{1}{2}$ E $\frac{1}{2}$
Section 36: E $\frac{1}{2}$ E $\frac{1}{2}$

Township 20 South, Range 28 East, NMPM

Section 29: SW $\frac{1}{4}$ SW $\frac{1}{4}$
Section 30: Lots 1-4, E $\frac{1}{2}$ W $\frac{1}{2}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$
Section 31: Lots 1-4, E $\frac{1}{2}$ W $\frac{1}{2}$, E $\frac{1}{2}$ (All)
Section 32: SW $\frac{1}{4}$ NE $\frac{1}{4}$, W $\frac{1}{2}$, W $\frac{1}{2}$ SE $\frac{1}{4}$

Township 21 South, Range 27 East, NMPM

Section 4: Lot 4
Section 5: Lots 1 and 2
Section 6: Lots 1 and 2

(5) The proposed Unit Area includes portions of the designated and undesignated Avalon-Delaware Pool.

(6) The above described area contains undeveloped acreage and acreage that will not be part of the initial waterflood project. Therefore, in compliance with Division Rule 701.G(3), the project area should be reduced to include the following described 1088.50 acres in Eddy County, New Mexico:

Township 20 South, Range 28 East, NMPM

Section 30: Lots 1-4, SE $\frac{1}{4}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$
Section 31: Lots 1-3, NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$
Section 32; W $\frac{1}{2}$ W $\frac{1}{2}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$

(7) The present Delaware oil producing wells within the subject project area and interval are in an advanced state of depletion and should therefore be properly classified as "stripper wells."

(8) Surface injection pressure on each well will initially be limited to 0.2 psi/foot. Each well should initially be equipped with a pressure gauge and the pressurization system should initially be equipped with a pressure activated bypass valve and a maximum pressure alarm.

(9) The Division Director should have the authority to administratively authorize a pressure limitation in excess of the above upon a showing by the operator that such higher pressure will not result in the fracturing of the injection formation or confining strata.

(10) The applicant submitted data on the prospective injection wells, water wells in the area, and all other wells (including plugged wells) which penetrate the zone of interest within 1/2-mile of each of the proposed injection wells. This data shows that wells in the area are cased and plugged so as to protect fresh water and prevent fluid migration from the injection zone, and includes testimony indicating no evidence of open faults or any other hydrologic connection between the injection zone and the fresh water resources in the area.

✓ (11) The operator of the proposed Avalon (Delaware) Unit Waterflood Project should take all steps necessary to ensure that the injected water enters and remains confined to only the proposed injection interval and is not permitted to escape from that interval and migrate into other formations, producing intervals, pools, or onto the surface from injection, production, or plugged and abandoned wells.

✓ (12) The injection of water into the proposed injection wells should be accomplished through 2-3/8-inch plastic-coated tubing installed in a seal bore assembly set within 100 feet of the uppermost injection perforation; the casing-tubing annulus should be filled with an inert fluid and a gauge or approved leak-detection device should be attached to the annulus in order to determine leakage in the casing, tubing or seal bore assembly.

✓ (13) Prior to commencing injection operations into the proposed injection wells, the casing in each well should be pressure tested throughout the interval from the surface down to the proposed seal bore assembly setting depth, to assure the integrity of such casing.

✓ (14) The operator should give advance notification to the supervisor of the Artesia District Office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity pressure-tests in order that the same may be witnessed.

(15) The proposed waterflood project should be approved and the project should be governed by the provisions of Rule Nos. 701 through 708 of the Oil Conservation Division Rules and Regulations.

(16) The applicant further requests that the subject waterflood project be approved by the Division as a qualified "Enhanced Oil Recovery Project" pursuant to the "Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5).

(17) The applicant submitted a unit production performance curve showing oil, gas and water production from 1983 to 1995. Oil production peaked at approximately 1760 barrels per month in 1984 and has now declined to approximately 400 barrels per month. Slight increases in production were shown in the early 1990's in response to an increase in the gas:oil ratio for the Avalon-Delaware Pool (Order No. R-6368, as amended) and well workovers.

(18) The evidence presented indicates that the subject waterflood project meets all the criteria for approval.

(19) The approved "project area" should initially comprise that area described in Finding Paragraph No. (6) above.

(20) To be eligible for the EOR credit, prior to commencing injection operations the operator must request from the Division a Certificate of Qualification, which certificate will specify the proposed project area as described above.

(21) At such time as a positive production response occurs and within five years from the date of the Certificate of Qualification, the operator must apply to the Division for certification of a positive production response, which application shall identify the area actually benefitting from enhanced recovery operations, and identifying the specific wells which the operator believes are eligible for the credit. The Division may review the application administratively or set it for hearing. Based upon evidence presented, the Division will certify to the Department of Taxation and Revenue those lands and wells which are eligible for the credit.

(22) The waterflood project is expected to cost \$14,400,000 and recover an additional 8.2 million barrels of oil.

(23) The injection authority granted herein for the proposed injection wells should terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject wells, provided however, the Division,

upon written request by the operator, may grant an extension thereof for good cause shown.

(24) The applicant requested approval of eighteen unorthodox oil well locations, being the first 18 wells described on Exhibit "A." The eighteen wells will initially be producing wells, but after a short period of production will be converted to injection. Approval of the unorthodox locations is necessary for the waterflood project and should be granted.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Exxon Corporation, is hereby authorized to institute a waterflood project in its Avalon (Delaware) Unit Area (Division Case No. 11298), Eddy County, New Mexico, by the injection of water into the Avalon-Delaware Pool (as found in that stratigraphic interval between 2378 feet to 4880 feet as identified by the Compensated Neutron/Lithodensity/Gamma Ray Log dated September 14, 1990 run in the Exxon Corporation Yates "C" Federal Well No. 36, located 1305 feet from the North and East lines (Unit A) of Section 31, Township 20 South, Range 28 East, NMPM, Eddy County, New Mexico through nineteen certain wells as further described in Exhibit "A" attached hereto and made a part hereof.

(2) The waterflood project, hereby designated the Avalon (Delaware) Unit Area, as further described below, which was the subject of Division Case No. 11298 heard in combination with this case:

**AVALON (DELAWARE) UNIT
WATERFLOOD PROJECT
EDDY COUNTY, NEW MEXICO**

Township 20 South, Range 27 East, NMPM

Section 25: E $\frac{1}{2}$ E $\frac{1}{2}$
Section 36: E $\frac{1}{2}$ E $\frac{1}{2}$

Township 20 South, Range 28 East, NMPM

Section 29: SW $\frac{1}{4}$ SW $\frac{1}{4}$
Section 30: Lots 1-4, E $\frac{1}{2}$ W $\frac{1}{2}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$
Section 31: Lots 1-4, E $\frac{1}{2}$ W $\frac{1}{2}$, E $\frac{1}{2}$ (All)
Section 32: SW $\frac{1}{4}$ NE $\frac{1}{4}$, W $\frac{1}{2}$, W $\frac{1}{2}$ SE $\frac{1}{4}$

Township 21 South, Range 27 East, NMPM

Section 4: Lot 4
Section 5: Lots 1 and 2
Section 6: Lots 1 and 2

(3) However, the initial waterflood project area, for allowable and tax credit purposes, shall comprise only the following described 1088.50 acres in Eddy County, New Mexico:

Township 20 South, Range 28 East, NMPM

Section 30: Lots 1-4, SE $\frac{1}{4}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$
Section 31: Lots 1-3, NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$
Section 32; W $\frac{1}{2}$ W $\frac{1}{2}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$

(4) The applicant must take all steps necessary to ensure that the injected water only enters and remains confined to the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

IT IS FURTHER ORDERED THAT:

(5) Injection shall be accomplished through 2-3/8-inch plastic-coated tubing installed in a seal bore assembly set approximately within 100 feet of the uppermost injection perforation; the casing-tubing annulus in each well shall be filled with an inert fluid and equipped with an approved pressure gauge or attention-attracting leak detection device.

(6) The injection wells or pressurization system for each injection well shall be so equipped as to initially limit injection pressure at the wellhead to no more than 0.2 psi/foot of depth to the top perforation..

(7) Any additional increase in the injection pressure limitation placed upon any well in the project area shall only be approved by the Santa Fe Office of the Division.

(8) Prior to commencing injection operations, the casing in each injection well shall be pressure-tested throughout the interval from the surface down to the proposed seal bore assembly setting depth, to assure the integrity of such casing.

(9) The operator shall give advance notification to the supervisor of the Artesia District Office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity pressure-test in order that the same may be witnessed.

(10) The applicant shall immediately notify the supervisor of the Artesia District Office of the Division of the failure of the tubing, casing or seal bore assembly in any of the injection wells, the leakage of water or oil from or around any producing well, or the leakage of water or oil from any plugged and abandoned well within the project area, and shall take such steps as may be timely and necessary to correct such failure or leakage.

(11) The applicant shall conduct injection operations in accordance with Division Rule Nos. 701 through 708 and shall submit monthly progress reports in accordance with Division Rule Nos. 706 and 1115.

FURTHERMORE:

(12) The subject waterflood project is hereby approved as an "Enhanced Oil Recovery Project" pursuant to the "Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5).

(13) The approved "project area" shall initially comprise that area described in Decretory Paragraph No. (3) above.

(14) To be eligible for the EOR credit, prior to commencing injection operations the operator must request from the Division a Certificate of Qualification, which certificate will specify the proposed project area as described above.

(15) At such time as a positive production response occurs and within five years from the date of the Certificate of Qualification, the operator must apply to the Division for certification of a positive production response, which application shall identify the area actually benefitting from enhanced recovery operations, and identifying the specific wells which the operator believes are eligible for the credit. The Division may review the application administratively or set it for hearing. Based upon evidence presented, the Division will certify to the Department of Taxation and Revenue those lands and wells which are eligible for the credit.

(16) The injection authority granted herein for the proposed injection wells shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject wells, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

FURTHERMORE:

(17) The applicant is authorized to drill the first eighteen wells listed on Exhibit "A" attached hereto. The applicant may complete the wells as producers and later convert them to injection.

(18) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO

OIL CONSERVATION DIVISION

William J. LeMay
Director

SEAL

EXHIBIT "A"

CASE NO. 11297
ORDER NO. R- _____

Exxon Corporation
Unorthodox Well Locations
Avalon (Delaware) Unit Waterflood Project Area

Township 20 South, Range 28 East, NMPM,
Eddy County, New Mexico

Well Name and Number	Originally Proposed Location	Section	Actual Staked Location
AVALON DELAWARE UNIT 1212	1668 FNL & 1455 FWL	30	1665' FNL & 1452' FWL
AVALON DELAWARE UNIT 1412	2310 FSL & 1485 FWL	30	2301' FSL & 1485' FWL
AVALON DELAWARE UNIT 1612	992 FSL & 1489 FWL	30	1152' FSL & 1489' FWL
AVALON DELAWARE UNIT 1614	1046 FSL & 2677 FWL	30	No change
AVALON DELAWARE UNIT 1812	183 FNL & 1397 FWL	31	101' FNL & 1355' FWL
AVALON DELAWARE UNIT 1814	123 FNL & 2673 FEL	31	No change
AVALON DELAWARE UNIT 1816	46 FNL & 1402 FEL	31	43' FNL & 1458' FEL
AVALON DELAWARE UNIT 2012	1386 FNL & 1314 FWL	31	No change
AVALON DELAWARE UNIT 2014	1335 FNL & 2681 FWL	31	1388' FNL & 2750' FWL
AVALON DELAWARE UNIT 2018	1317 FNL & 97 FEL	31	1310' FNL & 97' FEL
AVALON DELAWARE UNIT 2212	2600 FSL & 1322 FWL	31	No change
AVALON DELAWARE UNIT 2214	2699 FSL & 2549 FWL	31	2610' FSL & 2549' FWL
AVALON DELAWARE UNIT 2216	2566 FNL & 1377 FEL	31	2564' FNL & 1377' FEL
AVALON DELAWARE UNIT 2218	2423 FSL & 78 FEL	31	2438' FSL & 78' FEL
AVALON DELAWARE UNIT 2220	2648 FSL & 1127 FWL	32	2658' FSL & 1127' FWL
AVALON DELAWARE UNIT 2412	1337 FSL & 1324 FWL	31	No change
AVALON DELAWARE UNIT 2418	1356 FSL & 99 FEL	31	No change
AVALON DELAWARE UNIT 2420	1323 FSL & 1107 FWL	32	1333' FSL & 1107' FWL
AVALON DELAWARE UNIT 2016*	1305 FNL & 1305 FEL	31	No change

*Already drilled under prior Division Order (previously designated the Exxon Corporation Yates "C" Fed. #36).

HINKLE, COX, EATON, COFFIELD & HENSLEY

P.L.L.C.†

ATTORNEYS AT LAW

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CLARENCE E. HINKLE (1901-1985)

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L. A. WHITE**

AUSTIN AFFILIATION
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*REGISTERED IN NEW MEXICO
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COFFIELD & HENSLEY, P.L.L.C., LTD., CO.

*NOT LICENSED IN NEW MEXICO
†FORMERLY COMPRISING THE FIRM OF
CULTON, MORGAN, BRITAIN & WHITE, P.C.

August 11, 1995 **RECEIVED**

AUG 11 1995

HAND DELIVERED

Michael E. Stogner
Oil Conservation Division
2040 So. Pacheco Street
Santa Fe, New Mexico 87502

Oil Conservation Division

**Re: Exxon Corporation's application for administrative approval
of four unorthodox well locations in the proposed Avalon
(Delaware) Unit**

Dear Mr. Stogner:

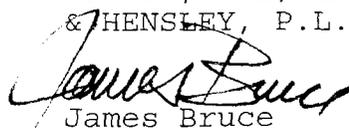
Regarding the July 27, 1995 letter application by Alex Correa of Exxon: As you know, in Case No. 11297 Exxon requested 18 unorthodox well locations as part of the waterflood project for the Unit. Unfortunately, most of those locations were not staked at the time of hearing. After staking, it turns out most of the locations requested at the hearing are wrong. Attached for your information is a chart listing the locations requested at hearing and the current locations.

As a result of these changes, Mr. Correa requested administrative approval for the four injection wells, which will be the first four wells drilled for the proposed Unit. Exxon felt this application was necessary due to the changed locations.

We appreciate your attention to this matter. Please call if you have any questions.

Very truly yours,

HINKLE, COX, EATON, COFFIELD
& HENSLEY, P.L.L.C., Ltd., Co.


James Bruce

Enclosure

cc: William T. Duncan, Jr.

EXHIBIT "A"

CASE NO. 11297
ORDER NO. R-_____

Exxon Corporation
Unorthodox Well Locations
Avalon (Delaware) Unit Waterflood Project Area

Township 20 South, Range 28 East, NMPM,
Eddy County, New Mexico

<u>Well Name and Number</u>	<u>Originally Proposed Location</u>	<u>Section</u>	<u>Actual Staked Location</u>
AVALON DELAWARE UNIT 1212	1668 FNL & 1455 FWL	30	1665' FNL & 1452' FWL
AVALON DELAWARE UNIT 1412	2310 FSL & 1485 FWL	30	2301' FSL & 1485' FWL
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AVALON DELAWARE UNIT 2016*	1305 FNL & 1305 FEL	31	No change

*Already drilled under prior Division Order (previously designated the Exxon Corporation Yates "C" Fed. #36).

OIL CONSERVATION DIVISION

August 16, 1995

Hinkle, Cox, Eaton, Coffield & Hensley P.L.L.C.

Attn: James Bruce

P. O. Box 2068

Santa Fe, New Mexico 87504-2068

Exxon Corporation

Attn: Alex Correa

P. O. Box 1600

Midland, Texas 79702-1600

Re: Case Nos. 11,297 and 11,298, Applications of Exxon Corporation for statutory unitization, to initiate a waterflood project, for "EOR" qualification, and for 18 unorthodox oil well locations, Eddy County, New Mexico.

Administrative request for four unorthodox oil well locations in Sections 31 and 32, Township 20 South, Range 28 East, NMPM, Eddy County, New Mexico.

Dear Messrs. Bruce and Correa:

Exxon's application for administrative approval by letter dated July 31, 1995 for four unorthodox oil well locations for the purpose of completing an efficient production/injection pattern within the proposed Avalon Delaware Unit Waterflood Project in Eddy County, New Mexico, which was the subject of controversy in consolidated Cases 11,297 and 11,298 heard in Hobbs, New Mexico on June 29, 1995, is being returned to you at this time.

These four wells were in part the subject of said controversial hearing, an order is still pending in this matter and should be issued shortly. Any action taken by the Division prior to the issuance of a decision in Case Nos. 11,297 and 11,298 on these four wells would be most inappropriate and could be construed as an attempt to circumvent the hearing process and to influence final judgement.

James Bruce / Alex Correa
August 16, 1995
Page 2

Should there be any need for further questions or comments concerning this matter, Mr. Bruce may address them in a letter with appropriate notice to the other two parties in these proceedings.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael E. Stogner". The signature is fluid and cursive, with a long horizontal stroke at the end.

Michael E. Stogner
Chief Hearing Officer/Engineer

cc: Oil Conservation Division - Artesia
U. S. Bureau of Land Management - Carlsbad
Case File 11,297
Case File 11,298
William J. LeMay - OCD Director, Santa Fe
Rand L. Carroll - Counsel, OCD, Santa Fe
Yates Petroleum Corporation, c/o William F. Carr - Santa Fe
Premier Oil & Gas, Inc., c/o W. Thomas Kellahin - Santa Fe

'95 AUG 4 AM 8 52

EXXON COMPANY, U.S.A.

POST OFFICE BOX 1600 • MIDLAND, TEXAS 79702-1600

July 27, 1995

MIDLAND PRODUCTION ORGANIZATION
OPERATIONS INTEGRITY

Proposed Avalon (Delaware) Unit
Unorthodox Locations
Sections 31 & 32, T20S, R28E
Eddy County, New Mexico

Mr. William J. LeMay
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

Dear Mr. LeMay:

Exxon Corp. requests Administrative Approval of the Unorthodox Locations listed below in the Proposed Avalon Delaware Unit.

Well #	Location	Qtr./Qtr.	Unit Letter
2420	32-20S-28E	SWSW	L
2220	32-20S-28E	SWNW	E
2216	31-20S-28E	SWNE	G
2014	31-20S-28E	SENW	F

These wells are necessary "to permit the completion of an efficient production and injection pattern with a secondary recovery or pressure maintenance project" and are not "closer than 330 feet to the outer boundary of the lease or the unitized area, nor closer than 10 feet to any quarter-quarter section line or subdivision inner boundary" (Rule 104,F,1).

Exxon Corp. will operate the Unit and is also the offset operator of the existing lease and has no objections to these unorthodox locations. Copies of the following are attached for each well: C-101, C-102, Federal Form 3160-3 (for Federal wells). Approval of this application will allow the permits to drill to be released before unitization. A space is provided below for your signature. If you have any questions, please call me at (915) 688-6782.

Sincerely,



Alex M. Correa

Signature: _____
William J. LeMay
Title: _____
Date: _____

AMC:mym
Attachments
Avalon.ltr

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer DD, Azusa, NM 88211-0719
District III
1000 Rio Brazos Rd., Azusa, 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-101
Revised February 10, 1994

Instructions on back
Submit to Appropriate District Office
State Lease - 6 Copies
Fee Lease - 5 Copies

AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

Operator Name and Address: Exxon Corp. P.O. Box 1600, ML-14 Midland, Texas 79702		* OGRID Number 007673
		* API Number 30 - 0
* Property Code	* Property Name Avalon (Delaware) Unit	* Well No. 2420

Surface Location

UL or lot no.	Section	Township	Range	Lot Ids	Feet from the	North/South line	Feet from the	East/West line	County
L	32	20S	28E		1333'	South	1107	West	Eddy

¹ Proposed Bottom Hole Location if Different From Surface

UL or lot no.	Section	Township	Range	Lot Ids	Feet from the	North/South line	Feet from the	East/West line	County

² Proposed Pool 1

³ Proposed Pool 2

Avalon Delaware 3715	
----------------------	--

* Work Type Code N	* Well Type Code 0	* Cable/Rotary R	* Lease Type Code S	* Ground Level Elevation 3205'
* Multiple NO	* Proposed Depth 4,500'	* Formation Delaware	* Contractor Unknown	* Sign Date ASAP

²¹ Proposed Casing and Cement Program

Bore Size	Casing Size	Casing weight/feet	Setting Depth	Seals of Cement	Estimated TOC
20"	16"	Line Pipe	40'	40 cu. ft.	Surface
14 3/4"	10 3/4"	40.4#/K-55	600'	350 cu. ft.	Surface
9 1/2"	7 5/8"	26.4#/K-55	2,540'	1500 cu. ft.	Surface
6 3/4"	4 1/2"	4.56*	**	300 cu. ft.	Lnr. Top

²² Describe the proposed program. If this application is to DEEPEN or PLUG BACK give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

- * 4 1/2" prod. string is fiberglass.
- ** 4 1/2" prod. string from 2,300' to TD.
- C-102 is attached.
- Copy of request for Administrative Approval of Unorthodox Locations is attached.

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature: *Alex M. Correa*
Printed name: Alex M. Correa
Title: Sr. Regulatory Specialist

OIL CONSERVATION DIVISION

Approved by:
Title:
Approved Date:
Expiration Date:

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

State of New Mexico
 Energy, Minerals & Natural Resources Department

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

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

OIL CONSERVATION DIVISION

District III
 1000 Rio Brasos Rd., Aztec, NM 87410

PO Box 2088
 Santa Fe, NM 87504-2088

District IV
 PO Box 2088, Santa Fe, NM 87504-2088

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 03715	Pool Name AVALON DELAWARE 3715
Property Code	Property Name AVALON (DELAWARE) UNIT	Well Number 2420
OGRID No. 007673	Operator Name Exxon Corp.	Elevation 3205

Surface Location

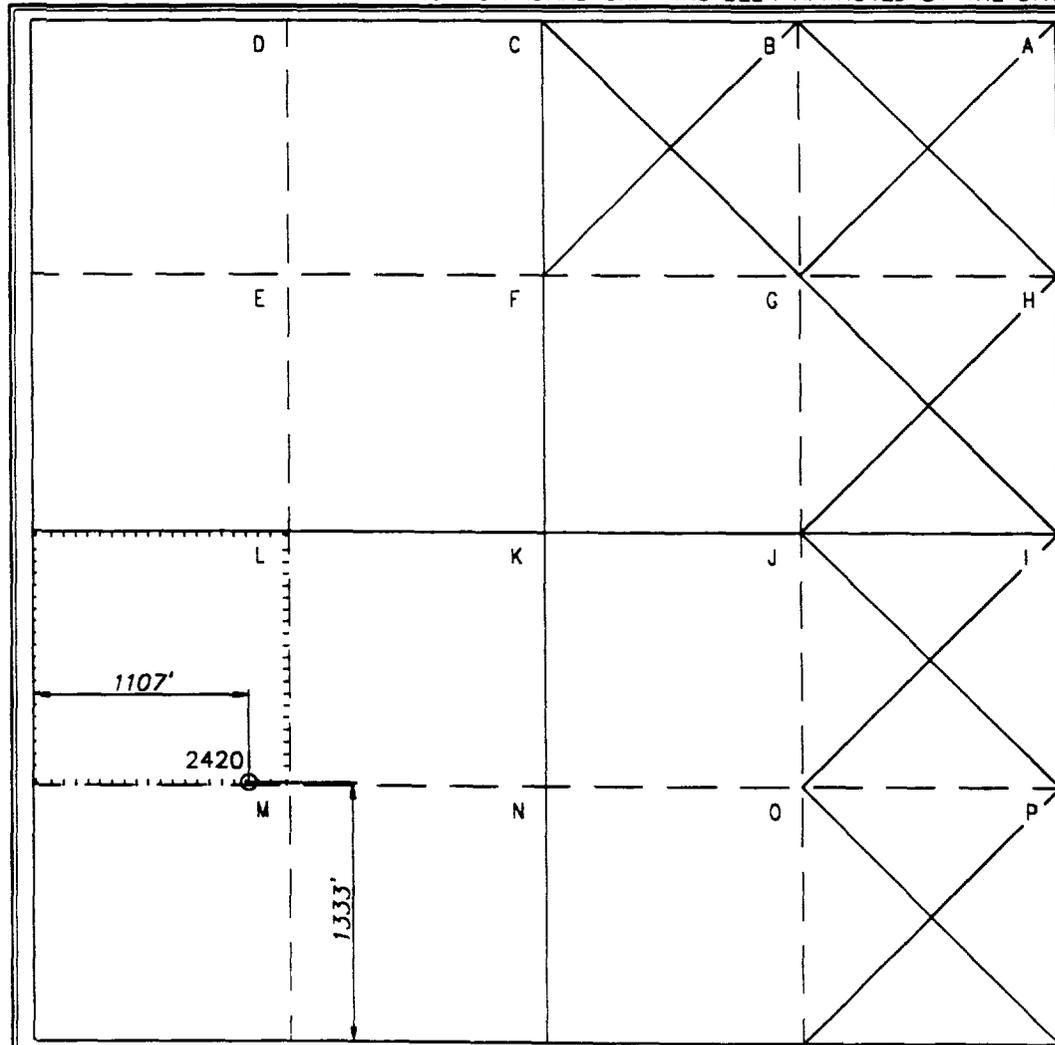
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	32	20S	28E		1333'	SOUTH	1107'	WEST	EDDY

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

Dedicated Acres 40	Joint or Infill	Consolidation Code	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



OPERATOR CERTIFICATION

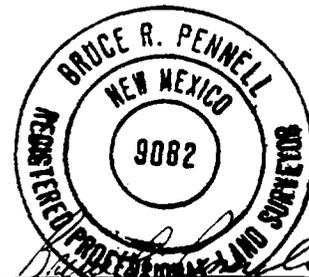
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature
 C.H. Harper
 Printed Name
 Permits Supervisor
 Title
 Date

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.

6/8/95
 Date of Survey
 Signature and Seal of Professional Surveyor.



Certificate Number

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

District II
PO Drawer DD, Aztec, 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-101
Revised February 10, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 6 Copies
Fee Lease - 5 Copies

AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

Operator Name and Address: Exxon Corp. P.O. Box 1600, ML-14 Midland, Texas 79702		' GRID Number 007673
		' API Number 30 - 0
' Property Code	' Property Name Avalon (Delaware) Unit	' Well No. 2220

Surface Location

UL or sec no.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West Line	County
E	32	20S	28E		2658'	South	1127'	West	Eddy

' Proposed Bottom Hole Location If Different From Surface

UL or sec no.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West Line	County

' Proposed Pool 1 Avalon Delaware 3715	' Proposed Pool 2
---	-------------------

' Work Type Code N	' Well Type Code 0	' Casing/Rotary R	' Lease Type Code S	' Ground Level Elevation 3208'
' Multiple NO	' Proposed Depth 4,500'	' Formation Delaware	' Contractor Unknown	' Spud Date ASAP

' Proposed Casing and Cement Program

Hole Size	Casing size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
20"	16"	Line Pipe	40'	40 cu. ft.	Surface
4 3/4"	10 3/4"	40.4#/K-55	600'	350 cu. ft.	Surface
9 1/2"	7 5/8"	26.4#/K-55	2,540'	500 cu. ft.	Surface
6 3/4"	4 1/2"	4.56*	**	300 cu. ft.	Lnr. Top

' Describe the proposed program. If this application is to DEEPEN or PLUG BACK give the data on the present productive zone and proposed non-productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

- * 4 1/2" prod. string is fiberglass.
- ** 4 1/2" prod. string from 2,300' to TD.
- C-102 is attached.
- Copy of request for Administrative Approval of Unorthodox Locations is attached.

' I hereby certify that the information given above is true and correct to the best of my knowledge and belief:

Signature: *Alex M. Correa*

Printed name: Alex M. Correa

Title: Sr. Regulatory Specialist

OIL CONSERVATION DIVISION

Approved by:

Title:

Approval Date:

Expiration Date:

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

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 Revised February 10, 1994
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 State Lease - 4 Copies
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OIL CONSERVATION DIVISION
 PO Box 2088
 Santa Fe, NM 87504-2088

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 03715	Pool Name AVALON DELAWARE 3715
Property Code	Property Name AVALON (DELAWARE) UNIT	Well Number 2220
OGRID No. 007673	Operator Name Exxon Corp.	Elevation 3208

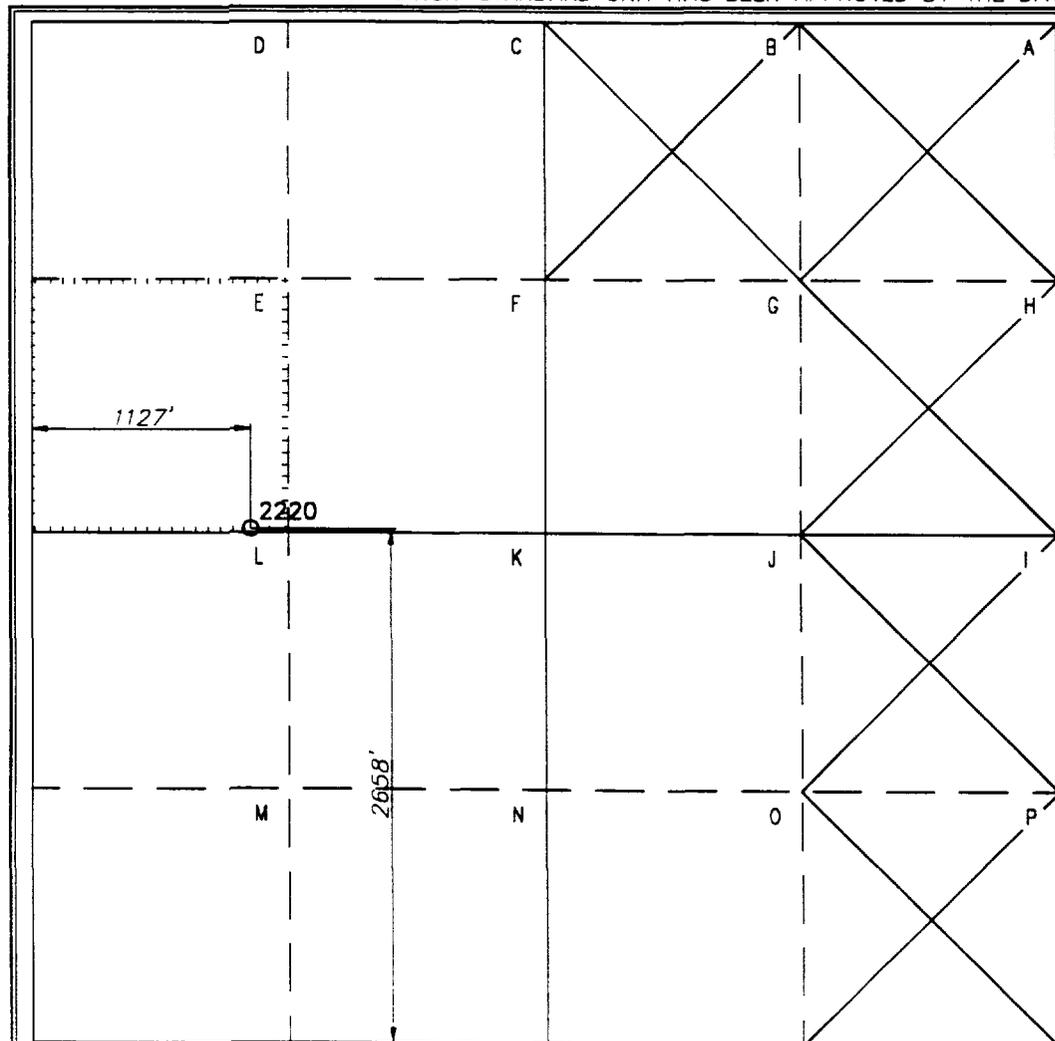
Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	32	20S	28E		2658'	SOUTH	1127'	WEST	EDDY

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
Dedicated Acres									
Joint or Infill									
Consolidation Code									
Order No.									
40									

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



OPERATOR CERTIFICATION

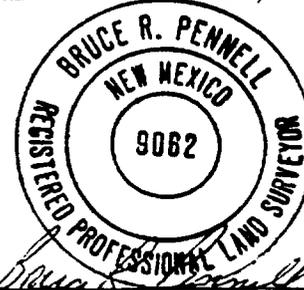
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature
 C.H. Harper
 Printed Name
 Permits Supervisor
 Title
 Date

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.

6/8/95
 Date of Survey
 Signature and Seal of Professional Surveyor.



Certificate Number 9082

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. NMMN 01119	
b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____ SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
2. NAME OF OPERATOR EXXON CORPORATION ATTN: REGULATORY AFFAIRS ML#14		7. UNIT AGREEMENT NAME AVALON (DELAWARE) UNIT	
3. ADDRESS AND TELEPHONE NO. P. O. BOX 1600 MIDLAND, TX 79702		8. FARM OR LEASE NAME, WELL NO. AVALON (DELAWARE) UNIT 2216	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 2564' FNL & 1377' FEL At proposed prod. zone 2564' FNL & 1377' FEL		9. API WELL NO.	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 5.5 MI. NORTH OF CARLSBAD, NM		12. COUNTY OR PARISH EDDY	13. STATE NM
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 2725' 39' FEL	16. NO. OF ACRES IN LEASE 2118.78*	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. 834' NW TO #2115	19. PROPOSED DEPTH 4500'	20. ROTARY OR CABLE TOOLS ROTARY	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 3233' GR		22. APPROX. DATE WORK WILL START* 10/31/95	

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
20"	16"	LINE PIPE	40'	40 CU. FT. TO SURF.
14 3/4"	10 3/4"	40.4#/K-55	600'	350 CU. FT. TO SURF.
9 1/2"	7 5/8"	26.4#/K-55	2540'	500 CU. FT. TO SURF.
6 3/4"	4 1/2"	4.56#/***	****	300 CU. FT.-LNR. TOP

*SURVEYED ACREAGE = 2140.14. ** #2216 IS AT AN UNORTHODOX LOCATION & SIMULTANEOUSLY DEDICATED W/ #2215. ***4 1/2" PROD. STRING IS FIBERGLASS
**** 4 1/2" PROD. STRING FROM 2300' TO TD.

CSG. CMT. TYPE
16" REDI-MIX
10 3/4" LITE CMT. & CLASS "C"
7 5/8" LITE CMT. & CLASS "C"
4 1/2" CLASS "C"

DRILLING DURATION WILL BE 20 DAYS.
FOR SURFACE USE PLAN AND DRILLING EIGHT POINT PLAN REFER TO UNITWIDE PLAN ON FILE. BOND COVERAGE PURSUANT TO 43 CFR 3104 FOR LEASE ACTIVITIES IS BEING PROVIDED BY EXXON CORPORATON'S NATIONWIDE OIL AND GAS BLANKET BOND NUMBER 511-23-06 (BLM BOND NO. 0024).

24. 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.

SIGNED *Alex M. Correa* TITLE Alex M. Correa DATE (915) 688-6782
Sr. Regulatory Specialist 07/27/95

This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

District I.
 Box 280, Hobbs, NM 88241-1980

District II
 Drawer DD, Artesia, NM 88211-0719

District III
 100 Rio Brasos Rd., Aztec, NM 87410

District IV
 Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
 Energy, Minerals & Natural Resources Department

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

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
	03715	AVALON DELAWARE 3715
Property Code	Property Name	Well Number
	AVALON (DELAWARE) UNIT	2216
OGRD No.	Operator Name	Elevation
007673	Exxon Corp.	3233'

Surface Location

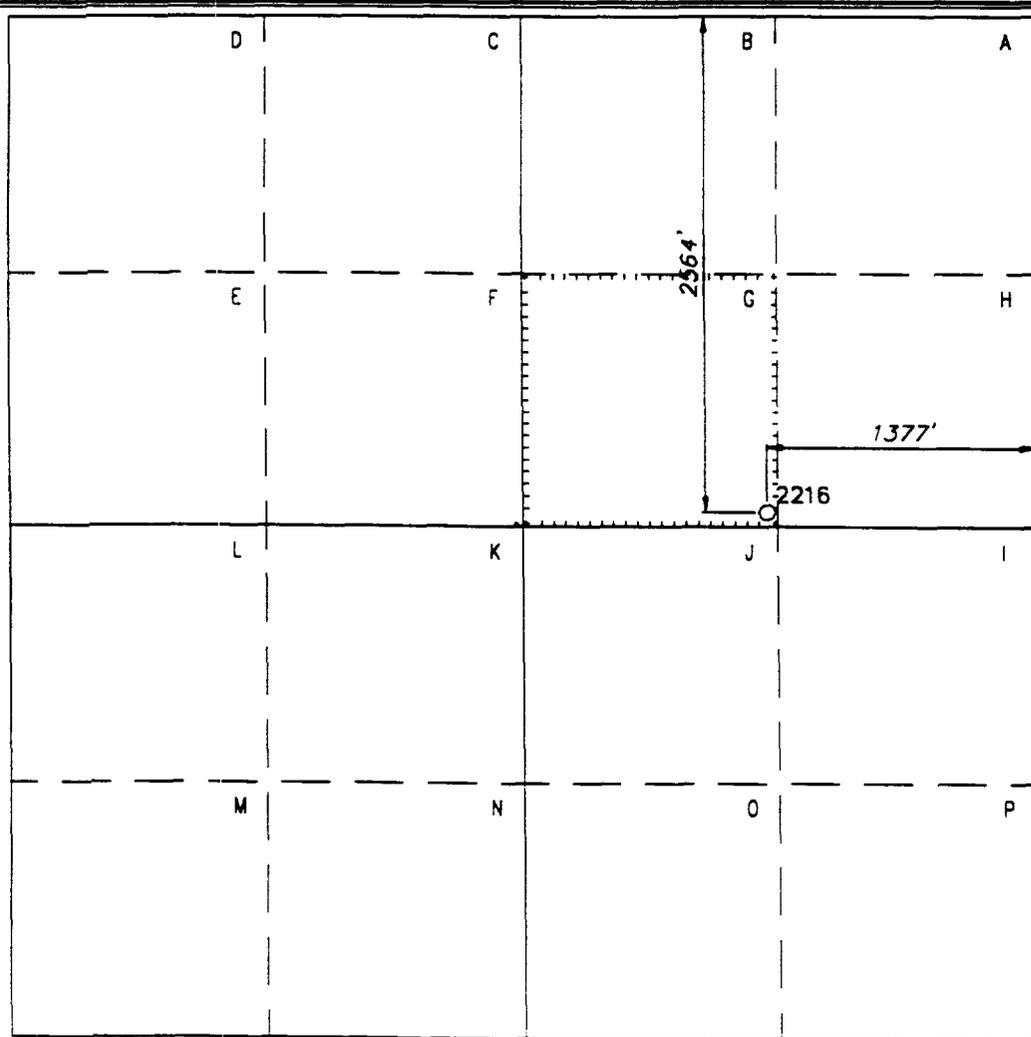
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	31	20S	28E		2564'	NORTH	1377'	EAST	EDDY

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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40			

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



OPERATOR CERTIFICATION

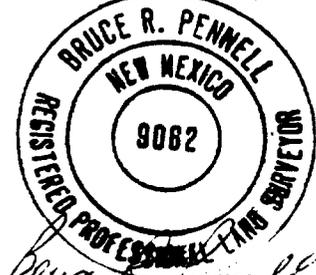
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature
 C.H. Harper
 Printed Name
 Permits Supervisor
 Title
 Date

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.

6/8/95
 Date of Survey
 Signature and Seal of Professional Surveyor.



Certificate Number 9062

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

5. LEASE DESIGNATION AND SERIAL NO.
NMNM 01119

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

1a. TYPE OF WORK

DRILL DEEPEN

7. UNIT AGREEMENT NAME

AVALON (DELAMARE) UNIT

b. TYPE OF WELL

OIL WELL GAS WELL OTHER SINGLE ZONE MULTIPLE ZONE

8. FARM OR LEASE NAME, WELL NO.

AVALON (DELAMARE) UNIT

2. NAME OF OPERATOR

EXXON CORPORATION ATTN: REGULATORY AFFAIRS ML#14

2014

9. API WELL NO.

3. ADDRESS AND TELEPHONE NO.

**P. O. BOX 1600
MIDLAND, TX 79702**

10. FIELD AND POOL, OR WILDCAT

AVALON DELAMARE 3715

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

At surface

1388' FNL & 2750' FWL

At proposed prod. zone

1388' FNL & 2750' FWL

11. SEC., T., R., M., OR BLK.
AND SURVEY OR AREA

SEC 31, T20S, R28E

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

5.5 MI. NORTH OF CARLSBAD, NM

12. COUNTY OR PARISH

EDDY

13. STATE

NM

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT.

3899'

(Also to nearest drig. unit line, if any)

45' FWL

16. NO. OF ACRES IN LEASE

2118.78*

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.

883' SE TO #2115

19. PROPOSED DEPTH

4500'

20. ROTARY OR CABLE TOOLS

ROTARY

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

3240 GR

22. APPROX. DATE WORK WILL START*

11/20/95

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
20"	16"	LINE PIPE	40'	40 CU. FT. TO SURF.
14 3/4"	10 3/4"	40.4#/K-55	600'	350 CU. FT. TO SURF.
9 1/2"	7 5/8"	26.4#/K-55	2540'	500 CU. FT. TO SURF.
6 3/4"	4 1/2"	4.56#/***	****	300 CU. FT.-LNR. TOP

*SURVEYED ACREAGE = 2140.14. ** #2014 IS AT AN UNORTHODOX LOCATION & SIMULTANEOUSLY DEDICATED W/ # . ***4 1/2" PROD. STRING IS FIBERGLASS **** 4 1/2" PROD. STRING FROM 2300' TO TD.

CSG.	CMT. TYPE
16"	REDI-MIX
10 3/4"	LITE CMT. & CLASS "C"
7 5/8"	LITE CMT. & CLASS "C"
4 1/2"	CLASS "C"

DRILLING DURATION WILL BE 20 DAYS.

FOR SURFACE USE PLAN AND DRILLING EIGHT POINT PLAN REFER TO UNITWIDE PLAN ON FILE. BOND COVERAGE PURSUANT TO 43 CFR 3104 FOR LEASE ACTIVITIES IS BEING PROVIDED BY EXXON CORPORATION'S NATIONWIDE OIL AND GAS BLANKET BOND NUMBER 511-23-06 (BLM BOND NO. 0024).

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. SIGN *Alex M. Correa* TITLE Alex M. Correa DATE (915) 688-6782
Sr. Regulatory Specialist 07/28/95

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

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

State of New Mexico
 Energy, Minerals & Natural Resources Department

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

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

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

AMENDED REPORT

District III
 1000 Rio Brazos Rd., Artesia, NM 87410

District IV
 PO Box 2088, Santa Fe, NM 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number		Pool Code	Pool Name
		03715	AVALON DELAWARE 3715
Property Code	Property Name		Well Number
	AVALON (DELAWARE) UNIT		2014
OGRID No.	Operator Name		Elevation
007673	Exxon Corp.		3240'

Surface Location

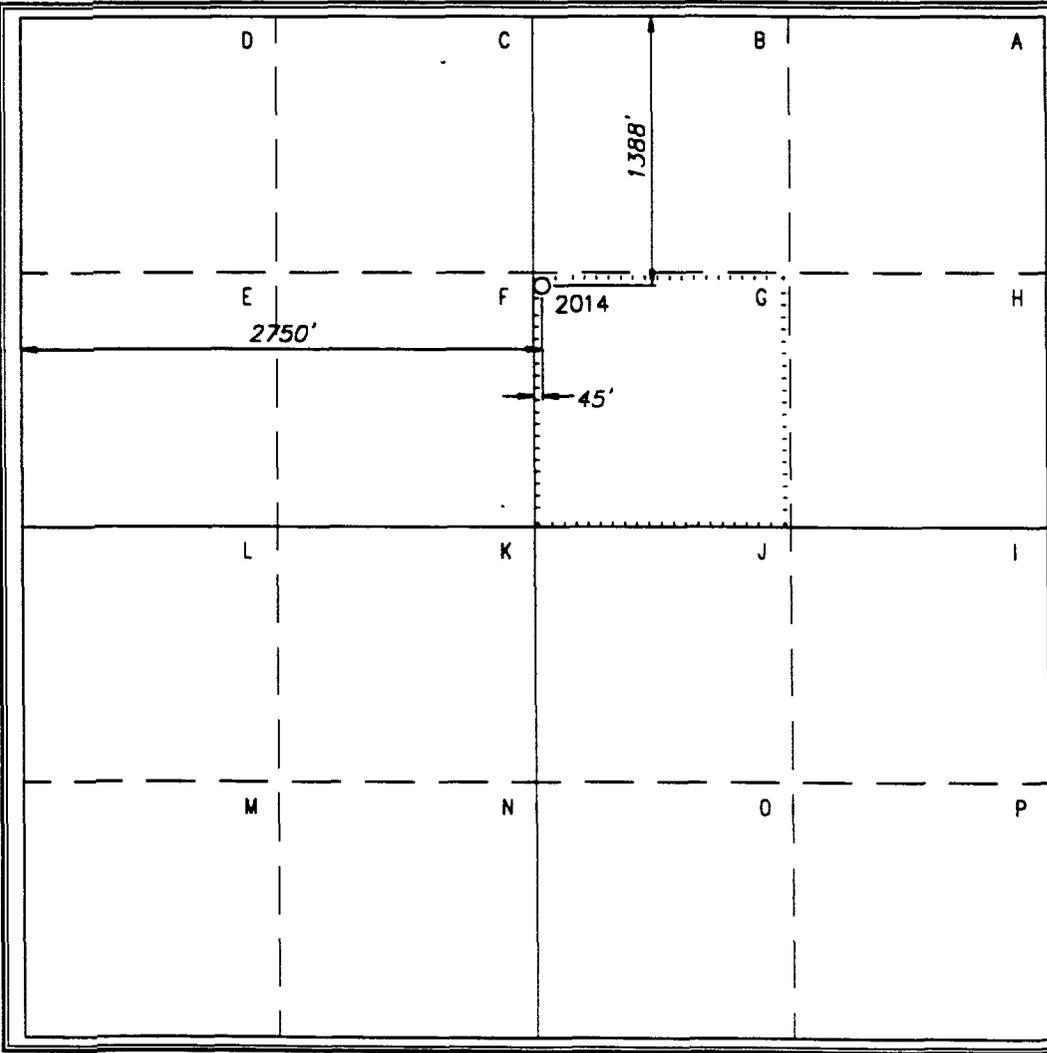
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	31	20S	28E		1388'	NORTH	2750'	WEST	EDDY

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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40			

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



OPERATOR CERTIFICATION

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

Signature
 C.H. Harper
 Printed Name
 Permits Supervisor
 Title
 Date

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.

7/24/95
 Date of Survey
 Signature and Seal of Professional Surveyor



Certificate Number 9062