

CASE 3792: Application of KEWANEE
OIL COMPANY FOR A WATERFLOOD
PROJECT, EDDY COUNTY, NEW MEXICO.

Case Number

3792

Application
Transcripts.

Small Exhibits

ETC.

OIL CONSERVATION COMMISSION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

July 23, 1963

Mr. Richard S. Morris
Montgomery, Federici, Andrews, Hannahs & Morris
Attorneys at Law
Post Office Box 2307
Santa Fe, New Mexico

Dear Sir:

Reference is made to Commission Order No. R-3448, recently entered in Case No. 3792, approving the Kewanee Square Lake "12" Waterflood Project.

Initial injection is to be through the seven authorized injection wells, through plastic-coated tubing set in packers which shall be located as near to the upper perforation as is practicable, or as near to the casing shoe as is practicable in the case of open-hole completions.

As to allowable, our calculations indicate that when all of the authorized injection wells have been placed on active injection, the maximum allowable which this project will be eligible to receive under the provisions of Rule 701-E-3 is 924 barrels per day when the Southeast New Mexico normal unit allowable is 42 barrels per day or less. This is assuming that the wells located in Units A, C, G, H, I, M, and O of Section 12, and in Units E and G of Section 7 will be placed back on production.

Please report any error in this calculated maximum allowable immediately, both to the Santa Fe office of the Commission and the appropriate district proration office.

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Page -2-

Mr. Richard S. Morris
Montgomery, Federici, Andrews, Hannahs & Morris
Attorneys at Law
Santa Fe, New Mexico

July 23, 1968

In order that the allowable assigned to the project may be kept current, and in order that the operator may fully benefit from the allowable provisions of Rule 701, it behooves him to promptly notify both of the aforementioned Commission offices by letter of any change in the status of wells in the project area, i.e., when active injection commences, when additional injection or producing wells are drilled, when additional wells are acquired through purchase or unitization, when wells have received a response to water injection, etc.

Your cooperation in keeping the Commission so informed as to the status of the project and the wells therein will be appreciated.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/DSH/lr

cc: Oil Conservation Commission
Hobbs and Artesia, New Mexico

U. S. Geological Survey
Drawer U
Artesia, New Mexico

Mr. D. E. Gray, State Engineer Office
Santa Fe, New Mexico

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 3792
Order No. R-3448

APPLICATION OF KEWANEE OIL COMPANY
FOR A WATERFLOOD PROJECT, EDDY COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on June 26, 1968,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 3rd day of July, 1968, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

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

(2) That the applicant, Kewanee Oil Company, seeks permis-
sion to institute a waterflood project in its Square Lake "12"
Unit Area, Square Lake Pool, by the injection of water into the
Grayburg formation through seven injection wells in Sections 1
and 12, Township 17 South, Range 29 East, and Sections 6 and 7,
Township 17 South, Range 30 East, NMPM, Eddy County, New Mexico.

(3) That the wells in the project area are in an advanced
state of depletion and should properly be classified as "stripper"
wells.

(4) That the proposed waterflood project should result in
the recovery of otherwise unrecoverable oil, thereby preventing
waste.

(5) That the subject application should be approved and the
project should be governed by the provisions of Rules 701, 702,
and 703 of the Commission Rules and Regulations.

-2-

CASE No. 3792

Order No. R-3448

IT IS THEREFORE ORDERED:

(1) That the applicant, Kewanee Oil Company, is hereby authorized to institute a waterflood project in its Square Lake "12" Unit Area, Square Lake Pool, by the injection of water into the Grayburg formation through the following-described wells in Eddy County, New Mexico:

TOWNSHIP 17 SOUTH, RANGE 29 EAST, NMPM

Kewanee-Tract 8 - Well No. 5, located in Unit P of Section 1
Kewanee-Tract 6 C - Well No. 1, located in Unit B of Section 12
Kewanee-Tract 5 - Well No. 3, located in Unit L of Section 12
Kewanee-Tract 1 B - Well No. 14, located in Unit J of Section 12
Kewanee-Tract 1 A - Well No. 3, located in Unit N of Section 12

TOWNSHIP 17 SOUTH, RANGE 30 EAST, NMPM

Kewanee-Tract 3 - Well No. 1, located in Unit L of Section 6
Kewanee-Tract 4 - Well No. 2, located in Unit F of Section 7

(2) That the subject waterflood project is hereby designated the Kewanee Square Lake "12" Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(3) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


DAVID F. CARGO, Chairman

GUYTON S. HAYS, Member

A. L. PORTER, Jr., Member & Secretary

esr/

-2-

CASE No. 3792
Order No. R-3448

IT IS THEREFORE ORDERED:

(1) That the applicant, Kewanee Oil Company, is hereby authorized to institute a waterflood project in its Square Lake "12" Unit Area, Square Lake Pool, by the injection of water into the Grayburg formation through the following-described wells in Eddy County, New Mexico:

TOWNSHIP 17 SOUTH, RANGE 29 EAST, NMPM

Kewanee-Tract 8 - Well No. 5, located in Unit P of Section 1
Kewanee-Tract 6 C - Well No. 1, located in Unit B of Section 12
Kewanee-Tract 5 - Well No. 3, located in Unit L of Section 12
Kewanee-Tract 1 B - Well No. 14, located in Unit J of Section 12
Kewanee-Tract 1 A - Well No. 3, located in Unit N of Section 12

TOWNSHIP 17 SOUTH, RANGE 30 EAST, NMPM

Kewanee-Tract 3 - Well No. 1, located in Unit L of Section 6
Kewanee-Tract 4 - Well No. 2, located in Unit F of Section 7

(2) That the subject waterflood project is hereby designated the Kewanee Square Lake "12" Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(3) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


DAVID F. CARGO, Chairman

GUYTON B. HAYS, Member

A. L. PORTER, Jr., Member & Secretary

State of New Mexico
Oil Conservation Commission



STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

July 3, 1968

Re: Case No. 3792
Order No. R-3448
Applicant:
KEWANEE OIL COMPANY

A. L. Porter, Jr.
A. L. PORTER, Jr.
Secretary-Director

Other _____

Case 3792

Heard 6-26-68

Rec. 6-28-68

Grant Kewanee permission to
convert 7 wells to water injection
in the Square Lake '12' Unit Area.

These wells are:

Kewanee - ~~Tract 8~~ ~~Tract 5~~ - P-1-17S-29E
" " " 3-#1 - L-6- " "
" " " 6C-#1 - B-12- " "
" " " 5-#3 - L- " " "
" " " 1B-#4 - d- " " "
" " " 1A-#3 N- " " "
" " " 2-#2 F-7-17-30

Injection shall be thru 2" internally
plastic coated tubing + under a packer
to be set as close to the ~~perforations~~ upper
perforations or the casing ^{production} show as
the case may be.

Trust to the

30 JUN 4 AM 8 30

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION OF KEWANEE OIL
COMPANY FOR APPROVAL OF A
WATERFLOOD PROJECT IN THE
SQUARE LAKE "12" UNIT AREA
EDDY COUNTY, NEW MEXICO

Case No. 3792

APPLICATION

Comes now KEWANEE OIL COMPANY and requests the New Mexico Oil Conservation Commission to approve a waterflood project in the Square Lake "12" Unit Area, Eddy County, New Mexico, and in support of its application states:

1. Coincident with the filing of this Application, Kewanee Oil Company also has filed an Application seeking approval of the Square Lake "12" Unit Agreement covering 1,360 acres of Federal Land in Eddy County, New Mexico, as follows:

Township 17 South, Range 29 East

Section 1: S/2 SE/4, SW/4 SW/4

Section 12: N/2, SW/4, W/2 SE/4, NE/4 SE/4

Township 17 South, Range 30 East

Section 6: SE/4, W/2 SW/4

Section 7: N/2, W/2 SW/4

2. Kewanee Oil Company proposes to institute secondary recovery operations in the Square Lake "12" Unit Area by injecting water into the Grayburg formation through the following wells located within the Unit Area:

Name of Well

Location of Well

Root E-5

Unit P, Section 1

Root J-1

Unit B, Section 12

Root G-14

Unit J, Section 12

Root D-3

Unit L, Section 12

DOCKET MAILED

Date 4/13/68

<u>Name of Well</u>	<u>Location of Well</u>
Root F-3	Unit N, Section 12
Root H-1	Unit L, Section 6
Wilson "B" - 2	Unit F, Section 7

Attached hereto as Exhibit "A" is a plat of the Square Lake Unit Area upon which the above described injection wells are circled in red.

3. Attached to this Application as Exhibit "B" is a structure map of the Square Lake Field contoured on the top of the Loco Hills sand, which exhibit also shows the location of other water injection wells in secondary recovery projects adjoining the Square Lake "12" Unit Area to the North.

4. Attached to this Application as Exhibit "C" is a graph of the daily oil production from wells located within the Square Lake "12" Unit Area.

5. Attached to this Application as Exhibit "D" is a plat showing ownership and development within a two-mile radius of the Square Lake "12" Unit Area.

6. Attached to this Application as Exhibit "E" is a typical electric log showing the top of the Grayburg formation and the producing members within the Grayburg formation.

7. Attached to this Application as Exhibit "F" is a tabulation of the completion data with respect to each of the proposed water injection wells in the Square Lake "12" Unit Area.

8. Attached to this Application as Exhibit "G" is a schematic diagram showing typical completion of proposed injection wells.

9. Attached to this Application as Exhibit "H" is an analysis of the water to be utilized in this project. This water will be purchased from the Double Eagle Water Company and will be re-cycled and re-injected into the Grayburg formation insofar as practicable.

10. Approval of this Application will prevent waste and protect correlative rights.

WHEREFORE, Kewanee Oil Company requests that this Application be set for hearing before the Commission or one of its examiners and that the Commission enter its order approving the proposed waterflood project.

MONTGOMERY, FEDERICI, ANDREWS,
HANNAHS & MORRIS

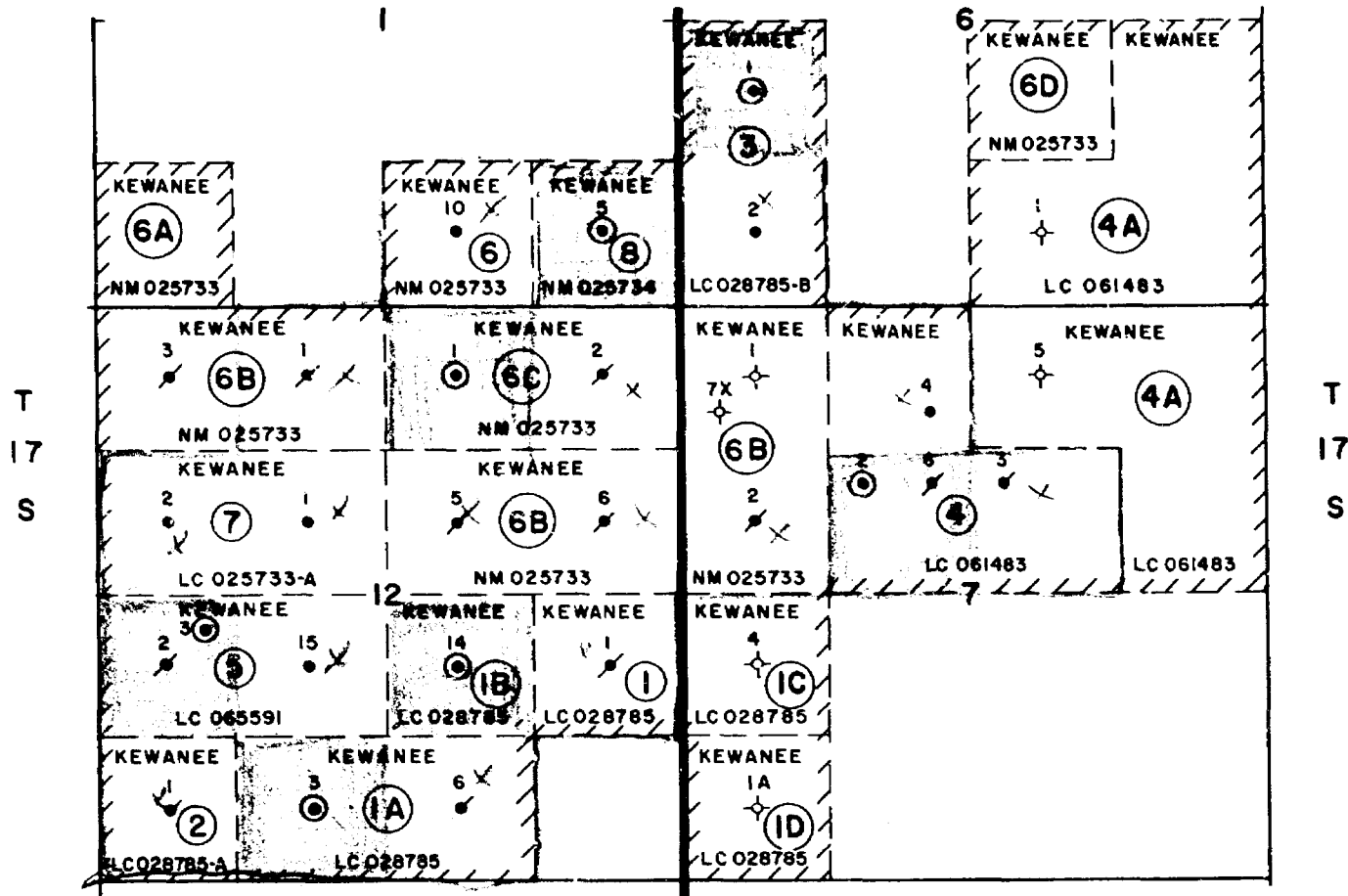
By Richard S. Morris

P. O. Box 2307
Santa Fe, New Mexico 87501

Attorneys for Kewanee Oil Company

R 29 E

R 30 E



LEGEND

- //// UNIT BOUNDARY
- ① TRACT NUMBER
- OIL WELL, PRODUCING
- ✕ OIL WELL, ABANDONED
- OIL WELL, INACTIVE
- ✦ DRY HOLE
- ▭ FEDERAL LAND
- Proposed Injection Well

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. A
CASE NO. 3792

EXHIBIT "A"

7 in, 40' SQUARE LAKE 12 UNIT
15 prod 10's
22 total 40's
EDDY COUNTY, NEW MEXICO



A C G H
I M P O
if 500 12
EFG

42
37
84
37
3792

Case 3792

R 30 E



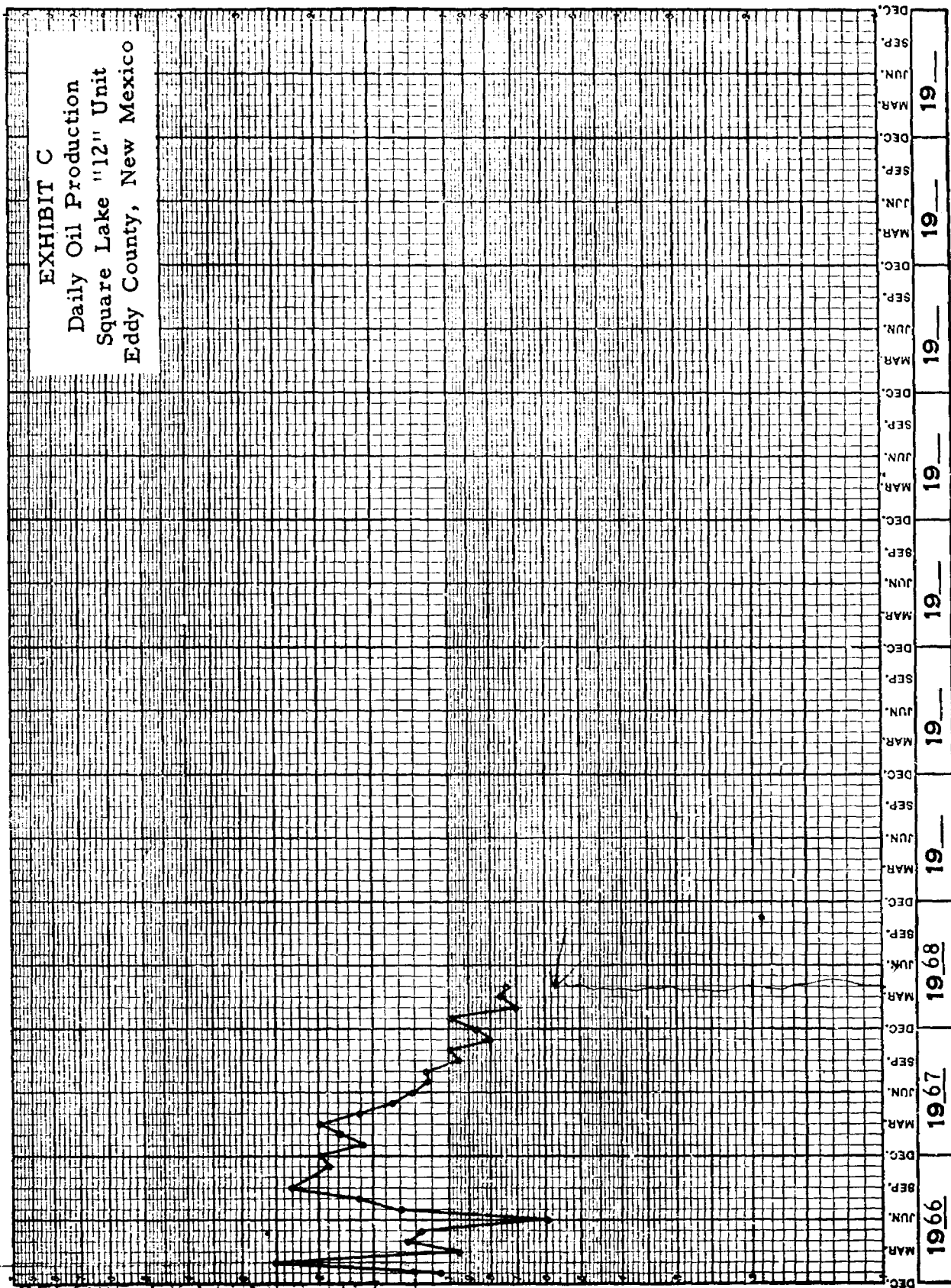
T
17
S

Theodore Roosevelt

CONT. INT. 50
DATE 5-20-66

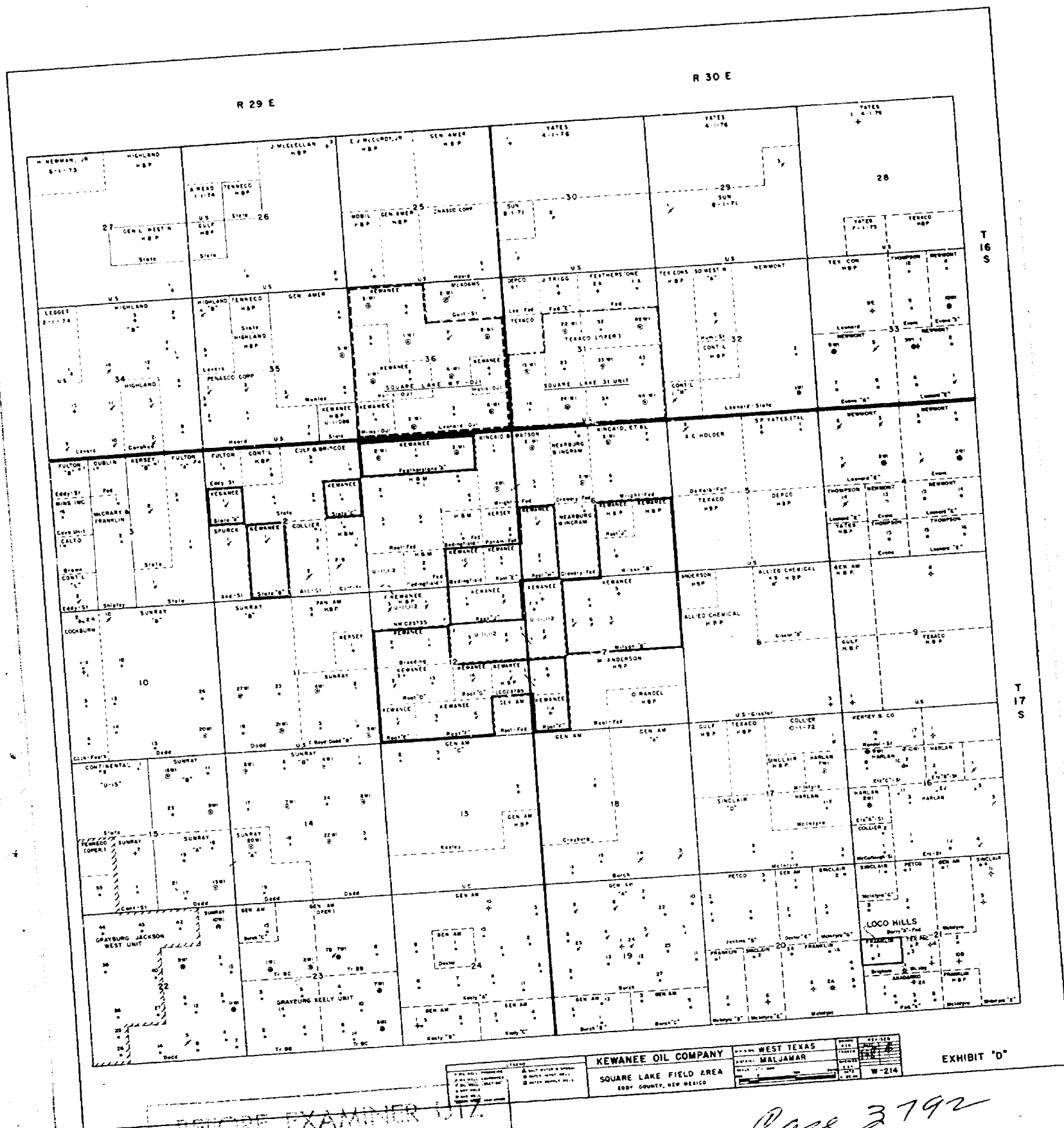
Case 3792

EXHIBIT C
 Daily Oil Production
 Square Lake "12" Unit
 Eddy County, New Mexico



100 BEFORE EXAMINER UTZ
 OIL CONSERVATION COMMISSION
 EXHIBIT NO. C
 CASE NO. 3792

Case 3792



BEFORE EXAMINER U.T.
U.S. CONSERVATION COMMISSION
EXHIBIT NO. D
CASE NO. 3792

Case 3792

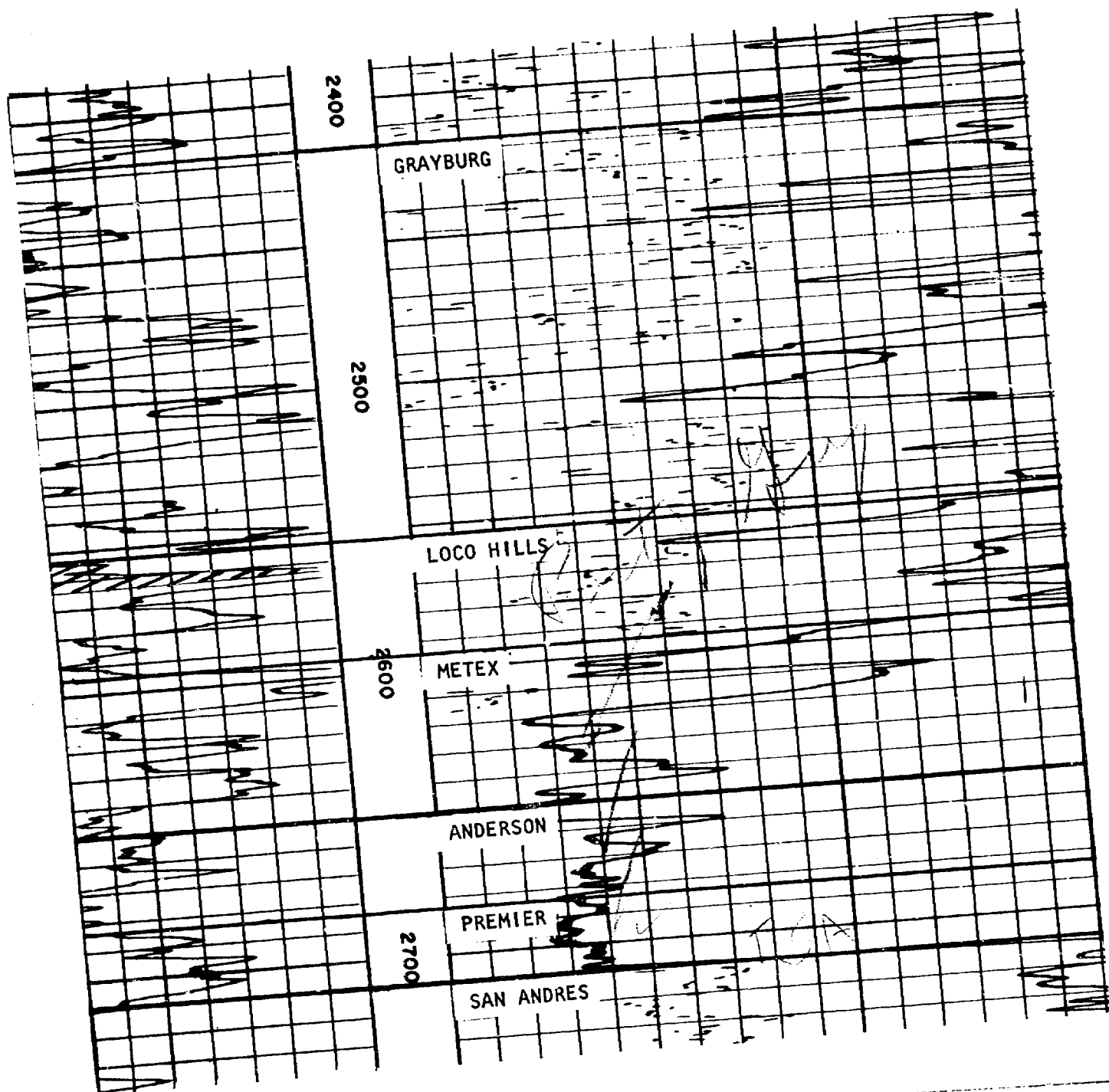


EXHIBIT "E"
TYPE LOG
SQUARE LAKE FIELD

Kewanee Oil Co.
Bedingfield # 10
C SW SE Sec 1-17S-29E
Eddy Co., New Mexico

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. E
CASE NO. 3792

Case 3792

EXHIBIT F

SQUARE LAKE "12" UNIT

Completion Data - Proposed Water Injection Wells

<u>Well</u>	<u>Tract No.</u>	<u>Location</u>	<u>TD</u>	<u>Casing</u>	<u>Perfs.</u>
Root E-5 <i>7 W 11 S</i>	8 ✓	SE, SE, Sec. 1, 17S, 29E <i>PL</i>	3435'	10 3/4" @ 558' w/50sx 7" @ 2434' w/100sx <i>500'</i> 4 1/2" Liner 3430	2536-92 2661-95 2721-31
Root H-1	3 ✓	NW, SW, Sec. 6, 17S, 30E <i>LE</i>	2780'	8 5/8" @ 500' w/50sx 5 1/2" @ 2500' w/100sx <i>+ 500'</i>	OH2500-2780
Root J-1	6C ✓	NW, NE, Sec. 12, 17S, 29E <i>B</i>	2632'	8 5/8" @ 558' w/50sx 7" @ 2450' w/100sx	OH2450-2632
Root D-3 ✓	5 ✓	NW, SW, Sec. 12, 17S, 29E <i>LE</i>	2584'	8 5/8" @ 489' w/50sx 4 1/2" @ 2582' w/200sx <i>500'</i>	2522-28 2546-56
Root G-14	1B ✓	NW, SE, Sec. 12, 17S, 29E <i>LC</i>	2573'	8 5/8" @ 490' w/40sx 7" @ 2400' w/109sx	OH2400-2573
Root F-3 ✓	1A ✓	SE, SW, Sec. 12, 17S, 29E <i>FC</i>	2570'	8 5/8" @ 480' w/50sx 7" @ 2322' w/100sx	OH2322-2570
Wilson "B"-2 ✓	24 ✓	SE, NW, Sec. 7, 17S, 30E	2768'	8 5/8" @ 485' w/50sx 7" @ 2451' w/100sx	OH2451-2768

BEFORE EXAMINER UTZ	
OIL CONSERVATION COMMISSION	
EXHIBIT NO. <u>8000</u>	EXHIBIT NO. <u>F</u>
CASE NO. <u>87430</u>	

Case 3792

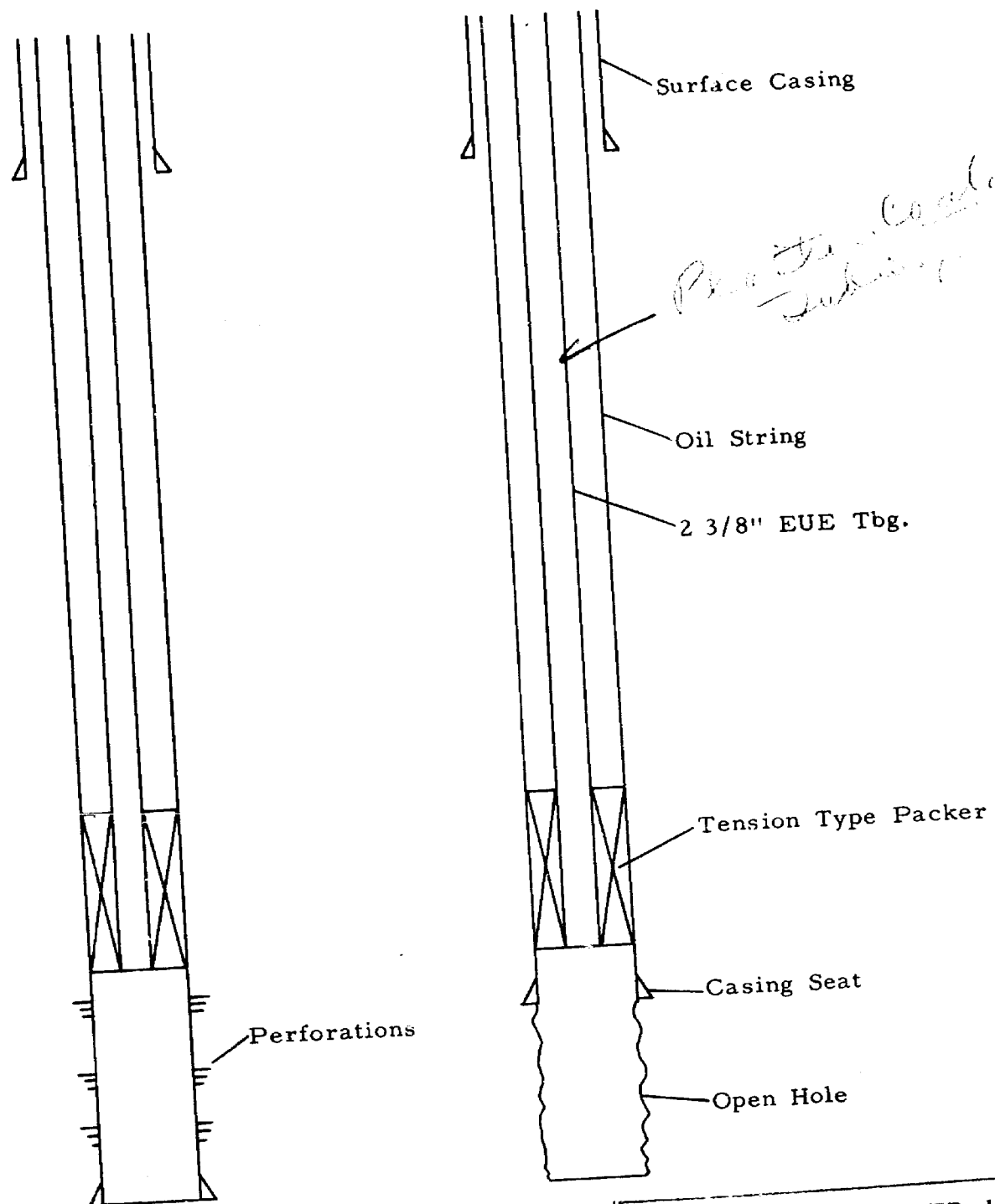


EXHIBIT G
Schematic Drawing of
Completed Water Injection Well
Square Lake "12" Unit
Eddy County, New Mexico
Case 3792

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
Agenda EXHIBIT NO. *G*
CASE NO. *3792*

EXHIBIT H

NALCO CHEMICAL COMPANY
VISCO DIVISION

P.O. Box 87 • Sugar Land, Texas 77478
Plants at Sugar Land, Texas, Anaheim, California, and Casper, Wyoming

REPORT OF WATER ANALYSIS

From Double Eagle Water Co.

Roswell, New Mexico

Sample Marked Caprock

Date 3/22/68

Analysis No. 68-W203C

Sampling Date 2/28/68

Date Sample Rec'd. 3/18/68

MILLIGRAMS PER LITER

Chloride (as NaCl)	80
Total Hardness (as CaCO ₃)	220
Calcium Hardness (as CaCO ₃)	130
Total Alkalinity (as CaCO ₃)	170
Addity to Phenolphthalein (as CaCO ₃) ..	30
Sulfate (as Na ₂ SO ₄)	53
Total Iron (as Fe)	0.5
Suspended Solids	
Precipitated By Sulfate (as BaSO ₄)	0
Turbidity (SiO ₂)	1

pH 7.9

Specific Gravity 1.000

*ESTIMATED

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. H
CASE NO. 3792

CHEMIST

Case 3792

Case 3791

UNIT AGREEMENT
FOR THE DEVELOPMENT AND OPERATION OF THE
SQUARE LAKE 12 UNIT
EDDY COUNTY, NEW MEXICO

BEFORE EXAMINER UTZ	
OIL CONSERVATION COMMISSION	
<u>Agg. 6.</u>	EXHIBIT NO. <u>1</u>
CASE NO.	<u>3791</u>

UNIT AGREEMENT
SQUARE LAKE 12 UNIT
EDDY COUNTY, NEW MEXICO

INDEX

<u>SECTION</u>		<u>PAGE</u>
1	Enabling Act and Regulations	2
2	Unit Area and Definitions	2
3	Exhibits	3
4	Expansion and Automatic Contraction	4
5	Unitized Land and Unitized Substances	5
6	Unit Operator	5
7	Resignation or Removal of Unit Operator	6
8	Successor Unit Operator	7
9	Accounting Provisions and Unit Operating Agreement	8
10	Rights and Obligations of Unit Operator	8
11	Plan of Operations	9
12	Easements or Use of Surface	10
13	Tract Participation	10
14	Development or Operation of Non-Participating Land	11
15	Enlargement of Participating Area	12
16	Allocation of Unitized Substances	13
17	Royalty Settlement	15
18	Rental Settlement	16
19	Conservation	17
20	Drainage	17
21	Leases and Contracts Conformed and Extended	17
22	Correction of Errors	18
23	Covenants Run With Land	19
24	Effective Date	19
25	Term	20
26	Rate of Prospecting, Development and Production	20
27	Nondiscrimination	21
28	Appearances	21
29	Notices	21
30	No Waiver of Certain Rights	21
31	Unavoidable Delay	22
32	Loss of Title	22
33	Nonjoinder and Subsequent Joinder	23
34	Counterparts	23
35	Taxes	24
36	No Partnership	24
37	Border Agreements	24
	Exhibit "A" (Map of Unit Area)	
	Exhibit "B" (Schedule of Ownership)	

UNIT AGREEMENT
FOR THE DEVELOPMENT AND OPERATION OF THE
SQUARE LAKE 12 UNIT
EDDY COUNTY, NEW MEXICO

THIS AGREEMENT, made and entered into this 1st day of August, 1967,
by and between the parties subscribing, ratifying or consenting hereto, and herein
referred to as "parties hereto",

WITNESSETH:

WHEREAS, the parties hereto are the owners of working, royalty or
other oil or gas interests in the Unit Area subject to this agreement; and

WHEREAS, the Oil Conservation Commission of the State of
New Mexico is authorized by law (Sec. 65-3-14, N.M.S. 1953 Anno.) to approve
this agreement, and the conservation provisions hereof; and

WHEREAS, the Mineral Leasing Act of February 25, 1920, (41 Stat.
437, as amended 30 U.S.C. Sections 181, et seq.) authorizes Federal lessee's
and their representatives to unite with each other or jointly or separately with
others in collectively adopting and operating a unit plan of development or
operation of any oil or gas pool, field or like area or any part thereof for the
purpose of more properly conserving the natural resources thereof whenever
determined and certified by the Secretary of the Interior to be necessary or
advisable in the public interest; and

WHEREAS, the parties hereto hold sufficient interests in the
Square Lake 12 Unit covering the land hereinafter described to give reasonably
effective control of operation therein; and

WHEREAS, it is the purpose of the parties hereto, to enable institution
and consummation of secondary recovery operations, to conserve natural re-
sources, to prevent waste and secure the other benefits obtainable through
development and operation of the area subject to this agreement under the
terms, conditions and limitations herein set forth.

NOW THEREFORE, in consideration of the premises and the promises herein contained, the parties hereto commit to this agreement their respective interests in the Unitized Formation as defined underlying the below defined Unit Area, and agree severally among themselves as follows:

SECTION 1. ENABLING ACT AND REGULATIONS. The Mineral Leasing Act of February 25, 1920, as amended, supra, and all valid pertinent regulations, including operating and unit plan regulations, heretofore issued thereunder and valid, pertinent and reasonable regulations hereafter issued thereunder are accepted and made a part of this agreement, provided such regulations are not inconsistent with the terms of the agreement.

SECTION 2. UNIT AREA AND DEFINITIONS. The area as specified on the map attached hereto marked Exhibit "A" is hereby designated and recognized as constituting the Unit Area, containing 1343.96 acres more or less. For the purpose of this agreement, the following terms and expressions as used herein shall mean:

(a) "Commission" is defined as the Oil Conservation Commission of the State of New Mexico.

(b) "Director" is defined as the Director of the United States Geological Survey.

(c) "Secretary" is defined as the Secretary of the Interior of the United States of America or any person duly authorized to exercise the powers vested in that officer.

(d) "Department" is defined as the Department of the Interior of the United States of America.

(e) "Supervisor" is defined as the Oil and Gas Supervisor of the United States Geological Survey for the region in which the Unit Area is situated.

(f) "Grayburg Formation" shall mean the established underground reservoir, the top of which is found at 2416 feet, and the base of which is found at 2710 feet, on the Gamma Ray-Neutron Log of the Kewanee Oil Company Number 10 Bedingfield Well, located in the SW/4 SE/4 of Section 1, Township 17 South, Range 29 East, N.M.P.M., insofar as the same lies within the Unit Area.

(g) "Unitized Substance" means all oil, gas, gaseous substances, sulphur contained in gas, condensate, distillate and all associated and constituent liquid or liquefiable hydrocarbons within or produced from the Unitized Formation.

(h) "Unitized Formation" is defined as the portion of the Grayburg Formation effectively committed to this agreement.

(i) "Cumulative Oil Recovery" is defined as that amount of Unitized Substance which was produced from the Unitized Formation in the Unit Area to 7:00 A.M. MST January 1, 1967.

(j) "Working Interest" is defined as the right to search for, produce and acquire Unitized Substances whether held as an incident of ownership of mineral fee simple title, under an oil and gas lease, or otherwise held.

(k) "Working Interest Owner" shall mean any party hereto owning a Working Interest, including a carried working interest owner, holding an interest in Unitized Substances by virtue of a lease, operating agreement, fee title or otherwise, which interest is chargeable with and obligated to pay or bear, either in cash or out of production, or otherwise, all or a portion of the cost of drilling, developing and producing the Unitized Substances.

(l) "Royalty Interest" or "Royalty" is defined as an interest other than a Working Interest in or right to receive a portion of the Unitized Substances or the proceeds thereof and includes the royalty interest reserved by the lessor by an oil and gas lease and any overriding royalty interest, oil payment interest, net profit contract, or any other payment or burden which does not carry with it the right to search for and produce Unitized Substances.

(m) "Royalty Owner" shall mean the owner of a Royalty Interest.

(n) "Unit Operating Agreement" shall mean any agreement or agreements entered into separately or collectively by and between the Unit Operator and the Working Interest Owners as provided in Section 9, Accounting Provisions and Unit Operating Agreement, infra, and shall be styled "Unit Operating Agreement, SQUARE LAKE 12 UNIT, Eddy County, New Mexico".

(o) "Unit Manager" is defined as the person or corporation appointed by the Unit Working Interest Owners in the absence of a Unit Operator to temporarily perform the duties of the Unit Operator until the selection and qualification of a successor Unit Operator as provided for in Section 8, Successor Unit Operator, hereof.

(p) "Unit Operations" is defined as all operations conducted pursuant to this agreement by the Unit Operator, or in the absence of a Unit Operator, temporarily performed by the Unit Manager.

(q) "Participating Area" is defined as the land within the Unit Area which is designated hereunder as being within the initial participating area or any enlargement thereof. The initial participating area is depicted on Exhibit "A" and designated by Tracts on Exhibit "B".

(r) "Non-participating" is a term that indicates the tracts not entitled to share in production of unitized substances from the participating area. The non-participating tracts are depicted on Exhibit "A" and designated by Tracts on Exhibit "B".

SECTION 3. EXHIBITS. Exhibit "A", attached hereto, is a map showing in addition to the Unit Area the boundaries and identity of tracts, the

initial Participating Area, and leases in said Unit Area to the extent known to the Unit Operator. Exhibit "B", attached hereto, is a schedule showing to the extent known to the Unit Operator, the acreage comprising each tract, percentage ownership of each Working Interest Owner in each tract, kind of ownership of oil and gas interests, and the percentage of participation, if any, each tract has in the Unit Area, based upon a presumed one hundred percent (100%) commitment. However, nothing herein or in said schedule or map shall be construed as a representation by any party hereto as to the ownership of any interest other than such interest or interests as are shown in said map or schedule as owned by such party. Exhibits "A" and "B" shall be revised by the Unit Operator whenever changes render such revision necessary, or when requested by the Supervisor and at least six copies of such revision shall be filed with and approved by the Supervisor as required.

SECTION 4. EXPANSION AND AUTOMATIC CONTRACTION. When practicable, the Unit Area may be expanded to include therein any additional tract regarded as reasonably necessary or advisable to conform with the purposes of this agreement. Such expansion shall be effected in the following manner:

(a) The owner or owners of the Working Interest of a tract or tracts desiring to bring such tract or tracts into the unit, shall file an application therefor with Unit Operator requesting such admission.

(b) Unit Operator shall circulate a notice of the proposed expansion to each Working Interest Owner, setting out the basis for admission and the participation to be assigned, if any. If at least eighty percent (80%) of the Working Interest Owners on the basis of Unit Participation have agreed to such tract or tracts being brought into the unit, then the Unit Operator shall:

(1) After preliminary concurrence by the Director prepare a notice of proposed expansion describing the contemplated changes in the boundaries of the Unit Area, the reason therefor, the basis for admission of the additional tract or tracts, participations to be assigned thereto, if any, and the proposed effective date thereof; and

(2) Deliver copies of said notice to the Supervisor, each Working Interest Owner and to the lessee and lessor whose interests are affected, advising such parties that thirty (30) days will be allowed for submission to the Unit Operator of any objection to such proposed expansion; and

(3) Upon the expiration of said thirty (30) day period as set out in (2) immediately above, file with the Supervisor the following: (a) Evidence of mailing or delivering copies of said notice or expansion; (b) An application for such expansion; (c) An instrument containing the appropriate joinders; and (d) Copies of any objections received.

After due consideration of all pertinent information, the expansion shall, upon approval by the Director, become effective as of the date prescribed in the notice thereof, preferably the first day of the month subsequent to the date of notice, or on such other date as set by the Director in the order or instrument approving such expansion and there shall be an appropriate revision of the participation schedule. The revised tract participation of the respective tracts included within the Unit Area prior to such expansion shall remain in the same ratio one to another.

Any tract not entitled to be included in the Participating Area within the 3-year period commencing on the effective date of this unit agreement will be eliminated automatically from this agreement, effective as of the first day of the fourth year. The Unit Operator shall, within ninety (90) days after the effective date of any elimination hereunder, describe the area so eliminated to the satisfaction of the Director and promptly notify all parties of interest.

SECTION 5. UNITIZED LAND AND UNITIZED SUBSTANCES. All land committed to this agreement as to the Grayburg formation as defined in Section 2, Unit Area, shall constitute land referred to herein as "Unitized Land" or "land subject to this agreement". All oil and gas in said Grayburg Formation in the Unitized Land are unitized under the terms of this agreement and herein are called "Unitized Substances".

SECTION 6. UNIT OPERATOR. Kewanee Oil Company is hereby designated the Unit Operator, and by signing this instrument as Unit Operator agrees and consents to accept the duties and obligations of Unit Operator for the operation, development and production of Unitized Substances as herein provided. Whenever reference is made herein to the Unit Operator, such reference means

the Unit Operator acting in that capacity and not as an owner of interests in Unitized Substances, and the term "Working Interest Owner" when used herein shall include or refer to the Unit Operator as the owner of a Working Interest when such an interest is owned by him.

SECTION 7. RESIGNATION OR REMOVAL OF UNIT OPERATOR.

Unit Operator shall have the right to resign at any time, but such resignation shall not become effective so as to release Unit Operator from the duties and obligations of Unit Operator and terminate Unit Operator's rights as such for a period of six (6) months after written notice of intention to resign has been given by Unit Operator to all Working Interest Owners and the Director, and until all wells are placed in a satisfactory condition for suspension, operation by Unit Manager, if contemplated, or abandonment, whichever is required by the Supervisor, unless a new Unit Operator shall have taken over and assumed the duties and obligations of Unit Operator prior to the expiration of said period.

The Unit Operator shall, upon default or failure in the performance of his duties or obligations hereunder, be subject to removal by at least two of the committed Working Interest Owners having in the aggregate seventy-five percent (75%) or more of Unit Participation exclusive of the Working Interest Owner who is the Unit Operator. Such removal shall be effective upon notice thereof to the Supervisor.

In all such instances of effective resignation or removal, until a successor Unit Operator is selected and accepted as hereinafter provided the Working Interest Owners shall be jointly responsible for the performance of the duties of the Unit Operator and shall, not later than thirty (30) days before such resignation or removal becomes effective, appoint a Unit Manager to represent them temporarily in any action to be taken hereunder until a successor Unit Operator can be selected and accepted.

The resignation or removal of Unit Operator under this agreement shall not terminate his right, title or interest as the owner of a Working

Interest or other interest in Unitized Substances, but, upon the resignation or removal of Unit Operator becoming effective, such Unit Operator shall deliver possession of all wells, equipment, books, records, materials, appurtenances, and any other assets, used in Unit Operations and collectively owned by the Working Interest Owners, to the new duly qualified successor Unit Operator, or to the Unit Manager until a new Unit Operator is selected, to be used for the purpose of conducting Unit Operations hereunder. Nothing herein shall be construed as authorizing the removal of any material, equipment or appurtenances needed for the preservation of any unit wells.

Nothing herein contained shall be construed to relieve or discharge any Unit Operator who resigns or is removed hereunder from any liability or duties accruing or performable by him prior to the effective date of such resignation or removal.

SECTION 8. SUCCESSOR UNIT OPERATOR. Whenever the Unit Operator shall tender his resignation as Unit Operator or shall be removed as hereinabove provided, the Working Interest Owners shall select a successor Unit Operator as herein provided. Such selection shall not become effective until (a) a Unit Operator so selected shall accept in writing the duties and responsibilities of Unit Operator, and (b) the selection shall have been accepted and notice thereof filed with the Supervisor. If no successor Unit Operator is selected and qualified as herein provided, the Director, at his election, may declare this agreement terminated.

In selecting a successor Unit Operator the majority vote of the Working Interest Owners shall prevail. If the Unit Operator who is removed votes only to succeed himself or fails to vote, the successor Unit Operator shall be selected by the affirmative vote of at least seventy-five percent (75%) of the voting interest remaining. In voting under this Section 8 each Working Interest Owner shall have a voting interest equal to its Unit Participation.

SECTION 9. ACCOUNTING PROVISIONS AND UNIT OPERATING AGREEMENT.

If the Unit Operator is not the sole owner of Working Interest, costs and expenses incurred by Unit Operator in conducting Unit Operations hereunder shall be paid, apportioned among and borne by the Working Interest Owners all in accordance with the Unit Operating Agreement, entered into by and between the Unit Operator and the owners of Working Interests. Such Unit Operating Agreement shall also provide the manner in which the Working Interest Owners shall be entitled to receive their respective proportionate and allocated share of the benefits accruing hereto in conformity with their underlying operating agreements, leases, or other independent contracts and such other rights and obligations between Unit Operator and the Working Interest Owners as may be agreed upon; however, no such Unit Operating Agreement shall be deemed either to modify any of the terms and conditions of this Unit Agreement or to relieve the Unit Operator of any right or obligation established under this agreement, and, in case of any inconsistency or conflict between this agreement and the Unit Operating Agreement, this Unit Agreement shall prevail.

At such time a Unit Operating Agreement is executed, three (3) true copies of such Agreement and any revision and amendment thereof, shall be submitted promptly to the Supervisor.

SECTION 10. RIGHTS AND OBLIGATIONS OF UNIT OPERATOR.

Except as otherwise specifically provided herein, the exclusive right, privilege and duty of exercising any and all rights of the parties hereto which are necessary or convenient for prospecting for, producing, storing, allocating and distributing the Unitized Substances are hereby delegated to and shall be exercised by the Unit Operator as herein provided. Upon request, acceptable evidence of title to said rights shall be deposited with said Unit Operator, and, together with this agreement, shall constitute and define the rights, privileges, and obligations of Unit Operator. Nothing herein, however, shall be construed to transfer title to any land or to any lease or operating agreement, it being understood that

gas, liquefied petroleum gases and any one or more other substances or combination of substances whether produced from the Unit Area or not, and that the location of input wells, the rates of injection therein and the rate of production shall be governed by standards of good geologic and petroleum engineering practices and conservation methods. After commencement of secondary operations, Unit Operator shall furnish the Supervisor monthly injection and production reports for each well in the Unit. The Supervisor shall be furnished periodic reports on the progress of the plan of operation and any revisions or changes thereto necessary to meet changed conditions or to protect the interests of all parties to this agreement, which revisions and changes shall be subject to approval by the Supervisor.

SECTION 12. EASEMENTS OR USE OF SURFACE. The parties hereto, to the extent of their rights and interest, hereby grant to Working Interest Owners the right to use as much of the surface of the land within the Participating Area as may reasonably be necessary for Unit Operations, including the free use of water from any formation above or below the Unitized Formation within the Participating Area for Unit Operations.

Working Interest Owners shall pay the owner for damages to growing crops, timber, fences, improvements and structures on the Unit Area that result from Unit Operations.

SECTION 13. TRACT PARTICIPATION. In Exhibit "B" attached hereto, there are listed and numbered the various tracts within the Unit Area and set forth opposite each tract is either a statement that the tract is "Non-participating" or a figure which represents the percentage of participation allocated to such tract based on a one hundred percent (100%) commitment of all tracts.

The percentage of participation of each tract comprising the initial Participating Area was determined by the proportion which the

Cumulative Oil Recovery for each participating tract bears to the Cumulative Oil Recovery for all tracts in the initial Participating Area.

However, if the Unit Agreement is approved with less than one hundred percent (100%) commitment of all tracts in the initial Participating Area, said participation percentage shall be revised to fit the Commitment Status as of the effective date hereof, and hereafter as needed pursuant to Section 16, Allocation of Unitized Substances.

SECTION 14. DEVELOPMENT OR OPERATION OF NON-PARTICIPATING LAND. Any party or parties hereto owning or controlling the Working Interest or a majority of the Working Interest in any Unitized Land having thereon a regular well location may, with the approval of the Supervisor and subject to the provisions of the Unit Operating Agreement, at such party's sole risk, cost and expense, drill or work over a well to test the Unitized Formation if such location is not within the Participating Area.

If any well drilled or worked over, as aforesaid, by a Working Interest Owner results in production of Unitized Substances such that the land upon which the well is situated may properly be included in a Participating Area, or is determined to be essential to unit operations, such Participating Area shall be enlarged as provided in this Agreement, and the well shall thereafter be operated by Unit Operator in accordance with the terms of this Agreement and the Unit Operating Agreement.

If any well drilled or worked over, as aforesaid, by a Working Interest Owner obtains production of Unitized Substances in quantities insufficient to justify the inclusion in a Participating Area of the land upon which such well is situated, or is determined not to be essential to Unit Operations, such well may be operated and produced by the party drilling or working over the same subject to the conservation requirements of this Agreement. The royalties in amount of value of production from any such well shall be paid as specified in the underlying lease and agreements affected.

SECTION 15. ENLARGEMENT OF PARTICIPATING AREA. Whenever it appears proper to revise the Participating Area to include Unitized Land then regarded as reasonably proven to be productive of Unitized Substances in paying quantities or determined to be essential to Unit Operations, the Unit Operator and the Working Interest Owner or Owners of such tracts shall determine, on the basis of estimated recoverable reserves of Unitized Substances, the essentiality to Unit Operations, or other pertinent factors, the participation percentage that should be assigned to such tract. At such time said parties agree upon such participation percentage, the Unit Operator shall submit to the Working Interest Owners in the existing Participating Area the proposed revision and the participation percentage to be assigned to each such tract. If ninety percent (90%) of the Working Interest Owners, based on unit participation, approve the proposed revision and revised tract participation percentage, then, subject to the approval of the Director, the Participating Area shall be revised and the participation percentage for each tract in the enlarged Participating Area shall be revised; provided, however, that in such revision, the revised participation percentage of the respective tracts which were participating prior to such revision shall remain in the same ratio one to another. The effective date of any enlargement of the Participating Area shall be determined by the Unit Operator, subject to the approval of the Director, in advance of the vote by the Working Interest Owners to consider a revision of the Participating Area. It is the intent of this section that the Participating Area shall be comprised of adjoining parcels of land consisting of one or more Government survey quarter-quarter sections, or lot equivalents in instances of irregular surveys, on each of which parcels there is a well capable of producing Unitized Substances in paying quantities or determined to be essential for Unit Operation. Nothing herein contained shall be construed as requiring any retroactive adjustment for production obtained prior to the effective date of the revision of the Participating Area.

In the absence of agreement at any time between the Unit Operator and the Director as to the proper definition or redefinition of a Participating Area, the portion of all payment affected may be impounded in a manner mutually acceptable to the owners of working interest, except royalties due the United States which shall be determined by the Supervisor, and the amount thereof deposited, as directed by the Supervisor, to be held as unearned money until a Participating Area as revised is finally approved and then applied as earned or returned in accordance with determination of the sum due as Federal royalty on the basis of such revised and approved Participating Area.

SECTION 16. ALLOCATION OF UNITIZED SUBSTANCES. All

Unitized Substances produced from the committed tracts within the Participating Area (except any part of such Unitized Substances used in conformity with good operating practices on Unitized Land for drilling, operating, camp, and other production or development purposes and for pressure maintenance in accordance with a plan of operations approved by the Supervisor, or unavoidably lost) shall be allocated to the committed tracts within the Participating Area in accordance with the respective tract participation effective hereunder during the respective periods such Unitized Substances were produced, as set forth in the schedule of participation in Exhibit "B" or any approved revision thereof. The amount of Unitized Substances so allocated to each tract shall for all intents and purposes be deemed to have been produced from such tract.

Unitized Substances allocated to each tract shall be distributed among or accounted for to the parties executing, consenting to, or ratifying this agreement entitled to share in the production from such tract in the same manner, in the same proportions, and upon the same conditions as they would have participated and shared in the production from such tract had this agreement not been entered into and with the same legal force and effect.

No participating tract shall be subsequently excluded from participation hereunder on account of depletion of Unitized Substances, and nothing herein contained shall be construed as requiring any retroactive adjustment for production obtained prior to the effective date of participation of any tract.

If the Working Interest or the Royalty Interest in any tract are divided with respect to separate parcels or portions of such tract and owned severally by different persons, the participation percentage assigned to such tract, in the absence of a recordable instrument executed by all owners and furnished to Unit Operator fixing the divisions of ownership, shall be divided among such parcels or portions in proportion to the number of surface acres in each.

Any party receiving in kind or separately disposing of all or any part of the Unitized Substances allocated to any tract, or receiving the proceeds therefrom if the same is sold or purchased by Unit Operator, shall be responsible for the payment of all royalty on the lease or leases and tracts contributed by it and received into the Unit, and each such party shall hold each other party hereto harmless against all claims, demands and causes of action for such royalty on the lease or leases and tracts contributed by it to the Unit Area.

If, after the effective date of this agreement, there is any tract or tracts that are subsequently committed hereto, as provided in Section 4, Expansion and Automatic Contraction, hereof, or any tract or tracts within the Unit Area not committed hereto as of the effective date hereof but which are subsequently committed hereto under provisions of Section 33, Nonjoinder and Subsequent Joinder, or if any tract is excluded from the Unit Area as provided for in Section 4, Expansion and Automatic Contraction, or Section 32, Loss of Title, the schedule of participation as shown in Exhibit "B" shall be

revised by the Unit Operator and distributed to the Working Interest Owners and the Supervisor to show the new participation percentage of all the then participating tracts; and the revised Exhibit "B", upon approval by the Director, shall govern all the allocation of production after the effective date thereof until a new revised Exhibit "B" is so approved and becomes effective.

SECTION 17. ROYALTY SETTLEMENT. The United States of America and all Royalty Owners who, under an existing contract, are entitled to take in kind a share of the substances produced from any tract unitized hereunder, shall continue to be entitled to such right to take in kind their share of the Unitized Substances allocated to such tract, and Unit Operator shall make deliveries of such Royalty share taken in kind in conformity with the applicable contracts, laws, and regulations. Settlement for Royalty Interest not taken in kind shall be made by Working Interest Owners responsible therefor under existing contracts, laws, and regulations, on or before the last day of each month for Unitized Substances produced during the preceding calendar month; provided, however, that nothing herein contained shall operate to relieve the lessees of any land from their respective lease obligations for the payment of any royalty due under their leases, except that such royalty shall be computed in accordance with the terms of this Unit Agreement.

If gas obtained from lands not subject to this Agreement is introduced into the Unitized Formation, for use in repressuring, stimulation of production, or increasing ultimate recovery in conformity with a plan approved pursuant to Section 11, Plan of Operations, a like amount of gas, less appropriate deductions for loss from any cause, may be withdrawn from the Unitized Formation, royalty free as to dry gas but not as to the products extracted therefrom; provided such withdrawal shall be at such times as may be provided in the approved plan of operations or as otherwise may be consented to by the Supervisor as conforming to good engineering practice; and provided further,

that such right of withdrawal shall terminate on the termination date of this Unit Agreement.

All royalty due the United States of America and the other Royalty Owners hereunder shall be computed and paid in accordance with the terms of the leases on the basis of the Unitized Substances allocated to the respective tract or tracts committed hereto, in lieu of actual production from such tract or tracts.

Royalty due the United States shall be computed as provided in the operating regulations and paid in value or delivered in kind as to all Unitized Substances on the basis of the amounts thereof allocated to unitized Federal land as provided herein at the rates specified in the respective Federal leases, or at such lower rate or rates as may be authorized by law or regulations; provided, that for leases on which the royalty rate depends on the daily average production per well, said average production shall be determined in accordance with the operating regulations as though the Participating Area were a single consolidated lease.

Each Royalty Owner (other than the United States of America) who ratifies this agreement represents and warrants that he is the owner of a Royalty Interest in a tract or tracts within the Unit Area as his interest appears in Exhibit "B" attached hereto. If any Royalty Interest in a tract or tracts should be lost by title failure or otherwise in whole or in part during the term of this agreement then the Royalty Interest of the party representing himself to be the owner thereof shall be reduced proportionately and the interest of all parties shall be adjusted accordingly.

SECTION 18. RENTAL SETTLEMENT. Rental or minimum royalties due on leases committed hereto shall be paid by Working Interest Owners responsible therefor under existing contracts, laws and regulations; provided that nothing herein contained shall operate to relieve the lessees of

any land from their respective lease obligations for the payment of any rental or minimum royalty in lieu thereof, due under their leases. Rental or minimum royalty for lands of the United States of America subject to this agreement shall be paid at the rates specified in the respective leases from the United States of America, unless rental or minimum royalty is waived, suspended, or reduced by law or by approval of the Secretary or his duly authorized representative.

SECTION 19. CONSERVATION. Operations hereunder and production of Unitized Substances shall be conducted to provide for the most economical and efficient recovery of said substances without waste, as defined by or pursuant to Federal and State laws and regulations.

SECTION 20. DRAINAGE. The Unit Operator shall take appropriate and adequate measures to prevent drainage of Unitized Substances from Unitized Land by wells on land not subject to this agreement.

SECTION 21. LEASES AND CONTRACTS CONFORMED AND EXTENDED. The terms, conditions and provisions of all leases, sub leases and other contracts relating to exploration, drilling, development or operation for oil or gas on lands committed to this agreement are hereby expressly modified and amended to the extent necessary to make the same conform to the provisions hereof, but otherwise to remain in full force and effect, and the parties hereto hereby consent that the Secretary shall, and by his approval hereof, or by the approval hereof by his duly authorized representative, does hereby establish, alter, change or revoke the drilling, producing, rental, minimum royalty and royalty requirements of Federal leases committed hereto and the regulations in respect thereto to conform said requirements to the provisions of this agreement.

Without limiting the generality of the foregoing, all leases, sub leases and contracts are particularly modified in accordance with the following:

(a) The development and operation of lands subject to this agreement under the terms hereof shall be deemed full performance of all obligations for development and operation with respect to each and every part or separately owned tract subject to this agreement, regardless of whether there is any development of any particular part or tract of the Unit Area, notwithstanding anything to the contrary in any lease, operating agreement or other contract by and between the parties hereto, or their respective predecessors in interest, or any of them.

(b) Drilling, producing or secondary recovery operations performed hereunder upon any tract of Unitized Land shall be accepted and deemed to be performed upon and for the benefit of each and every tract of Unitized Land, and no lease shall be deemed to expire by reason of failure to drill or produce wells situated on land therein embraced.

(c) Suspension of drilling or producing operations on all Unitized Land pursuant to direction or consent of the Secretary or his duly authorized representative, shall be deemed to constitute such suspension pursuant to such direction or consent as to each and every tract of Unitized Land.

(d) Each lease, sub lease, or contract relating to the exploration, drilling, development or operation for oil and gas which by its terms might expire prior to the termination of this agreement, is hereby extended beyond any such term so provided therein, so that it shall be continued in full force and effect for and during the term of this agreement.

(e) Termination of this agreement shall not affect any lease which, pursuant to the terms thereof or any applicable laws, shall continue in force and effect thereafter.

(f) The segregation of any Federal lease committed to this agreement is governed by the following provision in the fourth paragraph of Section 17 (j) of the Mineral Leasing Act, as amended by the Act of September 2, 1960 (74 Stat. 781-784): "Any (Federal) lease heretofore or hereafter committed to any such (Unit) plan embracing lands that are in part within and in part outside of the area covered by any such plan shall be segregated into separate leases as to the lands committed and the lands not committed as of the effective date of unitization; provided, however, that any such lease as to the non-unitized portion shall continue in force and effect for the term thereof but for not less than two years from the date of such segregation and so long thereafter as oil or gas is produced in paying quantities."

SECTION 22. CORRECTION OF ERRORS. It is hereby agreed by all parties to this agreement that Unit Operator is empowered to correct any mathematical or clerical errors which may exist in the pertinent exhibits to this agreement; provided, however, that correction of any error other than mathematical or clerical shall be made by Unit Operator only after first having obtained approval of Working Interest Owners and the Supervisor.

SECTION 23. COVENANTS RUN WITH LAND. The covenants

herein shall be construed to be covenants running with the land with respect to the interest of the parties hereto and their successors in interest until this agreement terminates, and any grant, transfer or conveyance of interest in land or leases subject hereto shall be and hereby is conditioned upon the assumption of all privileges and obligations hereunder by the grantee, transferee or other successor in interest. No assignment or transfer of any Working Interest subject hereto shall be binding upon Unit Operator until the first day of the calendar month after Unit Operator is furnished with the original, or an acceptable photostatic or certified copy, of the recorded instrument of transfer; and no assignment or transfer of any Royalty Interest subject hereto shall be binding upon the Working Interest Owner responsible therefor until the first day of the calendar month after said Working Interest Owner is furnished with the original or an acceptable photostatic or certified copy of the recorded instrument of transfer.

SECTION 24. EFFECTIVE DATE. This agreement shall become binding upon each party who executes or ratifies it as of the date of execution or ratification by such party and shall become effective as of 7:00 o'clock a.m. on the first day of the calendar month next following the approval of this agreement by the Secretary or his duly authorized representative.

If approval of this Unit Agreement is not accomplished on or before August 1, 1968, this agreement shall ipso facto expire on said date (hereinafter called "expiration date") and thereafter be of no further force or effect.

Unit Operator shall at any earlier time but not later than thirty (30) days after the effective date of this agreement, file for record in the office of the County Clerk of Eddy County, New Mexico, a counterpart of this agreement. Within thirty (30) days after said effective date, there also shall be filed a certificate to the effect that this agreement has become effective according to its terms and stating further the effective date.

SECTION 25. TERM. The term of this agreement shall be for the time that Unitized Substances can be produced in quantities sufficient to pay for the cost of producing same, and as long thereafter as drilling, reworking or other operations (including secondary recovery operations) are conducted without a cessation of more than sixty (60) consecutive days, and so long thereafter as Unitized Substances can be produced as aforesaid. Termination under this paragraph shall be effective as of the first day of the month after the Unit Operator determines, on confirmatory data satisfactory to the Director, that the unit is no longer paying.

This agreement may be terminated at any time by Working Interest Owners having a combined Unit Participation of at least ninety percent (90%) with the approval of the Director. Notice of termination shall be given to all parties and filed with the Supervisor, and with the County Clerk of Eddy County, New Mexico.

If not otherwise specified by the leases unitized under this agreement, Royalty Owners hereby grant Working Interest Owners a period of six (6) months after termination of this agreement in which to salvage, sell, distribute or otherwise dispose of the personal property and facilities used in connection with Unit Operations.

SECTION 26. RATE OF PROSPECTING, DEVELOPMENT AND PRODUCTION. All production and disposal thereof shall be in conformity with allocations and quotas made or fixed by any duly authorized person or regulatory body under any Federal or State statute. The Director is hereby vested with authority to alter or modify from time to time, at his discretion, the rate of prospecting and development and, within the limits made or fixed by the Commission, to alter or modify the quantity and rate of production under this agreement, such authority being hereby limited to alteration or modification in the public interest, the purpose thereof and the public interest to be served thereby to be stated in the order of alteration or modification.

Powers in this Section vested in the Director shall only be exercised after notice to Unit Operator and opportunity for hearing to be held not less than fifteen (15) days from notice, and thereafter subject to administrative appeal before becoming final.

SECTION 27. NONDISCRIMINATION. In connection with the performance of work under this agreement, the Unit Operator agrees to comply with all of the provisions of Section 202 (1) to (7) inclusive of Executive Order 11246 (30 F.R. 12319), which are hereby incorporated by reference in this agreement.

SECTION 28. APPEARANCES. Unit Operator shall have the right to appear for or on behalf of any and all interests affected hereby before the Department to appeal from any order issued under the rules and regulations by the Department, or to apply for relief from any of said rules and regulations or in any proceedings relative to operations before the Department, or any other legally constituted authority; provided, however, that any other interested party shall also have the right at his or its own expense to be heard in any such proceeding.

SECTION 29. NOTICES. All notices, demands, objections or statements required hereunder to be given or rendered to the parties hereto shall be deemed fully given if made in writing and personally delivered to the party or parties or sent by postpaid certified or registered mail, addressed to such party or parties at their respective addresses set forth in connection with the signatures hereto or to the ratification or consent hereof or to such other address as any such party or parties may have furnished in writing to the party sending the notice, demand or statement.

SECTION 30. NO WAIVER OF CERTAIN RIGHTS. Nothing in this agreement contained shall be construed as a waiver by any party hereto of the right to assert any legal or constitutional right or defense as to the validity

or invalidity of any Federal or State law or rule or regulation issued thereunder in any way affecting such party, or as a waiver by any such party or any right beyond his or its authority to waive.

SECTION 31. UNAVOIDABLE DELAY. All obligations under this agreement requiring the Unit Operator to commence or continue secondary recovery operations or to operate on or produce Unitized Substances from any of the land covered by this agreement shall be suspended while, but only so long as the Unit Operator, despite the exercise of due care and diligence, is prevented from complying with such obligations, in whole or in part, by strikes, acts of God, Federal, State or municipal law or agency, unavoidable accident, uncontrollable delays in transportation, inability to obtain necessary materials in open market, or other matters beyond the reasonable control of the Unit Operator whether similar to matters herein enumerated or not.

SECTION 32. LOSS OF TITLE. In the event title to any tract of Unitized Land shall fail so as to render the tract inoperable under this agreement, and the true owner cannot be induced to join this Unit Agreement, such tract shall be automatically regarded as not committed hereto and there shall be such readjustment of future costs and benefits and such revision of Exhibits "A" and "B" as may be required on account of the loss of such title. In the event of a dispute as to the title or right of any Royalty or Working Interest Owner the payment for (or delivery in kind of) Unitized Substances on account thereof may be withheld (or marketed and the proceeds impounded) without liability or interest until the dispute is finally settled; provided, that as to Federal land or leases, no payments of funds due the United States of America shall be withheld but such funds shall be deposited as directed by the Supervisor to be held as unearned money pending final settlement of the title dispute and then applied as earned or returned in accordance with such final settlement.

Unit Operator as such is relieved from any responsibility for any defect or failure of any title hereunder.

SECTION 33. NONJOINDER AND SUBSEQUENT JOINDER. Joinder by any Royalty Owner, at any time, must be accompanied by appropriate joinder of the corresponding Working Interest Owner in order for the interest of such Royalty Owner to be regarded as effectively committed. Joinder to the Unit Agreement by a Working Interest Owner, must be accompanied by appropriate joinder to the Unit Operating Agreement, if any, in order for such interest to be regarded as effectively committed to this Unit Agreement.

It is understood and agreed, however, that after thirty (30) days from the effective date hereof the right of subsequent joinder as provided in this Section shall be subject to such requirements or approvals and on such basis as may be agreed upon by ninety percent (90%) of the Working Interest Owners (based upon participation percentage in the Unitized Land). Except as may be otherwise herein provided, subsequent joinder to this Agreement shall be effective at 7:00 a.m. as of the first day of the month following the filing with the Supervisor of duly executed counterparts of any and all documents necessary to establish effective commitment of any tract or interest to this Agreement, unless objection to such joinder by the Director is duly made within sixty (60) days after such filing.

SECTION 34. COUNTERPARTS. This Agreement may be executed in any number of counterparts, no one of which needs to be executed by all parties, and may be ratified or consented to by separate instrument in writing specifically referring hereto, and shall be binding upon all parties who have executed such a counterpart, ratification or consent hereto with the same force and effect as if all parties had signed the same document, and regardless of whether or not it is executed by all other parties owning or claiming an interest in the land within the above described Unit Area.

SECTION 35. TAXES. Each party hereto shall, for its own account, render and pay its share of any taxes levied against or measured by the amount or value of the Unitized Substances produced from the Unitized Land; provided, however, that if it is required or if it be determined that the Unit Operator or the several Working Interest Owners must pay or advance said taxes for the account of the parties hereto, it is hereby expressly agreed that the parties so paying or advancing said taxes shall be reimbursed therefor by the parties hereto, including Royalty Owners, who may be responsible for the taxes on their respective allocated share of said Unitized Substances. No such taxes shall be charged to the United States, nor to any lessor who has a contract with a lessee which requires his lessee to pay such taxes.

SECTION 36. NO PARTNERSHIP. The duties, obligations and liabilities of the parties hereto are intended to be several and not joint or collective. This agreement is not intended to create, and shall not be construed to create, an association or trust, or to impose a partnership duty, obligation or liability with regard to any one or more of the parties hereto. Each party hereto shall be individually responsible for its own obligation as herein provided.

SECTION 37. BORDER AGREEMENTS. Subject to the approval of the Supervisor and the Commissioner, if appropriate, the Unit Operator, with concurrence of sixty-five percent (65%) of the Working Interest Owners, based on percentage of participation, may enter into a border-protection agreement or agreements with the working interest owners of adjacent lands along the exterior boundary of the Unit Area with respect to the operations in the border area for the maximum ultimate recovery, conservation purposes and proper protection of the parties and interests.

CERTIFICATION - DETERMINATION

No. _____

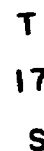
Pursuant to the authority vested in the Secretary of Interior as to Federal lands, under the Act approved February 25, 1920, 41 Stat. 437, as amended, 30 U.S.C. Secs. 181, et seq., and delegated to the Director of the Geological Survey pursuant to Departmental Order No. 2365 of October 8, 1947, 43 C.F.R. Sec. 4.611, 12 F.R. 6784, I do hereby:

- A. Approve the attached agreement for the development and operation of the Square Lake 12 Unit Area, Eddy County, New Mexico.
- 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

DIRECTOR, UNITED STATES
GEOLOGICAL SURVEY

R 30 E



UNIT BOUNDARY
TRACT NUMBER
OIL WELL, PRODUCING
OIL WELL, ABANDONED
OIL WELL, INACTIVE
DRY HOLE
FEDERAL LAND

EXHIBIT "A"
SQUARE LAKE 12 UNIT
EDDY COUNTY, NEW MEXICO



EXHIBIT "B"

SQUARE LAKE 12 UNIT

EDDY COUNTY, NEW MEXICO

Tract No.	Description of Land	Number of Acres	Serial Number and Expiration Date of Lease	Basic Royalty and Percentage	Lessee of Record	Overriding Royalty and Percentage	Working Interest and Percentage	Percentage Tract Participation
1	T-17-S, R-29-E Sec. 12: NE/4 SE/4	40.00	LC 028785 12/30/43(HBP)	United States 100% (1)	Mac T. Anderson	L. Jay Root 6.25% Lucretia Conlon 0.25% K. G. Lowry 1.00% Mac T. Anderson & Gladye C. Anderson, his wife 4.00% (2) Petroleum Corp. of Texas & Salt Creek Benevolent Foundation 2.6666% (3) Eugene E. Nearburg 0.6667% (3) Tom L. Ingram 0.6667% (3)	Kewanee Oil Company 100%	4.02688%
1A	T-17-S, R-29-E Sec. 12: SE/4 SW/4 & SW/4 SE/4	80.00	LC 028785 12/30/43	United States 100% (1)	Mac T. Anderson	L. J. Root 6.25% Lucretia Conlon 0.25% K. G. Lowry 1.00% C. L. East & Irene East, his wife 4.00% (2) Petroleum Corp. of Texas & Salt Creek Benevolent Foundation 2.6666% (3) Eugene E. Nearburg 0.6667% (3) Tom L. Ingram 0.6667% (3)	Kewanee Oil Company 100%	12.18819%
1B	T-17-S, R-29-E Sec. 12: NW/4 SE/4	40.00	LC 028785 12/30/43	United States 100% (1)	Mac T. Anderson	L. Jay Root 6.25% Lucretia Conlon 0.25% K. G. Lowry 1.00% J. E. Beddingfield 2.00% (4)	Kewanee Oil Company 100%	3.41402%

Tract No.	Description of Land	Number of Acres	Serial Number and Expiration Date of Lease	Basic Royalty and Percentage	Lessee of Record	Overriding Royalty and Percentage	Working Interest and Percentage	Percentage Tract Participation
1B (Cont.)								
1C	T-17-S, R-30-E Sec. 7: NW/4 SW/4	40.00	LC 028785 12/30/43 (HBP)	United States 100% (6)	Mac T. Anderson	Mary E. Hanners 0.375% (4) Leland J. Price, Rex Wheatley & V. L. Gates 1.625% (4) Petroleum Corp. of Texas & Salt Creek Benevolent Foundation 2.666% (3) Eugene Nearburg 0.6667% (3) Tom L. Ingram 0.6667% (3)	Kewanee Oil Company 100%	0.00000
1D	T-17-S, R-30-E Sec. 7: SW/4 SW/4	40.00	LC 028785 12/30/43 (HBP)	United States 100% (6)	Mac T. Anderson	L. Jay Root 6.25% Lucretia Conlon 0.25% K. G. Lowery 1.00% C. L. East & Irene East, his wife 4.00% (2) Petroleum Corp. of Texas & Salt Creek Benevolent Foundation 2.666% (3) Eugene E. Nearburg 0.6667% (3) Tom L. Ingram 0.6667% (3)	Kewanee Oil Company 100%	0.00000

19.85526%

Tract No.	Description of Land	Number of Acres	Serial Number and Expiration Date of Lease	Basic Royalty and Percentage	Lessee of Record	Overriding Royalty and Percentage	Working Interest and Percentage	Percentage Tract Participation
1A	T-17-S, R-30-E Sec. 7: E/2 NE/4 & NW/4 NE/4 Sec. 6: S/2 SE/4 & NE/4 SE/4	240.00	LC 061483 12/30/43 (HBP)	United States 100% (6)	Kewanee Oil Company	K. G. Lowery 1.00% L. Jay Root 6.25% Lucretia Conlon 0.25% Petroleum Corp. of Texas & Salt Creek Benevolent Foundation 2.6666% (7) Eugene E. Nearburg 0.6667% (7) Tom L. Ingram 0.6667% (7) Nova Johnson 2.00% (7) Broadway Factors, Inc. 2.00% (7)	Kewanee Oil Company 100%	0.00000%
5	T-17-S, R-29-E Sec. 12: N/2 SW/4	80.00	LC 065591 12/30/43	United States 100% (1)	O. H. Randel	K. G. Lowery 1.00% L. Jay Root 6.25% Lucretia Conlon 0.25% Kewanee Oil Company 2.00%	Kewanee Oil Company 100%	10.14707%
6	T-17-S, R-29-E Sec. 1: SW/4 SE/4	40.00	NMA 025733 12/30/43	United States 100% (1)	Mac T. Anderson	K. G. Lowery 1.00% L. Jay Root 6.25% Lucretia Conlon 0.25% J. D. Beddingfield 2.00% (4) Leland Price 2.00% (4) Petroleum Corp. of Texas & Salt Creek Benevolent Foundation 2.6666% (3) Eugene E. Nearburg 0.6667% (3) Tom L. Ingram 0.6667% (3)	Kewanee Oil Company 100%	0.64427%

Tract No.	Description of Land	Number of Acres	Serial Number and Expiration Date of Lease	Basic Royalty and Percentage	Lessee of Record	Overriding Royalty and Percentage	Working Interest and Percentage	Percentage Tract Participation
6A	T-17-S, R-29-E Sec. 1: SW/4 SW/4	40.00	NM 025733 12/30/43 (HBP)	United States 100% (6)	Mac T. Anderson	K. G. Lowery 1.00% L. Jay Root 6.25% Lucretia Conlon 0.25% O. H. Randel and Clarice Randel, his wife 4.00% Petroleum Corp. of Texas & Salt Creek Benevolent Foundation 2.6666% (3) Eugene E. Nearburg 0.6667% (3) Tom L. Ingram 0.6667% (3)	Kewanee Oil Company 100%	0.00000%
6B	T-17-S, R-29-E Sec. 12: N/2 NW/4 & S/2 NE/4 T-17-S, R-30-E Sec. 7: W/2 NW/4	240.00	NM 025733 12/30/43 (HBP)	United States 100% (1)	Mac T. Anderson	K. G. Lowery 1.00% L. Jay Root 6.25% Lucretia Conlon 0.25% Mac T. Anderson & Gladye C. Anderson, his wife 4.00% (2) Petroleum Corp. of Texas & Salt Creek Benevolent Foundation 2.6666% (3) Eugene E. Nearburg 0.6667% (3) Tom L. Ingram 0.6667% (3)	Kewanee Oil Company 100%	11.76919%
6C	T-17-S, R-29-E Sec. 12: N/2 NE/4	80.00	NM 025733 12/30/43	United States 100% (1)	Mac T. Anderson	K. G. Lowery 1.00% L. Jay Root 6.25% Lucretia Conlon 0.25% C. L. East & Irene East, his wife 4.00% (2) Petroleum Corp. of Texas and Salt Creek Benevolent Foundation 2.6666% (3) Eugene E. Nearburg 0.6667% (3) Tom L. Ingram 0.6667% (3)	Kewanee Oil Company 100%	3.85605%

Tract No.	Description of Land	Number of Acres	Serial Number and Expiration Date of Lease	Basic Royalty and Percentage	Lessee of Record	Overriding Royalty and Percentage	Working Interest and Percentage	Percentage Tract Participation
6D	T-17-S, R-30-E Sec. 6: NW/4 SE/4	40.00	NM 025733 12/30/43 (HBP)	United States 100% (6)	Mac T. Anderson	K. G. Lowery 1.00% L. Jay Root 6.25% Lucretia Conlon 0.25% C. J. East & Irene East, his wife 4.00% (2) Petroleum Corp. of Texas & Salt Creek Benevolent Foundation 2.6666% (8) (7b) Eugene E. Nearburg 0.6667% (8) (7b) Tom L. Ingram 0.6667% (8) (7b)	Kewanee Oil Company 100%	0.00000%
7	T-17-S, R-29-E Sec. 12: S/2 NW/4	80.00	LC 025733-A 12/30/43	United States 100% (1)	Estelle Shumate Breeding & W. E. Tyler	K. G. Lowery 1.00% L. Jay Root 6.25% Lucretia Conlon 0.25% Kewanee Oil Company 2.00%	Kewanee Oil Company 100%	13.42632%
8	T-17-S, R-29-E Sec. 1: SE/4 SE/4	40.00	NM 025734 12/30/43	United States 100% (1)	O. H. Randel	K. G. Lowery 1.00% L. Jay Root 6.25% Lucretia Conlon 0.25% Kewanee Oil Company 2.00%	Kewanee Oil Company 100%	7.72033%

RECAPITULATION		
Type of Land	Number of Acres	Percentage of Unit Area
Federal	1,360.00 (more or less)	100.00

- (1) Sliding scale royalty from 12.5% to 32.0%
- (2) This ORI is equal to 5% of the working interest production and will decrease if lessor's royalty increases from 12.5%. Working interest production is defined as the production remaining after the Root 7.5% ORI (L. Jay Root, Lucretia Conlon, and K. G. Lowery) and lessor's royalty have been deducted.

100.00000%

- (3) a. The total of these three ORI's is variable from 4.0% to 8.0% relating to a total ORI (inclusive of all ORI's) variable from 15.5% to 19.5%. Interests shown are based on a total ORI of 15.5%. After 225,000 gross barrels of oil have been produced, the total ORI will increase from 15.5% to 19.5%, except that the 4% increase (from 15.5% to 19.5%) will be suspended during any calendar month that production from Block I averages less than 7-1/2 barrels of oil per well, per day, with injection wells counted as producing wells in the computation. (Block I covers the following acreage: SW/4 SW/4 and SW/4 SE/4 Section 1, N/2 NW/4, NE/4, SE/4 SW/4, N/2 SE/4 and SW/4 SE/4 of Section 12, Township 17S, Range 29E, and W/2 SW/4 Section 6, W/2 NW/4 and W/2 SW/4 Section 7, Township 17S, Range 30E, all located in Eddy County, New Mexico)
- (3) b. After a total of 375,000 gross barrels of oil have been produced, interest owners shall have the collective option to convert their ORI's on the Block I lands into a working interest equal to 40% of the interest conveyed to Neil E. Salsich, Jr. in Block I lands.
- (4) The sum of these ORI's is equal to 5% of the working interest production when the average daily production from such tract, on a calendar month basis, is 20 barrels or less, and 10% of the working interest production when the average daily production is more than 20 barrels. Working interest production is defined as production remaining after the Root 7.5% ORI (See Note 2) and lessor's royalty have been deducted.
- (5) Fixed royalty of 12.5%
- (6) The Total of these ORI's is variable from 8.0% to 12.0% relating to a total ORI (inclusive of the Root 7.5% ORI -- See Note 2) variable from 15.5% to 19.5%. Upon recovery of 225,000 gross barrels of oil, the total ORI will increase from 15.5% except that the 4% increase will be suspended during any calendar month that production from Block I (See Note 3) averages less than 7-1/2 barrels of oil per well per day, with injection wells counted as producing wells in the computation.
- (7) a. The total of these ORI's is variable from 8.0% to 12.0% relating to a total ORI (inclusive of the Root 7.5% ORI -- See Note 2) variable from 15.5% to 19.5%. Upon recovery of 125% of the development costs and 100% of the operating costs on the land in Block II (SE/4 of Section 6, and NE/4 and E/2 NW/4 of Section 7, Township 17S, Range 30E, Eddy County, New Mexico), the total ORI will increase to 19.5% except that the 4% increase will be suspended during any calendar month that production from Block II averages less than 7-1/2 barrels per well per day, with injection wells to be counted as producing wells.
- (7) b. After 200% of the development costs and 100% of the operating costs in Block II have been recovered, interest owners shall have the collective option to convert their overriding royalty interests to a working interest equal to 40% of the interest conveyed to Neil E. Salsich, Jr. in Block II lands.
- (8) The total of these three ORI's is variable from 4.0% to 8.0% relating to a total ORI (including all ORI) variable from 15.5% to 19.5%. Interests shown are based on a total ORI of 15.5%. Upon recovery of 125% of the development costs and 100% of the operating costs on the lands in Block II (See Note 7), the total ORI will increase to 19.5%, except that the 4% increase will be suspended during any calendar month that production from Block II averages less than 7-1/2 barrels per well, per day, with injection wells counted as producing wells.