

Union Oil and Gas Division: Central Region

Union Oil Company of California
500 North Marienfeld, Midland, Texas 79701
P.O. Box 671, Midland, Texas 79702
Telephone (915) 682-9731



Robert V. Lockhart
District Land Manager
Midland District

February 3, 1981

Oil Conservation Division
Energy and Minerals Department
P. O. Box 2088
Santa Fe, New Mexico 87501

Attn: Mr. Joe D. Ramey, Director

Gentlemen:

Case No. 6182
Order No. R-5684
Laguna Deep Unit
Lea County, New Mexico

In connection with the captioned unit, please find enclosed for your approval and file the following "Royalty and Overriding Royalty Interest Owner" Ratification and Joinder:

Winifred Seaton Wills (formerly Winifred T. Seaton) - Tract 1.

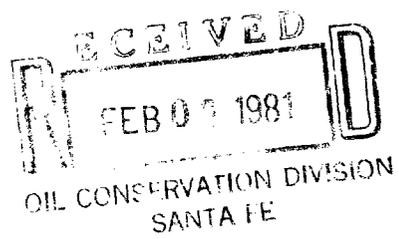
Also find enclosed Amoco Production Company's consent to joinder forms.

Sincerely yours,

UNION OIL COMPANY OF CALIFORNIA

Linda H. Hicks
Linda H. Hicks
Landman

LHH:cs
Encl. 2



RECEIVED
FEB 06 1981
CONSERVATION DIVISION
SANTA FE

CONSENT TO RATIFICATION AND JOINDER TO THE
LAGUNA DEEP UNIT AGREEMENT
DATED FEBRUARY 2, 1978
DESIGNATED NO. 14-08-0001-16905
LEA COUNTY, NEW MEXICO

The undersigned working interest owner in the Laguna Deep Unit Agreement and the Unit Operating Agreement, hereby consents to the joinder of the overriding royalty interests of Winifred Seaton Wills, in Tract No. 1, described as:

Township 19 South, Range 33 East

Section 26: SW/4

to said Unit Agreement:

Date: 1-28-81

AMOCO PRODUCTION COMPANY

By C. N. Menninger
Attorney-in-Fact

Address: P. O. Box 3092
Houston, Texas 77001

WORKING INTEREST OWNER

STATE OF TEXAS

COUNTY OF HARRIS

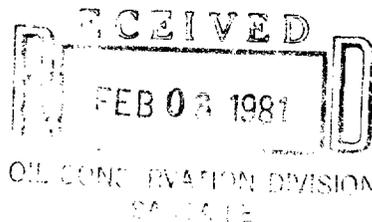
The foregoing instrument was acknowledged before me this 28th day of January, 1981, by C. N. Menninger, Attorney-in-Fact on behalf of AMOCO PRODUCTION COMPANY, a Delaware corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year above written.

My Commission expires:

11-2-81

Shirley B. Barnes
Notary Public



CONSENT, RATIFICATION AND JOINDER OF
LAGUNA DEEP UNIT AGREEMENT
LEA COUNTY, NEW MEXICO

(Royalty and Overriding Royalty Interest Owner)

KNOW ALL MEN BY THESE PRESENTS, THAT:

WHEREAS, a certain instrument entitled UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE LAGUNA DEEP UNIT AREA, LEA COUNTY, NEW MEXICO, has been executed as of the 2nd day of February, 1978, by various persons conducting operations with respect to the Laguna Deep Unit Area, located in Lea County, New Mexico, as more particularly described in said Agreement; and

WHEREAS, the Unit Agreement, by Exhibit "A", shows on a map the boundary lines of the Unit Area and the tracts therein and, by Exhibit "B", describes each Tract within the Unit Area; and

WHEREAS, the Unit Agreement provides that a person may become a party thereto by signing an instrument agreeing to be bound by the provisions thereof; and

WHEREAS, the undersigned (whether one or more) is, or claims to be, the owner of a royalty and/or overriding royalty interest in one or more of the Tracts described in Exhibit "B" of the Unit Agreement.

NOW, THEREFORE, the undersigned (whether one or more), for and in consideration of the premises and the benefits anticipated to accrue under said agreement, does hereby agree to become a party to and to be bound by the provisions of the said Unit Agreement, and the undersigned does hereby agree that the parties to said agreement are those persons signing the originals of said instruments, counterparts thereof, or other instruments agreeing to be bound by the provisions thereof. The undersigned does also hereby acknowledge receipt of a true copy of the said Unit Agreement.

IN WITNESS WHEREOF, the undersigned has executed this instrument on the date set forth opposite the undersigned's signature.

Date: 1-23-81

Winifred Seaton Wills
Winifred Seaton Wills, Dealing with
her sole and separate property
(Royalty or Overriding Royalty OWNER)

Address: P. O. Box 2120
Wickenburg, AZ 85358

STATE OF Arizona |
COUNTY OF Maricopa | SS. (Individual)

The foregoing instrument was acknowledged before me this 23 day of Jan, 1981, by Winifred Seaton Wills.

My Commission expires: _____
Sean M. Peckard
Notary Public
My Commission Expires Apr. 20, 1982

STATE OF _____ |
COUNTY OF _____ | SS. (Corporate)

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, of _____, a _____ corporation, on behalf of said corporation.

My Commission expires: _____
Notary Public

Union Oil and Gas Division: Central Region

Union Oil Company of California
500 North Marienfeld, Midland, Texas 79701
P.O. Box 671, Midland, Texas 79702
Telephone (915) 682-9731



DEC 29 1980
OIL CONSERVATION DIVISION
SANTA FE

Robert V. Lockhart
District Land Manager
Midland District

December 23, 1980

Oil Conservation Division
Energy and Minerals Department
P. O. Box 2088
Santa Fe, New Mexico 87501

Attn: Mr. Joe D. Ramey, Director

Gentlemen:

Case No. 6182
Order No. R-5684
Laguna Deep Unit
Lea County, New Mexico

In connection with the captioned unit, please find enclosed for your approval and file the following "Royalty and Overriding Royalty Interest Owner" Ratification and Joinders:

- 1) Leo Pollack and Madeline Pollack - Tract 4
- 2) M. A. Schofman and Ruth Schofman - Tract 4

Also find enclosed Union Oil Company of California's consent to joinder forms.

Sincerely yours,

UNION OIL COMPANY OF CALIFORNIA

Linda H. Hicks
Landman

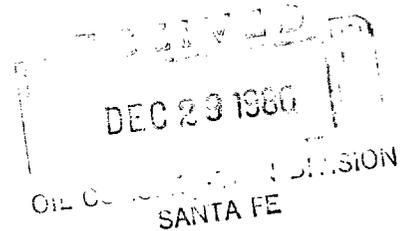
LHH:cs
Encl.

CONSENT TO RATIFICATION AND JOINDER TO THE
LAGUNA DEEP UNIT AGREEMENT
DATED FEBRUARY 2, 1978
DESIGNATED NO. 14-08-0001-16905
LEA COUNTY, NEW MEXICO

THE UNDERSIGNED WORKING INTEREST OWNER IN THE LAGUNA DEEP UNIT AGREEMENT AND
THE UNIT OPERATING AGREEMENT, HEREBY CONSENTS TO THE JOINDER OF THE OVERRIDING
ROYALTY INTERESTS OF M. A. SCHOFMAN AND RUTH SCHOFMAN, AND LEO POLLACK AND
MADELINE POLLACK, IN TRACT NO. 4, DESCRIBED AS:

Township 19 South, Range 33 East

Section 26: SE/4 NE/4



TO SAID UNIT AGREEMENT.

UNION OIL COMPANY OF CALIFORNIA

Date: 12-12-80

By Samuel C. Terry
Attorney-in-Fact

Address: P. O. Box 3100
Midland, Texas 79702

WORKING INTEREST OWNER

STATE OF TEXAS, |
 | ss.
COUNTY OF MIDLAND. |

The foregoing instrument was acknowledged before me this 12th day
of December, 1980, by SAMUEL C. TERRY,
Attorney-in-Fact of UNION OIL COMPANY OF CALIFORNIA, a California Corporation,
on behalf of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official
seal the day and year above written.

My Commission Expires:

11-30-84

Mavis Jones
Notary Public

MAVIS JONES
Notary Public
Midland Co. Texas

CONSENT, RATIFICATION AND JOINDER OF
LAGUNA DEEP UNIT AGREEMENT
LEA COUNTY, NEW MEXICO

(Royalty and Overriding Royalty Interest Owner)

KNOW ALL MEN BY THESE PRESENTS, THAT:

WHEREAS, a certain instrument entitled UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE LAGUNA DEEP UNIT AREA, LEA COUNTY, NEW MEXICO, has been executed as of the 2nd day of February, 1978, by various persons conducting operations with respect to the Laguna Deep Unit Area, located in Lea County, New Mexico, as more particularly described in said Agreement; and

WHEREAS, the Unit Agreement, by Exhibit "A", shows on a map the boundary lines of the Unit Area and the Tracts therein and, by Exhibit "B", describes each Tract within the Unit Area; and

WHEREAS, the Unit Agreement provides that a person may become a party thereto by signing an instrument agreeing to be bound by the provisions thereof; and

WHEREAS, the undersigned (whether one or more) is, or claims to be, the owner of a royalty and/or overriding royalty interest in one or more of the Tracts described in Exhibit "B" of the Unit Agreement.

NOW, THEREFORE, the undersigned (whether one or more), for and in consideration of the premises and the benefits anticipated to accrue under said agreement, does hereby agree to become a party to and to be bound by the provisions of the said Unit Agreement, and the undersigned does hereby agree that the parties to said agreement are those persons signing the originals of said instruments, counterparts thereof, or other instruments agreeing to be bound by the provisions thereof. The undersigned does also hereby acknowledge receipt of a true copy of the said Unit Agreement.

IN WITNESS WHEREOF, the undersigned has executed this instrument on the date set forth opposite the undersigned's signature.

Date: Dec. 1 1980
Address: 78' N. W. 1110th St.
Miami Shores,
Fla. 33168

M. A. Schofman
M. A. Schofman
Ruth Schofman
(Royalty or Overriding Royalty OWNER)

STATE OF Fla)
COUNTY OF Dade) SS. (Individual)

The foregoing instrument was acknowledged before me this 1st day of December, 19 80, by MA + Ruth Schofman.

My Commission expires:
NOTARY PUBLIC STATE OF FLORIDA AT LARGE
MY COMMISSION EXPIRES JAN. 26 1982
BONDED THRU GENERAL INS. UNDERWRITERS

Helen S. Mc Muller
Notary Public

STATE OF _____)
COUNTY OF _____) SS. (Corporate)

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____ of _____ a _____ corporation, on behalf of said corporation.

My Commission expires: _____
Notary Public

CONSENT, RATIFICATION AND JOINDER OF
LAGUNA DEEP UNIT AGREEMENT
LEA COUNTY, NEW MEXICO

(Royalty and Overriding Royalty Interest Owner)

KNOW ALL MEN BY THESE PRESENTS, THAT:

WHEREAS, a certain instrument entitled UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE LAGUNA DEEP UNIT AREA, LEA COUNTY, NEW MEXICO, has been executed as of the 2nd day of February, 1978, by various persons conducting operations with respect to the Laguna Deep Unit Area, located in Lea County, New Mexico, as more particularly described in said Agreement; and

WHEREAS, the Unit Agreement, by Exhibit "A", shows on a map the boundary lines of the Unit Area and the Tracts therein and, by Exhibit "B", describes each Tract within the Unit Area; and

WHEREAS, the Unit Agreement provides that a person may become a party thereto by signing an instrument agreeing to be bound by the provisions thereof; and

WHEREAS, the undersigned (whether one or more) is, or claims to be, the owner of a royalty and/or overriding royalty interest in one or more of the Tracts described in Exhibit "B" of the Unit Agreement.

NOW, THEREFORE, the undersigned (whether one or more), for and in consideration of the premises and the benefits anticipated to accrue under said agreement, does hereby agree to become a party to and to be bound by the provisions of the said Unit Agreement, and the undersigned does hereby agree that the parties to said agreement are those persons signing the originals of said instruments, counterparts thereof, or other instruments agreeing to be bound by the provisions thereof. The undersigned does also hereby acknowledge receipt of a true copy of the said Unit Agreement.

IN WITNESS WHEREOF, the undersigned has executed this instrument on the date set forth opposite the undersigned's signature.

Date: 12-2-80
LAFAYETTE BUILDING
Address: SUITE 1110
DETROIT, MICH. 48226

Leo Pollack
Leo Pollack
Madeline Pollack
(Royalty or Overriding Royalty OWNER)

STATE OF MICHIGAN §
COUNTY OF WAYNE § SS.

(Individual)

The foregoing instrument was acknowledged before me this 2nd day of DECEMBER, 1980, by LEO POLLACK AND MADELINE POLLACK, HIS WIFE.

My Commission expires:
APRIL 29, 1981

Madeline C. Bennett
Notary Public MADLINE C. BENNETT
WAYNE COUNTY,
MICHIGAN

STATE OF _____ §
COUNTY OF _____ § SS.

(Corporate)

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, of _____, a _____ corporation, on behalf of said corporation.

My Commission expires:

Notary Public

Union Oil and Gas Division: Central Region

Union Oil Company of California
500 North Marienfeld, Midland, Texas 79701
P.O. Box 671, Midland, Texas 79702
Telephone (915) 682-9731



Robert V. Lockhart
District Land Manager
Midland District

January 8, 1981

6182

Oil Conservation Division
Energy and Minerals Department
P. O. Box 2088
Santa Fe, New Mexico 87501

Attn: Mr. Joe D. Ramey, Director

Gentlemen:

Case No. 6182
~~Order No. R-5684~~
Laguna Deep Unit
Lea County, New Mexico

In connection with the captioned unit, please find enclosed for your approval and file the following "Royalty and Overriding Royalty Interest Owner" Ratification and Joinder:

Jo Anna W. Light and Robert S. Light - Tract 1

Also find enclosed Amoco Production Company's consent to joinder forms.

Sincerely yours,

UNION OIL COMPANY OF CALIFORNIA

A handwritten signature in cursive script that reads "Linda H. Hicks".

Linda H. Hicks
Landman

LHH:cs
Encl.

A rectangular stamp with a double-line border. The text inside reads "JAN 13 1981" in the center, "OIL CONSERVATION DIVISION" at the bottom, and "SANTA FE" at the very bottom. There are some faint, illegible markings above the date.

CONSENT, RATIFICATION AND JOINDER OF
LAGUNA DEEP UNIT AGREEMENT
LEA COUNTY, NEW MEXICO

(Royalty and Overriding Royalty Interest Owner)

KNOW ALL MEN BY THESE PRESENTS, THAT:

WHEREAS, a certain instrument entitled UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE LAGUNA DEEP UNIT AREA, LEA COUNTY, NEW MEXICO, has been executed as of the 2nd day of February, 1978, by various persons conducting operations with respect to the Laguna Deep Unit Area, located in Lea County, New Mexico, as more particularly described in said Agreement; and

WHEREAS, the Unit Agreement, by Exhibit "A", shows on a map the boundary lines of the Unit Area and the Tracts therein and, by Exhibit "B", describes each Tract within the Unit Area; and

WHEREAS, the Unit Agreement provides that a person may become a party thereto by signing an instrument agreeing to be bound by the provisions thereof; and

WHEREAS, the undersigned (whether one or more) is, or claims to be, the owner of a royalty and/or overriding royalty interest in one or more of the Tracts described in Exhibit "B" of the Unit Agreement.

NOW, THEREFORE, the undersigned (whether one or more), for and in consideration of the premises and the benefits anticipated to accrue under said agreement, does hereby agree to become a party to and to be bound by the provisions of the said Unit Agreement, and the undersigned does hereby agree that the parties to said agreement are those persons signing the originals of said instruments, counterparts thereof, or other instruments agreeing to be bound by the provisions thereof. The undersigned does also hereby acknowledge receipt of a true copy of the said Unit Agreement.

IN WITNESS WHEREOF, the undersigned has executed this instrument on the date set forth opposite the undersigned's signature.

Date: 4-10-79
P. O. BOX 1658
Address: CARLSBAD, N.M. 88220

Joanna W. Light
Robert S. Light
RECEIVED
JAN 13 1979
COUNTY OF SANTA FE
COMMISSION

(Royalty or Overriding Royalty OWNER)
STATE OF NEW MEXICO
COUNTY OF EDDY OF SS. SANTA FE (Individual)

The foregoing instrument was acknowledged before me this 10th day of APRIL, 1979, by Jo Anna W. Light and Robert S. Light (Her Husband).

My Commission expires: 8-5-82
Dorothy Bridgwater
Notary Public

STATE OF _____
COUNTY OF _____ OF _____ SS. (Corporate)

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____ of _____, a _____ corporation, on behalf of said corporation.

My Commission expires: _____
Notary Public

CONSENT TO RATIFICATION AND JOINDER TO THE
LAGUNA DEEP UNIT AGREEMENT
DATED FEBRUARY 2, 1978
DESIGNATED NO. 14-08-0001-16905
LEA COUNTY, NEW MEXICO

The undersigned working interest owner in the Laguna Deep Unit Agreement and the Unit Operating Agreement, hereby consents to the joinder of the overriding royalty interests of Jo Anna W. Light and Robert S. Light, in Tract No. 1, described as:

Township 19 South, Range 33 East

Section 26: SW/4

to said Unit Agreement.

AMOCO PRODUCTION COMPANY

Date: 12-31-80

By *C. N. Menninger*
C. N. MENNINGER Attorney-in-Fact

Address: P. O. Box 3092
Houston, Texas 77001

WORKING INTEREST OWNER

STATE OF TEXAS, X
 X ss.
COUNTY OF HARRIS. X

The foregoing instrument was acknowledged before me this 31st day of December, 1980, by C. N. MENNINGER, Attorney-in-Fact of AMOCO PRODUCTION COMPANY, a Delaware corporation, on behalf of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year above written.

My Commission expires:

Shirley B. Barnes
Notary Public

11-2-81

Union Oil and Gas Division: Central Region

Union Oil Company of California
500 North Marienfeld, Midland, Texas 79701
P.O. Box 671, Midland, Texas 79702
Telephone (915) 682-9731



Robert V. Lockhart
District Land Manager
Midland District

August 14, 1980

Oil Conservation Division
Energy and Minerals Division
P.O. Box 2088
Santa Fe, New Mexico 87501

Attn: Mr. Joe Ramey,
Director

Gentlemen:

Case No. 6182
Order No. R-5684
Laguna Deep Unit
Laguna Deep Unit Well No. 2
Lea County, New Mexico

Please find enclosed a copy of a letter from the U.S.G.S. in which the Laguna Deep Unit Well No. 2 is designated as a unit well.

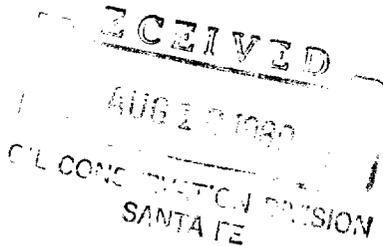
Sincerely yours,

UNION OIL COMPANY OF CALIFORNIA

A handwritten signature in cursive script that reads "Linda H. Hicks".

Linda H. Hicks
Landman

LHH/CS
Encl. 1





United States Department of the Interior

GEOLOGICAL SURVEY
South Central Region
P.O. Box 26124
Albuquerque, New Mexico 87125

RECEIVED

AUG 14 1980

11 AUG 1980

MIDLAND DISTRICT LAND

Union Oil Company of California
Attention: Mr. Robert V. Lockhart
P.O. Box 671
Midland, Texas 79702

Gentlemen:

Your letter of March 10, 1980 stated that as unit operator of the Laguna Deep Unit, in Lea County, New Mexico, you have determined that well No. 2 in the SE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 26, T. 19 S., R. 33 E., N.M.P.M. is capable of producing unitized substances in paying quantities.

Well No. 2 was completed on January 19, 1980 with a stabilized flow of 2,028 MCFGPD plus 108 BCPD from the Morrow interval (perforations 13,381 - 13,390 feet).

This office concurs with your determination that such well is capable of producing unitized substances in paying quantities from the Morrow formation pursuant to section 9 of the unit agreement.

Sincerely yours,

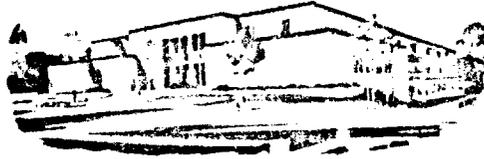
James W. Sutherland
For James W. Sutherland
Acting Conservation Manager

RECEIVED
AUG 18 1980
OIL CONSERVATION DIVISION
SANTA FE

State of New Mexico



ALEX J. ARMIJO
COMMISSIONER



6182

Commissioner of Public Lands

September 2, 1980

P. O. BOX 1148
SANTA FE, NEW MEXICO 87501

Union Oil Company of California
P. O. Box 671
Midland, Texas 79702

Re: Laguna Deep Unit
Lea County, New Mexico
FIRST REVISION TO PARTICIPATING
AREA-MORROW FORMATION

ATTENTION: Ms. Linda H. Hicks

Gentlemen:

The Commissioner of Public Lands has this date approved the First Revision to the Participating Area, Morrow Formation, for the Laguna Deep Unit, Lea County, New Mexico. Such revision constitutes the following lands:

Township 19 South, Range 33 East, N.M.P.M.

Section 25: W/2
Section 26: All
Section 36: W/2

Containing 1,280.00 acres, more or less

Our approval is subject to like approval by the United States Geological Survey.

Enclosed is one approved copy for your files.

Very truly yours,

ALEX J. ARMIJO
COMMISSIONER OF PUBLIC LANDS

BY:
RAY D. GRAHAM, Director
Oil and Gas Division
AC 505-827-2748

AJA/RDG/s
encls.
cc:

OCD-Santa Fe, New Mexico
USGS-Roswell, New Mexico
USGS-Albuquerque, New Mexico

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

February 17, 1981

Union Oil Company of California
P. O. Box 671
Midland, Texas 79702

Attention: Linda H. Hicks

Re: Case No. 6182
Laguna Deep Unit
1981 Plan of Development
and Operation

Gentlemen:

We hereby approve the 1981 Plan of Development and Operation for the Laguna Deep Unit, Lea County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands.

One approved copy of the Plan of Development is returned herewith.

Yours very truly,

JOE D. RAMEY
Director

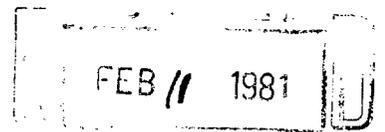
JDR/EP/fd
enc.

cc: U.S.G.S. - Albuquerque
Commissioner of Public Lands

C
O
P
Y

Union Oil and Gas Division: Central Region

Union Oil Company of California
500 North Marienfeld, Midland, Texas 79701
P.O. Box 671, Midland, Texas 79702
Telephone (915) 682-9731



OIL CONSERVATION DIVISION
SANTA FE

Robert V. Lockhart
District Land Manager
Midland District

OK
S/R
1/14/81

Oil Conservation Division
Energy and Minerals Department
P. O. Box 2088
Santa Fe, New Mexico 87501

Attn: Mr. Joe D. Ramey, Director

Gentlemen:

Laguna Deep Unit
Lea County, New Mexico
T-19 and 20-S, R-33-E, NMPM
Case No. 6182 - Order No. R-5684

Enclosed for your review please find one (1) copy of Union Oil Company of California's "1981 Plan of Development and Operation for Laguna Deep Unit Area."

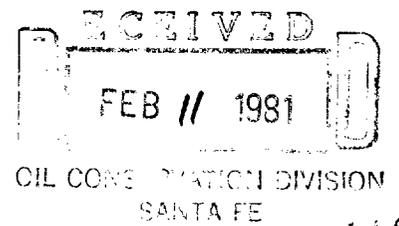
Union, as operator, respectfully requests your consideration and approval of this plan. Should you have any additional questions, please contact the undersigned.

Sincerely yours,

UNION OIL COMPANY OF CALIFORNIA

Linda H. Hicks
Landman

LHH:cs
Encl. 1



1981 PLAN OF DEVELOPMENT AND OPERATION

FOR

LAGUNA DEEP UNIT AREA

LEA COUNTY, NEW MEXICO

TO: The Director
Oil Conservation Division
Energy and Minerals Department
P. O. Box 2088
Santa Fe, New Mexico 87501

UNION OIL COMPANY OF CALIFORNIA, as Unit Operator for the Laguna Deep Unit Area, pursuant to the provisions of Section 10 of the Unit Agreement for development and Operation of the Laguna Deep Unit Area, dated June 22, 1978 (No. 14-08-0001-16905), respectfully submits for approval this 1981 Plan of Development and Operation for the Laguna Deep Unit Area. This plan is for the period ending December 31, 1981.

SUMMARY OF 1979 and 1980 OPERATIONS

In our 1979 Plan of Development and Operation you were informed that the Laguna Deep Unit Federal Well No. 1, located 1650' FNL and 1980' FEL Section 35, T-19-S, R-33-E, Lea County, New Mexico, was drilled to a total depth on January 5, 1979, at 14,753'. By respective letters dated April 11, 1979, and April 17, 1979, the Oil and Gas Supervisor, U.S.G.S., and the Commissioner of Public Lands, concurred with our determination the #1 Well did qualify as a Unit Well and validated the Unit Area. A gas contract was finalized August 1, 1979, and initial delivery was made at 2:00 P.M., September 24, 1979. By respective letters dated February 25, 1980 and March 17, 1980., the Initial Participating Area for the Morrow formation was approved by the Oil and Gas Supervisor, U.S.G.S., and the Commissioner of Public Lands, to be effective February 9, 1979. The Initial Participating Area for the Morrow formation was established as all Section 35, T-19-S, R-33-E, N.M.P.M., Lea County, New Mexico, containing 640.00 acres.

The Laguna Deep Unit Federal Well No. 2 was spudded on November 8, 1979, at 990' FSL and 1980' FWL Section 26, T-19-S, R-33-E, Lea County, New Mexico. This test was drilled to a total depth of 13,490' on January 4, 1980. The lower Morrow was perforated January 21, 1980, at an interval between 13,381'-13,390' and on January 23, 1980, this Morrow interval was flowed at a stabilized

rate of 2,000 MCFD at 1700 PSI FTP for 7 hours then SI. The well produced condensate at the rate of 108 BPD during this 7 hour flow period. SITP (12 hours) was 3900 PSI. The well was shut-in awaiting a pipeline connection, but initial sales began April 22, 1980.

By letter dated August 11, 1980, the Oil and Gas Supervisor, U.S.G.S., concurred with our determination that the #2 well did qualify as a unit well. By respective letters dated September 11, 1980, September 2, 1980, and September 24, 1980, the Application for the First Revision of the Participating Area for the Morrow formation was approved by the Oil and Gas Supervisor, U.S.G.S., the Commissioner of Public Lands, and the Director of the Oil Conservation Division, effective January 1, 1980. The first Revision adds 1,280.00 acres described as the W/2 Section 25, ALL Section 26, W/2 Section 36, T-19-S, R-33-E, N.M.P.M., Lea County, New Mexico, which enlarges the total participating area to 1,920.00 acres.

In our 1980 Plan of Development and Operation, a third Morrow well was proposed to be commenced in the first half of 1980, to be located in the SW/4 Section 35, T-19-S, R-33-E, Lea County, New Mexico. However, by letter dated February 19, 1980, the Bureau of Land Management notified Gulf, a Working Interest Owner in this Unit, that Lease NM-9992 had expired by "Operation of Law" effective July 31, 1979.

Since the lands in Gulf's lease covered the E/2 of Section 34 offsetting our proposed location, we delayed commencing the #3 well pending an outcome of Gulf's appeal, which presently is under review.

During the second half of 1980, realizing that Gulf's appeal would not be quickly resolved, we made the decision to proceed with drilling the #3 well. However, we ran into problems with the rig shortage that is hampering the industry and were unable to drill the #3 in 1980.

PLAN OF DEVELOPMENT AND OPERATION FOR 1981

The #3 well is now scheduled to be commenced in the second half of 1981. Additional studies and evaluations will be made based on monitoring of the Laguna Deep Unit Well #1 and #2 and the proposed #3 well.

Our Plan may be modified or supplemented from time to time with the necessary approval needed, when necessary to meet changed conditions or to protect the interest of all parties to the Unit Agreement.

Submitted this 6 day of February, 1981.

UNION OIL COMPANY OF CALIFORNIA

BY: Robert V. Lockhart
District Land Manager

Approved 2/17 19 81
Joe Ramsey
Director
Oil Conservation Division
Energy and Minerals Department

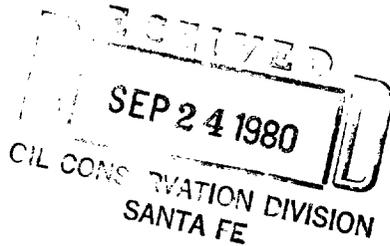
THIS APPROVAL GRANTED SUBJECT TO LIKE APPROVAL
BEING GRANTED BY THE STATE GEOLOGICAL
SURVEY AND THE COMMISSIONER OF PUBLIC LANDS
OF THE STATE OF NEW MEXICO.

Union Oil and Gas Division: Central Region

Union Oil Company of California
500 North Marienfeld, Midland, Texas 79701
P.O. Box 671, Midland, Texas 79702
Telephone (915) 682-9731



Robert V. Lockhart
District Land Manager
Midland District



September 16, 1980

Oil Conservation Division
Energy and Minerals Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Attn: Mr. Joe D. Ramey, Director

OK
12/1/80
E/P

Dear Mr. Ramey:

Case No. 6182
Order No. R-5684
Laguna Deep Unit
Lea County, New Mexico

Reference is made to our letter of July 30, 1980, whereby we submitted an application for your approval for the First Revision of the Morrow participating area, Laguna Deep Unit Agreement.

We are enclosing for your file a copy of the U.S.G.S.'s letter of September 11, 1980, together with their approved Revision Application. The Commissioner of Public Lands, by letter dated September 2, 1980, indicated approval for the First Revision, subject to like approval by the U.S.G.S. It appears the Commissioner did furnish you with a copy of his approval letter and application.

Should you require any additional information in handling this matter, please contact the undersigned. Thank you for your cooperation.

Very truly yours,

UNION OIL COMPANY OF CALIFORNIA

Robert V. Lockhart
Robert V. Lockhart
District Land Manager

RVL:ib

Encl: 2

cc: U.S.G.S.- P. O. Box 26124 - Albuquerque, N.M. 87125

Attn: Acting Deputy Conservation Mgr., Oil & Gas

Certif./Ret. Receipt



United States Department of the Interior

GEOLOGICAL SURVEY
South Central Region
P. O. Box 26124
Albuquerque, New Mexico 87125

11 SEP 1980

RECEIVED

SEP 15 1980

Union Oil Company of California
Attention: Robert V. Lockhart
P. O. Box 671
Midland, Texas 79702

MIDLAND DISTRICT LAND

Gentlemen:

Your application of July 21, 1980 requesting approval of the first revision of the Morrow participating area, Laguna Deep Unit Agreement, Lea County, New Mexico, No. 14-08-0001-16905, was approved on this date by the Deputy Conservation Manager for Oil and Gas, SCR, U. S. Geological Survey, Conservation Division, effective January 1, 1980.

The first revision adds 1,280.00 acres described as the W $\frac{1}{2}$ sec. 25, all sec. 26, W $\frac{1}{2}$ sec. 36, T. 19 S., R. 33 E., N.M.P.M., Lea County, New Mexico, which enlarges the total participating area to 1,920.00 acres. This revision is based upon the information contributed by unit well No. 2 located in the SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 26, T. 19 S., R 33 E., tested on January 19, 1980 for a stabilized flow rate of 2,028 MCFGPD and 108 barrels of condensate from the Morrow formation at a depth of 13,381 to 13,390 feet.

Copies of the approved application are being distributed to the appropriate Federal offices and one approved copy is enclosed. You are requested to furnish the State of New Mexico and other interested parties with appropriate evidence of this approval.

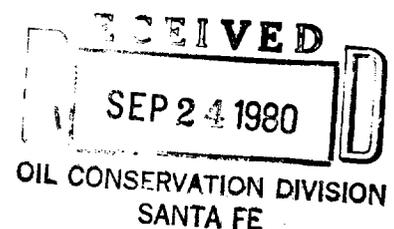
Sincerely yours,

Gene F. Daniel
FOR Gene F. Daniel
Acting Deputy Conservation
Manager, Oil and Gas

Enclosure

Copy: Comm. of Public Land
OCD
Region / Hansen

W.I. Owens



Laguna Deep Unit Area
Lea County, New Mexico

Application for
approval of the
first revision of
the participating
area of the
Morrow formation.

Supervisor
United States Geological Survey
P. O. Box 26124
Albuquerque, New Mexico 87125

Attn: Mr. Jack Willock
Acting Oil and Gas Supervisor, SRMA

Union Oil Company of California, as unit operator for the Laguna Deep Unit Agreement, approved by the Regional Conservation Manager of the U.S. Geological Survey, effective June 22, 1978, pursuant to the provisions of section 11 thereof, respectfully submits for your approval the selection of the following described land to constitute the first revision of the participating area for the Morrow producing zone or formation, to wit:

Township 19 South, Range 33 East, N.M.P.M.

Section 25: W/2

Section 26: All

Section 36: W/2

Containing 1,280.00 acres, more or less

In support of this application the following numbered items are attached hereto and made a part hereof:

(1) An ownership map marked Exhibit "A" showing thereon the boundary of the unit area, the participating area as heretofore established, and the boundary of the proposed revision herein.

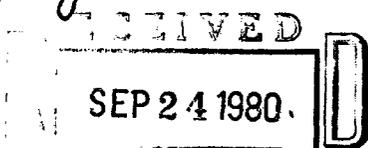
(2) A schedule showing the lands entitled to participation in the unitized substances produced from the Morrow formation, with the percentages of participation of each lease or tract indicated thereon.

Applicant is submitting separately in triplicate a geological report with accompanying maps supporting and justifying the proposed selection of the first revision of the participating area.

This proposed first revision of the participating area is predicated upon the knowledge and information first obtained upon completion in paying quantities under the terms of the unit agreement on January 19, 1980, of the Laguna Deep Unit Well No. 2 in SE/4 SW/4, Section 26, T-19-S, R-33-E, with an initial test stabilized flow rate of 2028 MCFGPD + 108 barrels of condensate and a CAOF 2365 MCFGPD with a gas-liquid hydrocarbon ratio of 18,778 CF/barrel from the Morrow formation at a depth of 13,381 to 13,390 feet. The well went on stream April 22, 1980 and during the remainder of the month produced an average of 1010 MCFGPD plus 103 barrels condensate per day. Although this well is not yet a unit well, by letter dated March 10, 1980, a request has been submitted that the Laguna Deep Unit Well No. 2 be validated as a unit well. The effective date of this first revision shall be January 1, 1980, pursuant to section 11 of the unit agreement.

Consequently, applicant respectfully requests your approval of the herein above selection of lands to constitute the first revision of the participating area to be effective January 1, 1980.

Dated this 21 day of July, 1980.



UNION OIL COMPANY OF CALIFORNIA

Approved 11 SEP 1980

OIL CONSERVATION DIVISION
SANTA FE

by:

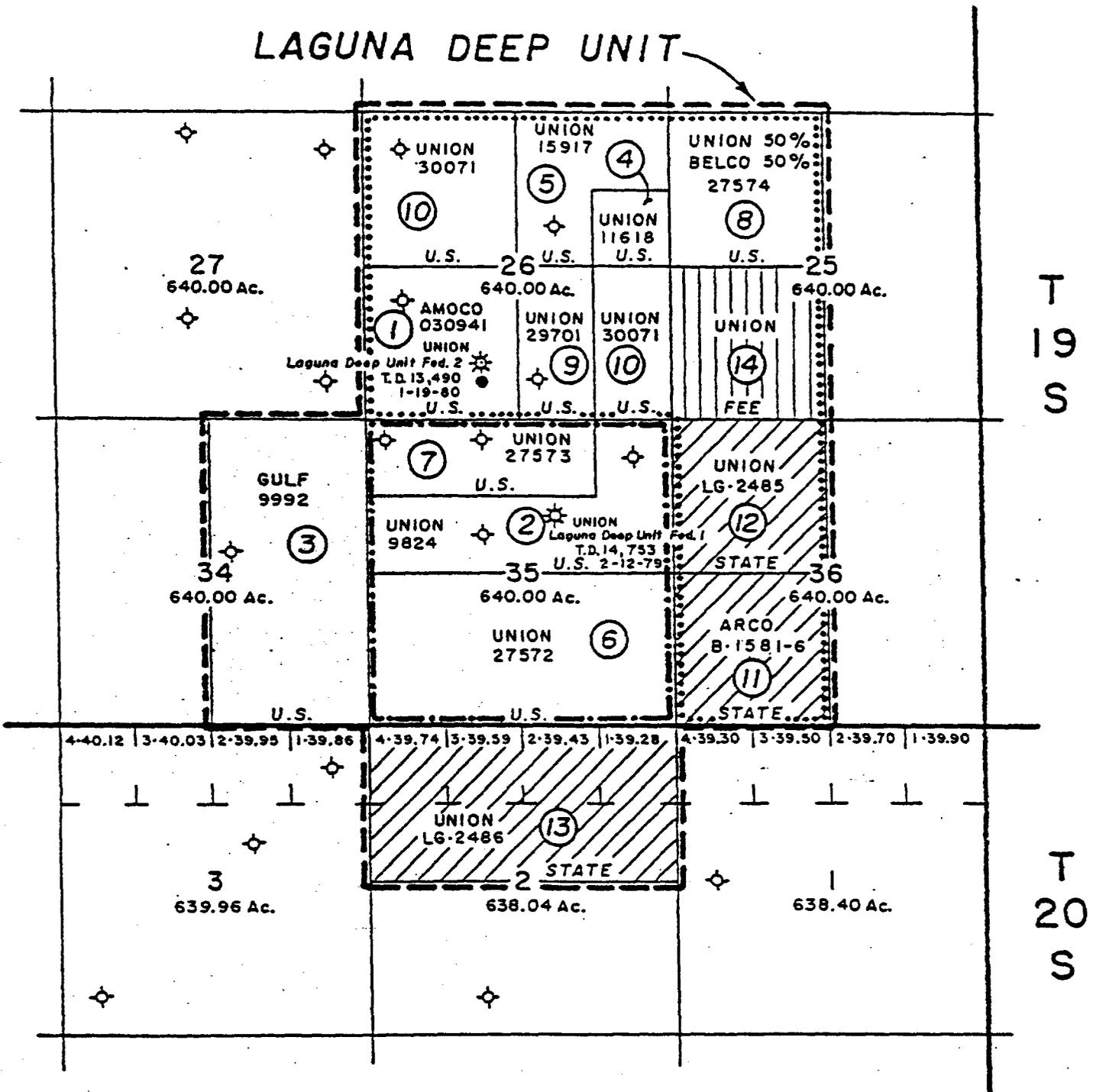
Robert V. Lockhart

FOR Deputy Conservation Manager, O&G
South Central Region

Robert V. Lockhart
District Land Manager

R 33 E

LAGUNA DEEP UNIT



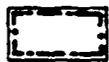
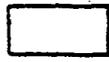
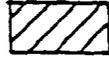
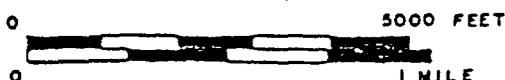
	PROPOSED PARTICIPATING AREA - LAGUNA DEEP UNIT FED No. 2
	EXISTING PARTICIPATING AREA - LAGUNA DEEP UNIT FED. No. 1, 2-1-79
	FEDERAL 1760.00 Ac. 68.80268%
	STATE 638.04 Ac. 24.94253%
	FEE 160.00 Ac. 6.25479%
	<hr/> 2558.04 Ac. 100.00000%

EXHIBIT "A"
LAGUNA DEEP UNIT
LEA COUNTY, NEW MEXICO



① TRACT NUMBER - EXHIBIT "B"

Exhibit "B"
 First Revision Morrow Formation
 Participating Area
 Laguna Deep Unit Agreement
 Lea County, New Mexico

Tract No.	Lease No. or Type of Land	Description	Participating Acres	Percent of Participation	Working Interest Owner
All lands are in T-19-S, R-33-E, <u>N.M.P.M.</u>					
1	NM-030941 Federal	Sec. 26: SW/4	160.00	9.09091	AMOCO
2	NM-9824 Federal	Sec. 35: NE/4 NE/4, S/2 N/2	200.00	11.36364	Union Oil Co. of California
4	NM-11618 Federal	Sec. 26: SE/4 NE/4	40.00	2.27272	Union Oil Co. of California
5	NM-15917 Federal	Sec. 26: N/2 NE/4, SW/4 NE/4	120.00	6.81818	Union Oil Co. of California
6	NM-27572 Federal	Sec. 35: S/2	320.00	18.18182	Union Oil Co. of California
7	NM-27573 Federal	Sec. 35: NW/4 NE/4, N/2 NW/4	120.00	6.81818	Union Oil Co. of California
8	NM-27574 Federal	Sec. 25: NW/4	160.00	-0-	Union Oil Co. of California (50%) Belco Petroleum Corporation (50%)
9	NM-29701 Federal	Sec. 26: W/2 SE/4	80.00	4.54546	Union Oil Co. of California
10	NM-30071 Federal	Sec. 26: NW/4, E/2 SE/4	240.00	13.63636	Union Oil Co. of California

Exhibit "B"
 First Revision Morrow Formation
 Participating Area
 Laguna Deep Unit Agreement
 Lea County, New Mexico

Tract No.	Lease No. or Type of land	Description	Participating Acres	Percent of Participation	Working Interest Owner
		T-19-S, R-33-E N.M.P.M.			
11	B-1581-6 State	Sec. 36: SW/4	160.00	9.09091	Atlantic Richfield
12	LG-2485 State	Sec. 36: NW/4	160.00	9.09091	Union Oil Co. of California
14	Patented Land	Sec. 25: SW/4	160.00	9.09091	Union Oil Co. of California
		TOTAL	1,920.00	100.000000%	

SUMMARY

TYPE LAND	COMMITTED ACRES	NON-COMMITTED ACRES	PERCENT
Federal	1,280.00	160.00	72.72727
State	320.00	-0-	18.18182
Patented	160.00	-0-	9.09091
TOTAL	1,760.00	160.00	100.000000%

LAGUNA DEEP UNIT
LEA COUNTY, NEW MEXICO

Participating area for production from the Laguna Deep Unit Federal Well No. 2 from the Morrow formation, East Gem Morrow Gas Pool, Lea County, New Mexico.

GEOLOGICAL REPORT

The Union Oil Company of California No. 2 Laguna Deep Unit Federal well in Unit N, 990 feet from the south line and 1980 feet from the west line of Section 26, Township 19 south, Range 33 east, Lea County, New Mexico, was drilled to a total depth of 13,490 feet in the lower Morrow section of the Pennsylvanian. The subject well was completed January 19, 1980 from the Morrow formation for CAOF 2365 MCF gas per day with a gas-liquid hydrocarbon ratio of 18,778 CF per barrel.

Formation tops on subject well are as follows (elevation 3491' G.L.):

Rustler	1,329'
Salt	1,500'
Yates	3,053'
Capitan	3,472'
Delaware	5,324'
Bone Spring	7,974'
Wolfcamp	10,808'
Cisco	11,748'
Canyon	11,950'
Strawn	12,054'
Atoka	12,308'
Morrow	12,782'
Lower Morrow	13,338'

Gas production in the No. 2 Laguna Deep Federal well is from perforations 13,381 to 13,390 feet in a lower Morrow sand. The accumulation appears to be controlled both by structure and stratigraphy.

The reservoir rock is about 10 feet thick and a white, coarse-grained quartz sand with about 40% gray shale. Porosity calculations from wireline logs range up to 14 percent. Shut in bottom-hole pressure

is 6,180 psi at 13,386 feet.

The Laguna Deep Unit Federal Well No. 2 ran 15 feet low to the Laguna Deep Unit Federal Well No. 1 located approximately 1/2 mile to the southeast. The subject well is located on the northwest flank of the Laguna structure.


Ralph L. Hawks, Jr.
Geologist
Union Oil Company of California

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

September 24, 1980

Union Oil Company of California
P. O. Box 671
Midland, Texas 79702

Attention: Robert V. Lockhart

Re: Case No. 6182
Laguna Deep Unit
First Revision of the
Participating Area of
the Morrow Formation

Gentlemen:

We hereby approve the First Revision of the Participating Area of the Morrow Formation for the Laguna Deep Unit, Lea County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands.

One approved copy of the First Revision is returned herewith.

Yours very truly,

JOE D. RAMEY
Director

JDR/EP/fd
enc.

cc: U.S.G.S. - Roswell
Commissioner of Public Lands

C

O

P

Y

Union Oil and Gas Division: Central Region

Union Oil Company of California
500 North Marienfeld, Midland, Texas 79701
P.O. Box 671, Midland, Texas 79702
Telephone (915) 682-9731



9/16/80
OK
EJP

Robert V. Lockhart
District Land Manager
Midland District

July 30, 1980

Oil Conservation Division
Energy and Minerals Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Attn: Mr. Joe D. Ramey,
Director

Dear Mr. Ramey:

RECEIVED
AUG 4 1980
OIL CONSERVATION DIVISION
SANTA FE

Case No. 6182
Order No. R-5684
Laguna Deep Unit
Lea County, New Mexico

Please find enclosed Union Oil Company of California's application for approval of the first revision of the participating area of the Morrow formation for the above captioned unit. A similar application has also been submitted to the U.S.G.S. and the Commissioner of Public Lands.

Should you require further information or have any questions, please do not hesitate to call.

Thank you for your consideration in this matter.

Sincerely yours,

UNION OIL COMPANY OF CALIFORNIA

Robert V. Lockhart
Robert V. Lockhart
District Land Manager

RVL:cs
Encl. 5

Laguna Deep Unit Area
Lea County, New Mexico

Application for
approval of the
first revision of
the participating
area of the
Morrow formation.

Oil Conservation Division
Energy and Minerals Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Attn: Mr. Joe D. Ramey, Director

Union Oil Company of California, as unit operator for the Laguna Deep Unit Agreement, approved by the Oil Conservation Division April 4, 1978 and by the Regional Conservation Manager of the U.S. Geological Survey, effective June 22, 1978, pursuant to the provisions of section 11 thereof, respectfully submits for your approval the selection of the following described land to constitute the first revision of the participating area for the Morrow producing formation, to wit:

Township 19 South, Range 33 East, N.M.P.M.
Section 25: W/2
Section 26: All
Section 36: W/2
Containing 1,280.00 acres, more or less

RECEIVED
AUG 1 1980
OIL CONSERVATION DIVISION
SANTA FE

In support of this application the following numbered items are attached hereto and made a part hereof:

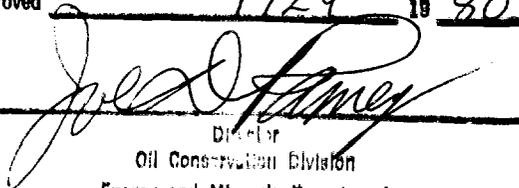
- (1) An ownership map marked Exhibit "A" showing thereon the boundary of the unit area, the participating area as heretofore established, and the boundary of the proposed revision herein.
- (2) A schedule showing the lands entitled to participate in the unitized substances produced from the Morrow formation, with the percentages of participation of each lease or tract indicated thereon.

Applicant is also submitting a geological report with accompanying map supporting and justifying the proposed selection of the first revision of the participating area.

This proposed first revision of the participating area is predicated upon the knowledge and information first obtained upon completion in paying quantities under the terms of the unit agreement on January 19, 1980, of the Laguna Deep Unit Well No. 2 in SE/4 SW/4, Section 26, T-19-S, R-33-E, with an initial test stabilized flow rate of 2028 MCFGPD + 108 barrels of condensate and a CAOF 2365 MCFGPD with a gas-liquid hydrocarbon ratio of 18,778 CF/barrel from the Morrow formation at a depth of 13,381 to 13,390 feet. The well went on stream April 22, 1980 and during the remainder of the month produced an average of 1010 MCFGPD plus 103 barrels condensate per day. Although this well is not yet a unit well, by letter dated March 10, 1980, a request has been submitted to the U.S.G.S. that the Laguna Deep Unit Well No. 2 be validated as a unit well. The effective date of this first revision shall be January 1, 1980, pursuant to section 11 of the unit agreement.

Consequently, applicant respectfully requests your approval of the herein above selection of lands to constitute the first revision of the participating area to be effective January 1, 1980.

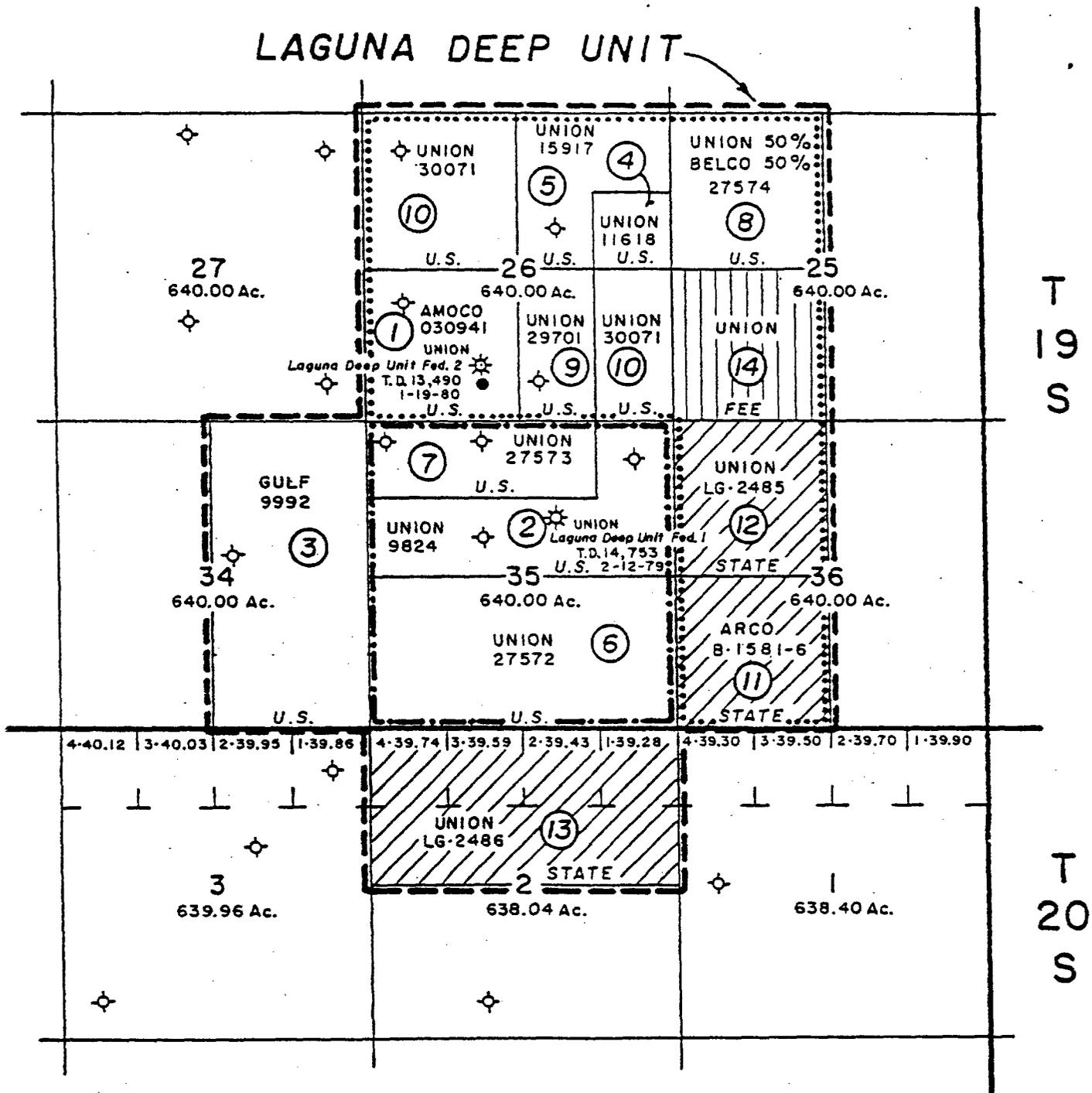
Dated this 21 day of July, 1980.

Approved 9/24 1980

Director
Oil Conservation Division
Energy and Minerals Department

UNION OIL COMPANY OF CALIFORNIA
by: 
Robert V. Lockhart
District Land Manager

R 33 E

LAGUNA DEEP UNIT



	PROPOSED PARTICIPATING AREA-LAGUNA DEEP UNIT FED No. 2
	EXISTING PARTICIPATING AREA-LAGUNA DEEP UNIT FED. No. 1, 2-1-79
	FEDERAL 1760.00 Ac. 68.80268 %
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LAGUNA DEEP UNIT
LEA COUNTY, NEW MEXICO



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LAGUNA DEEP UNIT
LEA COUNTY, NEW MEXICO

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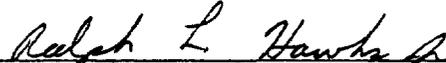
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Laguna Deep Unit
Lea County, New Mexico
Page 2

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Ralph L. Hawks, Jr.
Geologist
Union Oil Company of California