

Case No.

492

Application, Transcript,
Small Exhibits, Etc.

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

August 21, 1979

Bass Enterprises Production Co.
Fort Worth National Bank Building
Fort Worth, Texas 76102

Attention: Jens Hansen

Re: Case No. 492
James Ranch Unit
Amended 1979 Plan
of Development

Gentlemen:

We hereby approve the 1979 Amended Plan of Development for the James Ranch Unit, Eddy County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands.

Two approved copies of the Amended Plan of Development are returned herewith.

Yours very truly,

JOE D. RAMEY
Director

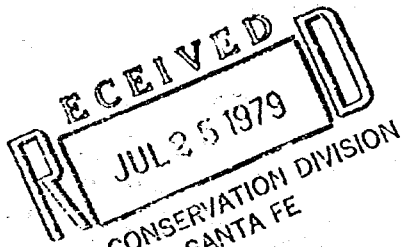
JDR/EP/fd
enc.

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

C
O
P
Y

BASS ENTERPRISES PRODUCTION CO.
FORT WORTH NATIONAL BANK BUILDING
FORT WORTH, TEXAS 76102

July 19, 1979



United States Geological Survey
Post Office Box 26124
Albuquerque, New Mexico 87125

Commissioner of Public Lands
Post Office Box 1148
Santa Fe, New Mexico 87501

Oil Conservation Commission
Post Office Box 2088
Santa Fe, New Mexico 87501

THIS COPY FOR

492
Approved
Aug 20, 1979
EJP

Re: Amended 1979 Plan of Development
James Ranch Unit
Eddy County, New Mexico

Gentlemen:

In accordance with Section 12 of the James Ranch Unit Agreement dated April 22, 1953 which provides for the modification or supplementing of the James Ranch Unit Plan of Development, we hereby submit the following modification to our 1979 Plan of Development for your review and approval.

Modified Well Location

James Ranch Unit Well #10 - 1980' FNL and 660' FEL, Section 1, Township 23 South, Range 30 East, Eddy County, New Mexico - Morrow Test

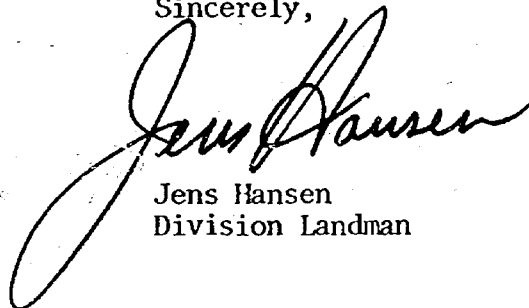
In our original Plan of Development for 1979, we proposed the drilling of the James Ranch Unit Well #9 to be located 1495' FNL and 350' FWL in Section 6, Township 23 South, Range 31 East and to be drilled to the Atoka formation. We are hereby requesting that the above proposed James Ranch Well #10 which will be drilled to a deeper depth and will test additional formations be drilled in place of and substituted for the James Ranch #9 location.

Page 2
July 19, 1979

In the event further modifications to the 1979 Plan of Development become necessary, additional amendments will be submitted for approval.

If this amended Plan of Development meets with your approval, please indicate by signing in the appropriate space provided below and retain one copy for your records. Your immediate attention will be greatly appreciated.

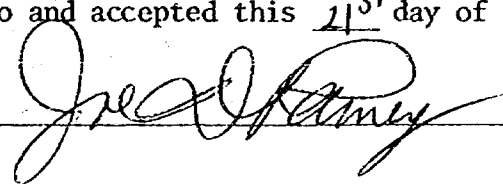
Sincerely,



Jens Hansen
Division Landman

JH/ma

Agreed to and accepted this 21st day of August 19 79

Signed: 

492
STANOLIND OIL AND GAS COMPANY

MAIN OFFICE OCC

P. O. Box 899
Roswell, New Mexico

1954 OCT 13 PM 1:24

October 13, 1954

Re: AFE-9964
Thorn Unit
Otero County, New Mexico

Mr. W. B. Macey
State of New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Dear Sir:

Enclosed herewith for your information and files is a photo copy of the Application for Approval of Termination of the above captioned Unit. Subject Application has been approved by both the proper State and Federal authorities.

Very truly yours,

STANOLIND OIL AND GAS COMPANY

Robert N. Enfield
Robert N. Enfield

RNE:ja

Enclosure

cc: Mr. D. B. Mason, Jr.
Mr. G. B. Jenkinson

file

The State of New Mexico Oil Conservation Commission

Stanolind Oil and Gas Company in its own behalf and as Unit Operator and representing more than ninety-nine per centum (99%) ownership basis of the request approval of the Director, the Commissioner and the Commission to the immediate termination of the Thorn Unit Agreement, pursuant to Section 20 thereof.

In support of this Application for Termination, the following is respectfully submitted.

(1) Pursuant to Section 9 of said Unit Agreement, the Thorn Unit Well #1, located 1980' from the north line and 660' from the east line of Section 15, Township 21 South, Range 14 East, Otero County, New Mexico, was drilled to a total depth of 4,646'.

(2) The elevation of the drill site is 6,380' and the following tops were recorded:

Glorietta
Abo
Pennsylvanian

680'
2400'
2735'

RECEIVED
SEP 24 1954
U. S. GEOLOGICAL SURVEY
MOSWELL, NEW MEXICO

(3) No commercial oil or gas showings were encountered in any of the zones penetrated.

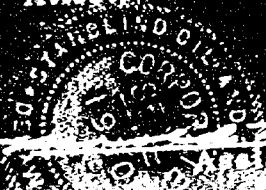
(4) The well was plugged and abandoned on September 14, 1953.

The undersigned believes it is reasonably determined that the unitized land is incapable of production of unitized substances in paying quantities in the formations tested, and, therefore, is unwilling to incur the expense and risk of drilling any additional test wells. We have been unsuccessful in our attempts to find another party to drill the well on a farm out basis.

Dated this 23rd day of August, 1954.

STANOLIND OIL AND GAS COMPANY

Attest:



STATE OF OKLAHOMA
COUNTY OF TULSA

By Frank Lindeman
Vice President

APPROVED
SEP 24 1954

On this 23rd day of August, 1954, before me appeared Frank Lindeman, to me personally known, who, being by me duly sworn, did say that he is the Vice President of STANOLIND OIL AND GAS COMPANY, a Delaware corporation, and that the seal affixed to said instrument is the



The foregoing application is hereby approved this 3rd day of September 1954, and the Thore Unit Agreement is hereby terminated.

The foregoing application is hereby approved this 3rd day of September 1954, and the Thore Unit Agreement is hereby terminated.



[Signature]
Commissioner of Public Lands

The foregoing application is hereby approved this 20th day of September 1954, and the Thore Unit Agreement is hereby terminated.

State of New Mexico
Oil Conservation Commission

By W. B. Macey
SECRETARY DIRECTOR

STANOLIND OIL AND GAS COMPANY

PRODUCING DEPARTMENT
G. B. JENKINSON
UNITIZATION MANAGER

STANOLIND BUILDING
TULSA, OKLAHOMA

1954 AUG 26 AM 8:27

August 24, 1954

File: GBJ-41.533

Re: Thorn Unit
Otero County
New Mexico

RECEIVED
STATE LAND OFFICE

SEP 3 4 23 PM '54
SANTA FE, N. M.

Case 492

Mr. R. R. Spurrier
State of New Mexico
Oil Conservation Commission
Santa Fe, New Mexico

Dear Sir:

Submitted herewith are seven (7) counterparts of a self-explanatory Application for Termination of the Thorn Unit Agreement, Otero County, New Mexico. We respectfully request approval thereof by the Commission and the Commissioner of Public Lands.

Please forward all the instruments to Mr. W. A. Blankenship, Jr., Stanolind Oil and Gas Company, P. O. Box 899, Roswell, New Mexico, when you have completed your handling of them. He will submit them to the U. S. Geological Survey for approval.

[We are furnishing an unsigned copy of the application for your files. We will furnish you an original counterpart when the U.S.G.S. has approved the instruments.]

Yours very truly,

G. B. Jenkinson

By *McCony*

JM:jg
Enclosures

cc: Commissioner of Public Lands
State of New Mexico
Santa Fe, New Mexico

*Keep one copy
for files*

STANOLIND OIL AND GAS COMPANY

MAIN OFFICE OCC

PRODUCING DEPARTMENT
G. B. JENKINSON
UNITIZATION MANAGER

STANOLIND BUILDING
TULSA, OKLAHOMA

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[We are furnishing an unsigned copy of the application for your files. We will furnish you an original counterpart when the U.S.G.S. has approved the instruments.]

Yours very truly,

G. B. Jenkinson

By *JB Long*

JM:jg
Enclosures

cc: Commissioner of Public Lands
State of New Mexico
Santa Fe, New Mexico

*Keep one copy
for files*

OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

March 24, 1954

Mr. C. F. Bedford
Stanolind Oil and Gas Company
Oil and Gas Building
Fort Worth, Texas

Re: Thorn Unit, Otero County, New Mexico

Dear Sir:

This letter will serve as Commission approval for a six month extension of time within which to commence second well on the above captioned Unit.

Very truly yours,

R. R. SPURRIER
Secretary and Director

RRS:vc

C
O
P
Y

Memo

From Rhodes

To Spurrer

Suggest Standline be granted
a 6 months extension on date
for commencement of second
well onshore unit.

Huk

OK R's
3/22

STANOLIND OIL AND GAS COMPANY

OIL AND GAS BUILDING

FORT WORTH, TEXAS

MAIN OFFICE OCC

C. F. BEDFORD
DIVISION PRODUCTION SUPERINTENDENT

March 15, 1954

1954 MAR 17 AM 8:43

File: RLH-8077-216

Subject: Thorn Unit, Otero
County, New Mexico

New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Attention: Mr. R. R. Spurrier

Gentlemen:

In regard to your letter of March 3, 1954, requesting additional information on Thorn Well No. 1, this well was drilled to a total depth of 4646 feet, using air as a drilling agent. Water was encountered and in an attempt to run 7 5/8" intermediate casing, casing parted and we were unable to fish out 589 feet of casing. The top of the fish is 4212 feet. The well was temporarily abandoned on September 14, 1953, as a junked hole after plugging back to a total depth of 3748 feet. The casing program included 13 3/8" surface pipe set at 307 feet with cement circulated to the surface. Nine and 5/8" casing was set at 2803 feet with 200 sacks of cement.

A gamma ray neutron log was run of this well. Unfortunately, however, we have no extra copies in this office. By copy of this letter, we are requesting our district office in Roswell to furnish you with a copy of the log to facilitate your review of our application for an extension of time for commencing the next test well. The tops, as reflected by our records, are listed below:

| | |
|---------------|---------------------|
| Elevation | 6310 feet (est.) |
| Glorietta | 610 feet (✓ 6700') |
| Yeso | 635 feet (✓ 5675') |
| Drinkard | 1950 feet (✓ 4360') |
| Abo | 2450 feet (✓ 3860') |
| Hueco | 2730 feet (✓ 3580') |
| Pennsylvanian | 2810 feet (✓ 3500') |

The well was still drilling the Pennsylvanian Formation at a total depth of 4646 feet.

Yours very truly,



RLH:cp

STANOLIND OIL AND GAS COMPANY
MAIN OFFICE OCC

1954 MAR 20 AM 10 58, 1954
Roswell, New Mexico

File: EMK-1090-216

Subject: Thorn Unit, Otero
County, New Mexico

New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Attention: Mr. R. R. Spurrier

Gentlemen:

As requested in Mr. C. F. Bedford's letter to you, dated March 15, 1954, File: RLH-8077-216, regarding the above subject, we are forwarding, under separate cover, a copy of the gamma ray neutron log on the Thorn Unit Well No. 1

Very truly yours,

C. L. KELLEY

By: Em Knight

DRM:gc
CC: Mr. C. F. Bedford

OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

March 3, 1954

C
O
P
Y

Mr. C. F. Bedford
Stanolind Oil & Gas Company
Fort Worth, Texas

Dear Mr. Bedford:

I have your letter of February 24th relating to the Thorn Unit. Before we decide upon your application we would like to have some additional data on formation tops, casing points, cementing procedure and a copy of the electric log, if available.

Very truly yours,

R. R. Spurrier
Secretary and Director

RRS:vc

New Mexico
OIL CONSERVATION COMMISSION

GOVERNOR EDWIN L. MECHEM
CHAIRMAN
LAND COMMISSIONER E. S. WALKER
MEMBER
STATE GEOLOGIST R. R. SPURRIER
SECRETARY AND DIRECTOR



P. O. BOX 871
SANTA FE, NEW MEXICO

MEMORANDUM:

TO: R. R. Spurrier, Secretary-Director

FROM: H. N. Rhodes, Engineer

I feel that insufficient information is presented in this application for extension. Would like to see some data on formation tops, casing points, cementing procedure, and a copy of the electric log if available. According to testimony received at the hearing, a hole 4646' deep would completely penetrate the Ellenburger and put them in the Cambrian, thereby making their contention that "production may be obtained at greater depth" highly improbable.

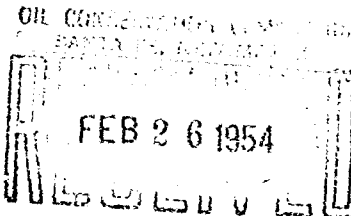
ir
3-1-54

STANOLIND OIL AND GAS COMPANY
FORT WORTH, TEXAS

February 24, 1954

File: RLH-8062-216

Subject: Thorn Unit
Otero County,
New Mexico



REGISTERED - RECEIPT REQUESTED

United States Geological Survey
P. O. Box 997
Roswell, New Mexico
ATTENTION: Mr. John A. Anderson

Oil Conservation Commission
State of New Mexico
Santa Fe, New Mexico
ATTENTION: Mr. R. R. Spurrier ✓

State Land Commission
State of New Mexico
Santa Fe, New Mexico
ATTENTION: Mr. E. S. Walker

Gentlemen:

The Stanolind Oil and Gas Company, as Unit Operator of the Thorn Unit, Otero County, New Mexico, has drilled the first test well to a depth in excess of the 4500 feet specified in Article 9 of the Unit Agreement. Drilling difficulties encountered below this depth ultimately resulted in temporarily abandoning the well on September 14, 1953, as a junked hole. Under the terms of Article 9 of the Unit Agreement, the Unit Operator is obligated to commence operations on the second test well within six months of the completion date of the first well, which in this case would be March 14, 1954.

The available geological information in this area indicates possibilities of deeper producing horizons. Because of the excessive and almost prohibitive drilling costs in this area, however, we consider it advisable to secure a suitable farmout in order that exploration of these deeper pays may be carried on.

COPY

TO:

United States Geological Survey - 2 -
Roswell, New Mexico

February 24, 1954

Oil Conservation Commission
Santa Fe, New Mexico

State Land Commission
Santa Fe, New Mexico

Attached for your consideration and approval is an instrument entitled, "Application for Extension of Time for Commencement of Test Well", requesting an extension of twelve months on the commencement date of the second test well in the Thorn Unit. We would appreciate being advised of your decision in this matter at your earliest convenience.

Yours very truly,

Original Signed By
C. F. Bedford

RLH:gp
Attach.

United States Geological Survey - 6
Oil Conservation Commission - 2
State Land Commission - 2

APPLICATION FOR EXTENSION OF TIME FOR COMMENCEMENT OF TEST WELL

TO THE DIRECTOR OF THE UNITED STATES GEOLOGICAL SURVEY:

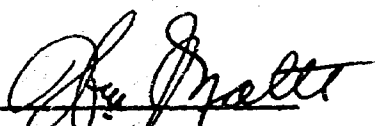
Stanolind Oil and Gas Company, as Unit Operator of the Unit Agreement for the Development and Operation of the Thorn Unit, County of Otero, State of New Mexico, has heretofore drilled the first test well to a depth of at least 4500' in compliance with Article 9 of said Unit Agreement. Under the terms of Article 9 of said Unit Agreement, the Unit Operator is obligated to commence drilling a second test well within six months of the completion date of the first test well. Thorn Unit Well No. 1, located 1980' from the north line and 660' from the east line of Section 15, T-21-S, R-14-E, Otero County, New Mexico, the first test well, was drilled to 4500' without encountering unitized substances in paying quantities. Drilling proceeded below this depth, however, in order to evaluate possible deeper pays. Due to the lack of a readily available source of water in the area, it was necessary to drill Thorn Unit Well No. 1 using air rather than drilling mud as the circulating medium with which to carry drill cuttings to the surface. Drilling difficulties were encountered at a total depth of 4646' which resulted in the ultimate loss of the hole. Thorn Unit No. 1 was temporarily abandoned as a junked hole on September 14, 1953. Although unitized substances in paying quantities were not encountered above the total depth of 4646', the available geological information indicates possibilities of commercial production in deeper pays in the area. The lack of a readily available water supply, however, makes drilling costs in the area excessive and almost prohibitive. For that reason it is considered advisable to make a suitable farmout in order that exploration of these deeper pays may be better carried out. The Unit Operator fully intends to comply with the terms of the Unit Contract and is asking for a reasonable extension of time in order that negotiations in this respect may be consummated.

Premises considered, Stanolind Oil and Gas Company, Unit Operator under the Thorn Unit Agreement hereby makes application to the Director of the United States Geological Survey, pursuant to Article 9 of said Unit Agreement for an

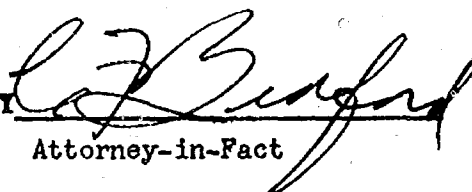
extension of 12 months from and after March 14, 1954, for the commencement of the second test well to be drilled on the unit area so that said test well shall be commenced on or before March 14, 1955. Copies of this application have been filed with the Commissioner of Public Lands of the State of New Mexico and the Oil Conservation Commission of the State of New Mexico.

IN WITNESS WHEREOF, this application is hereby made this 25th day of February, 1954.

ATTEST:


Assistant Secretary

STANOLIND OIL AND GAS COMPANY
Unit Operator of the Thorn
Unit Agreement

BY 
Attorney-in-Fact

The foregoing application is hereby approved this _____ day of _____, 1954, and the time for the commencement of the test well referred to in the foregoing application is hereby extended to March 14, 1955.

DIRECTORY OF THE UNITED STATES
GEOLOGICAL SURVEY

BY _____

APPLICATION FOR EXTENSION OF TIME FOR COMMENCEMENT OF TEST WELL

TO THE DIRECTOR OF THE UNITED STATES GEOLOGICAL SURVEY:

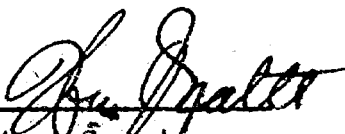
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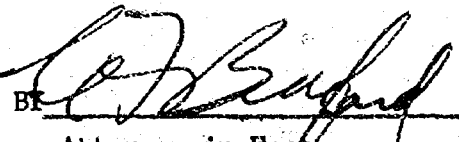
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Assistant Secretary

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Unit Operator of the Thorn
Unit Agreement

BY 
Attorney-in-Fact

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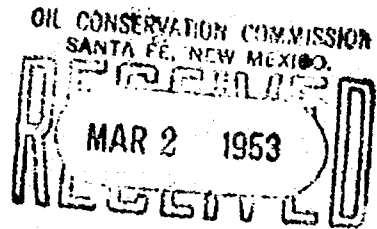
DIRECTORY OF THE UNITED STATES
GEOLOGICAL SURVEY

BY _____

C
O
P
Y

February 27, 1953

Case 492



Stanolind Oil and Gas Company
Fair Building
Fort Worth, Texas

Re: Thorn Unit Agreement, Otero County,
New Mexico

Gentlemen:

I have examined the proposed form of the Thorn Unit Agreement in Otero County, New Mexico. It appears that this proposal form is substantially the form of agreement heretofore approved by me for others.

I am withholding approval of the proposition pending a hearing to be held before the Oil Conservation Commission of the State of New Mexico and the evidence adduced at that time in support of the Agreement.

Very truly yours,

E. S. WALKER
Commissioner of Public Lands

cc: Oil Conservation Commission
Santa Fe, N.M. (1)
U. S. Geological Survey
Roswell, New Mexico (3)

ot

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED
BY THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO FOR THE
PURPOSE OF CONSIDERING THE MATTER OF
THE APPLICATION OF STANOLIND OIL AND
GAS COMPANY FOR THE APPROVAL OF A UNIT
AGREEMENT FOR THE THORN UNIT AREA,
EMBRACING 5,410.46 ACRES, MORE OR LESS,
LOCATED IN TOWNSHIP 21 SOUTH, RANGE 14
EAST, N.M.P.M., OTERO COUNTY, NEW MEXICO.

CASE NO. 492

ORDER NO. R-287

ORDER OF THE COMMISSION

BY THE COMMISSION:

This matter having come on for hearing at 9:00 o'clock a.m. on February 24, 1953, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the Commission.

NOW, on this 27th day of February, 1953, the Commission, a quorum being present, having before it for consideration the said application and the evidence introduced in support thereof, and being fully advised in the premises:

FINDS:

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

That the proposed unit agreement and plan will in principal tend to promote the conservation of oil and gas and to prevent waste;

IT IS THEREFORE ORDERED:

Section 1. That this Order shall be known as the:

"THORN UNIT AGREEMENT ORDER".

Section 2. That the plan by which the project or unit will be operated shall be embraced in the form of a unit agreement for the development and operation of the Thorn Unit Area referred to in the petition of the petitioner and filed with the petition. Such plan shall be known as the Thorn Unit Agreement Plan.

Section 3. The Thorn Unit Agreement Plan shall be and is hereby approved in principle as a proper conservation measure; provided, however, that notwithstanding any of the provisions contained in said Unit Agreement this approval shall not be considered as waiving or relinquishing in any manner any rights, duties or obligations which now or may hereafter be vested in the New Mexico Oil Conservation Commission by law relative to the supervision and

control of operations or exploration and development of any lands committed to the said Thorn Unit Agreement or relative to the production of oil or gas therefrom.

Section 4. The Unit Area shall be:

NEW MEXICO PRINCIPAL MERIDIAN, NEW MEXICO

T-21-S, R-14-E

Sec. 2, All
Sec. 3, All
Sec. 10, All
Sec. 11, All
Sec. 14, All
Sec. 15, All
Sec. 22, All
Sec. 23, All

Total Unit Area embraces 5,410.46 acres, more or less.

Section 5. That the unit operator shall file with the Commission an executed original or executed counterpart of the Thorn Unit Agreement not later than thirty (30) days after the effective date thereof.

Section 6. That any party owning rights in the unitized substances who did not commit such rights to said unit agreement before the effective day thereof may thereafter become a party thereto by subscribing to such agreement or counterpart thereof or by ratifying the same. The unit operator shall file with the Commission within thirty (30) days an original of such counterpart or ratification.

Section 7. That this Order shall become effective upon the approval thereof by the Commissioner of Public Lands of the State of New Mexico and the Director of the United States Geological Survey, and shall terminate ipso facto on the termination of the said unit agreement. The last unit operator shall immediately notify the Commission in writing of such termination.

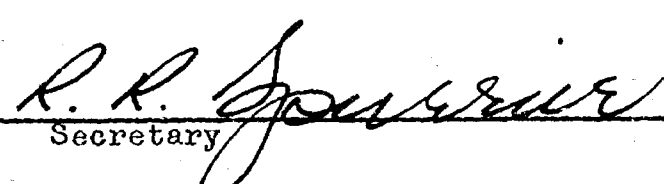
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO OIL CONSERVATION COMMISSION

BY


Chairman

Member


Secretary

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED
BY THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO FOR THE
PURPOSE OF CONSIDERING THE MATTER OF
THE APPLICATION OF STANOLIND OIL AND
GAS COMPANY FOR THE APPROVAL OF A UNIT
AGREEMENT FOR THE THORN UNIT AREA,
EMBRACING 5,410.46 ACRES, MORE OR LESS,
LOCATED IN TOWNSHIP 21 SOUTH, RANGE 14
EAST, N.M.P.M., OTERO COUNTY, NEW MEXICO.

CASE NO. 492

ORDER NO. R-284

ORDER OF THE COMMISSION

BY THE COMMISSION:

This matter having come on for hearing at 9:00 o'clock a.m. on February 24, 1953, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the Commission.

NOW, on this 27th day of February, 1953, the Commission, a quorum being present, having before it for consideration the said application and the evidence introduced in support thereof, and being fully advised in the premises:

FINDS:

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

That the proposed unit agreement and plan will in principal tend to promote the conservation of oil and gas and to prevent waste;

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Section 3. The Thorn Unit Agreement Plan shall be and is hereby approved in principle as a proper conservation measure; provided, however, that notwithstanding any of the provisions contained in said Unit Agreement this approval shall not be considered as waiving or relinquishing in any manner any rights, duties or obligations which now or may hereafter be vested in the New Mexico Oil Conservation Commission by law relative to the supervision and

control of operations or exploration and development of any lands committed to the said Thorn Unit Agreement or relative to the production of oil or gas therefrom.

Section 4. The Unit Area shall be:

NEW MEXICO PRINCIPAL MERIDIAN, NEW MEXICO

T-21-S, R-14-E

Sec. 2, All
Sec. 3, All
Sec. 10, All
Sec. 11, All
Sec. 14, All
Sec. 15, All
Sec. 22, All
Sec. 23, All

Total Unit Area embraces 5,410.46 acres, more or less.

Section 5. That the unit operator shall file with the Commission an executed original or executed counterpart of the Thorn Unit Agreement not later than thirty (30) days after the effective date thereof.

Section 6. That any party owning rights in the unitized substances who did not commit such rights to said unit agreement before the effective day thereof may thereafter become a party thereto by subscribing to such agreement or counterpart thereof or by ratifying the same. The unit operator shall file with the Commission within thirty (30) days an original of such counterpart or ratification.

Section 7. That this Order shall become effective upon the approval thereof by the Commissioner of Public Lands of the State of New Mexico and the Director of the United States Geological Survey, and shall terminate ipso facto on the termination of the said unit agreement. The last unit operator shall immediately notify the Commission in writing of such termination.

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

STATE OF NEW MEXICO OIL CONSERVATION COMMISSION

BY _____

Chairman

Member

Secretary

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED
BY THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO FOR THE
PURPOSE OF CONSIDERING THE MATTER OF
THE APPLICATION OF STANOLIND OIL AND
GAS COMPANY FOR THE APPROVAL OF A UNIT
AGREEMENT FOR THE THORN UNIT AREA,
EMBRACING 5,410.46 ACRES, MORE OR LESS,
LOCATED IN TOWNSHIP 21 SOUTH, RANGE 14
EAST, N.M.P.M., OTERO COUNTY, NEW MEXICO.

CASE NO. 492

ORDER NO. R-284

ORDER OF THE COMMISSION

BY THE COMMISSION:

This matter having come on for hearing at 9:00 o'clock a.m. on February 24, 1953, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the Commission.

NOW, on this 27th day of February, 1953, the Commission, a quorum being present, having before it for consideration the said application and the evidence introduced in support thereof, and being fully advised in the premises:

FINDS:

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

That the proposed unit agreement and plan will in principal tend to promote the conservation of oil and gas and to prevent waste;

IT IS THEREFORE ORDERED:

Section 1. That this Order shall be known as the:

"THORN UNIT AGREEMENT ORDER".

Section 2. That the plan by which the project or unit will be operated shall be embraced in the form of a unit agreement for the development and operation of the Thorn Unit Area referred to in the petition of the petitioner and filed with the petition. Such plan shall be known as the Thorn Unit Agreement Plan.

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control of operations or exploration and development of any lands committed to the said Thorn Unit Agreement or relative to the production of oil or gas therefrom.

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Section 7. That this Order shall become effective upon the approval thereof by the Commissioner of Public Lands of the State of New Mexico and the Director of the United States Geological Survey, and shall terminate ipso facto on the termination of the said unit agreement. The last unit operator shall immediately notify the Commission in writing of such termination.

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

STATE OF NEW MEXICO OIL CONSERVATION COMMISSION

BY _____
Chairman

Member

Secretary

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OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED
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DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO OIL CONSERVATION COMMISSION

BY _____

Chairman

Member

Secretary

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OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED
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PURPOSE OF CONSIDERING THE MATTER OF
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NOW, on this _____ day of February, 1953, the Commission, a quorum being present, having before it for consideration the said application and the evidence introduced in support thereof, and being fully advised in the premises:

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

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

STATE OF NEW MEXICO OIL CONSERVATION COMMISSION

BY _____
Chairman

Member

Secretary

OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

Case 492

January 26, 1953

Mr. C. F. Bedford
Stanolind Oil and Gas Company
Box 1410
Ft. Worth, Texas

Dear Sir:

We have received your requests for hearings on your two proposed unit agreements, the San Juan 32-5 Unit and the Thorn Unit.

These applications were received today by this office. In order for them to be heard at the February 17 hearing, as you requested, they should have been received at least 30 days prior to that time, so that proper advertisement might have been made. Inasmuch as legal notices for the February 17 hearing have long since been sent to the newspapers, it is impossible for these to be scheduled. We will be glad to set these up for the March 17 hearing, unless otherwise advised by you.

Yours very truly,

W. B. Macey,
Chief Engineer

WBH:mr

C
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P
Y

BEFORE THE
OIL CONSERVATION COMMISSION
STATE OF NEW MEXICO

In the matter of the application of Stanolind)
Oil and Gas Company for the approval of a Unit)
Agreement for the Thorn Unit Area, embracing)
5,650.46 acres, more or less, located in Township)) CASE NO. 492
21 south, Range 14 east, N.M.P.M., Otero County,)
New Mexico.)

TRANSCRIPT OF HEARING
HELD AT THE
OFFICES OF THE OIL CONSERVATION COMMISSION
FEBRUARY 24, 1953

PROCEEDINGS TRANSCRIBED FROM ELECTRONIC
TAPE RECORDER BY AGNES COOMBS, COURT REPORTER

PROCEEDINGS

SECRETARY SPURRIER: --we will proceed to Case No. 492. Mr. Seth--
excuse me, let the record show that the advertisement has been read.

MR. OLIVER SETH: Seth and Montgomery appearing in Case No. 492. We
have two witnesses, Mr. Ingram and Mr. Blankenship.
(Mr. Tom L. Ingram and Mr. Wayne Blankenship are duly sworn by
Secretary Spurrier.)

DIRECT EXAMINATION BY MR. SETH:

Q. Will you state your name, please, Mr. Ingram?

A. Tom L. Ingram.

Q. By whom are you employed, Mr. Ingram?

A. By Stanolind Oil and Gas Company.

Q. Have you previously testified as a geologist before this Commission?

A. I have.

Q. Are you familiar with the geology in the area covered by the proposed
Thorn Unit which contains approximately fifty-four hundred (5,400)
acres, located in Otero County?

A. I am.

Q. Would you describe briefly to the Commission the geology of this
particular area?

A. The proposed Unit is located southwest of Pinon in T-21-S, R-14-E on
the backslope of the southeast extension of the Sacramento Mountains.
San Andres and Glorieta, two formations of the Permian Age, are present
at the surface except where alluvium is covering it in the valleys.
In accomplishing our surface geologic mapping, all readings were reduced

to a single datum, the top of a massive limestone member about a hundred and forty feet below the top of the San Andres, as is present here. The structural data that we obtained indicated north-south trending and defined as approximately four miles long and two miles wide, around which we have drawn the outline of this proposed unit. There are two smaller closures located along the crest. In order to test all of the potentially productive horizons which have indicated good porosity in other deep wells in this providence, we feel that a well should be drilled to a depth sufficient to test the Ellenberger formation. The approximate thickness, in descending order of the formations that we expect to encounter: About twenty-one hundred and fifty (2,150) feet of Permian, which will be broken down into San Andres, Glorieta, Yaso and Abo; seven hundred (700) feet of Pennsylvanian, which will be undifferentiated limestones; two hundred (200) feet of undifferentiated Mississippian limestones; three hundred (300) feet of Russellman formation of the Silurian Age; two hundred feet (200) of Montoya; and six hundred and fifty (650) feet of Ellenberger. This would give us a depth of around a spread of forty-two hundred (4,200) feet; but due to the possible variation in thickness of Yaso and Abo, we think a depth of forty-five hundred (4,500) feet should be sufficient.

- Q. In view of the geology of the area which you have described, do you believe that its development under the Unit Agreement proposed in this petition would be to the best interests of the State?
- A. I do. It would lead toward drilling one well at a time, rather than having to step out to meet other offsets, or expiring leases, or things

of that nature.

Q. You believe the development will be more orderly under this Unit Agreement?

A. Yes, I do.

Q. And will it promote conservation and prevent waste?

A. I believe so, yes.

Q. And how about the utilization of reservoir energy?

A. Well, we will appraised it. It should be appraised to the best advantage because we will be able to locate all of our tests on the structural information.

Q. And under the Unit Agreement of the development proposed, will the State of New Mexico receive its fair share of the recoverable oil and gas?

A. Yes, it will.

MR. SETH: That's all we have on this witness.

MR. SPURRIER: Are there any questions of the witness? (No response.)
If not, he may be excused.

(Next witness is called to the stand.)

DIRECT EXAMINATION BY MR. SETH:

Q. Will you state your name, please, sir?

A. Wayne A. Blankenship, Jr.

Q. By whom are you employed and in what capacity, Mr. Blankenship?

A. I am District Land Man for Stanolind Oil and Gas Company, in Roswell, New Mexico.

Q. Are you familiar with the proposed Thorn Unit Agreement, the subject of this hearing?

A. Yes, sir, I am.

Q. Do you have available a map showing the proposed Unit Area?

A. Yes, sir. There is a plat attached to the Unit Agreement, as Exhibit A, showing the proposed Unit Area, and it has colored in various colors the federal and state land involved.

Q. What is the percentage of ownership as between federal and state land in this proposed Unit?

A. The total acreage in the proposed unit is five thousand four hundred and ten point forty-six (5,410.46) acres, of which four thousand six hundred and four point thirty-eight (4,624.38) are federal lands; seven hundred and eighty-six, point o eight (786.08) are state lands; the federal lands making up eighty-five point forty-seven hundredths (85.47) per cent of the Unit Area, the state lands making up fourteen point fifty-three (14.53) per cent. There are no patented lands.

Q. The acreage that you have just mentioned, Mr. Blankenship, is that a smaller amount than is contained in the petition of the original plat?

A. Yes, sir, it is. The Unit Area proposed now covers Sections 2, 3, 10, 11, 14, 15, 22, and 23, all in T-21-S, R-14-E of Otero County, New Mexico.

Q. And would you describe to the Commission the lands which have been excluded from the original?

A. The E $\frac{1}{2}$ of the SE $\frac{1}{4}$ of Sec. 9, and the E $\frac{1}{2}$ of the E $\frac{1}{2}$ of Sec. 16 have been excluded.

Q. What percentage of the working interest has been committed?

A. We have one hundred per cent (100%) of the working interest committed on both the federal and state land. There is an overriding royalty

owner holding three per cent (3%) on Section 2, which is a state tract, who has verbally committed himself to join the Unit Agreement. However, we have not at this date received the ratification papers from him.

Q. And as far as the provisions of the Unit Agreement are concerned, are they similar to unit agreements which have been considered by this Commission and the Land Commissioner at previous hearings?

A. Yes, sir, they are. This particular Unit Agreement follows closely the Lakewood Unit Agreement which was previously considered and approved by the Commissioner and the Commission.

Q. Does this Unit Agreement contain any unusual provisions?

A. No, sir, it doesn't. The Unit Agreement provides that within six months from the effective date of the Unit that a forty-five hundred pre-Cambrian test must be commenced, and that if such well results in production, then within six months from completion a plan of development must be filed for approval by the Commissioner and the Commission and the Department of the Interior. Also, it provides that if the first well is found to be non-productive of unified substances, then a second well must be commenced within six months unless an extension of time is granted by the Commissioner, the Commission and the Department.

Q. Is there anything further about the Agreement that you would like to mention?

A. No, sir. Not that I know of, other than that, including those terms, it follows closely former units.

Q. Has application for approval been filed with the Commissioner of Public Lands?

A. Yes, sir, it has.

Q. Do you have a letter so indicating?

A. Yes, sir. I have a copy of the letter here. (Secretary Spurrier marks the copy of letter Exhibit 1, Case 492.)

MR. SETH: We would like to offer Exhibit 1, if the Commission please, and also the executed copy of the Unit Agreement with exhibits, and ask that the Commission give us permission to withdraw the original and substitute copies until final approval is had.

MR. SPURRIER: Without objection, the exhibits will be received, and the executed copy may be withdrawn.

MR. SETH: That's all we have on this Thorn Unit.

MR. SPURRIER: Are there any questions of the witness? (No response.) If not the witness may be excused.

WITNESS BLANKENSHIP: Thank you, sir.

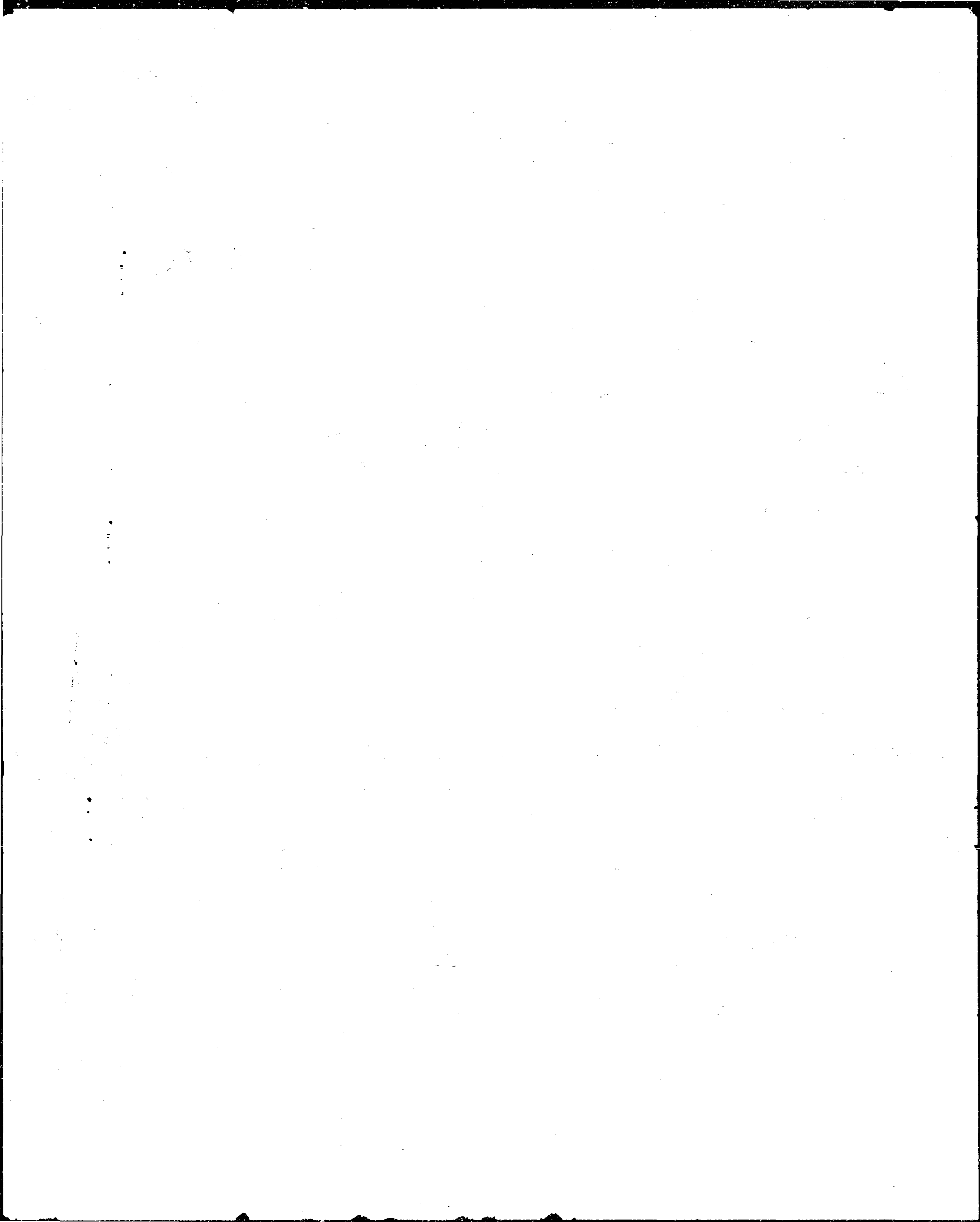
MR. SPURRIER: If there are no further comments in the case, we will move on to Case No. 493.

CERTIFICATE

I, Agnes Coombs, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the Oil Conservation Commission, State of New Mexico, in the matter of Case No. 492, Thorn Unit Area, taken at the Offices of the Oil Conservation Commission, Santa Fe, New Mexico, February 24, 1953, is a true and correct record of all said proceedings.

Dated at Santa Fe, New Mexico, this 26th day of February, 1953.

Agnes Coombs
Reporter



BEFORE THE
OIL CONSERVATION COMMISSION
STATE OF NEW MEXICO

In the matter of the application of Stanolind
Oil and Gas Company for the approval of a Unit
Agreement for the Thorn Unit Area, embracing
5,650.46 acres, more or less, located in Township
21 south, Range 14 east, N.M.P.M., Otero County,
New Mexico.)
CASE NO. 492

TRANSCRIPT OF HEARING
HELD AT THE
OFFICES OF THE OIL CONSERVATION COMMISSION
FEBRUARY 24, 1953

PROCEEDINGS TRANSCRIBED FROM ELECTRONIC
TAPE RECORDER BY AGNES COOMBS, COURT REPORTER

P R O C E E D I N G S

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MR. OLIVER SETH: Seth and Montgomery appearing in Case No. 492. We

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(Mr. Tom L. Ingram and Mr. Wayne Blankenship are duly sworn by

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MR. SPURRIER: Without objection, the exhibits will be received, and the executed copy may be withdrawn.

MR. SETH: That's all we have on this Thorn Unit.

MR. SPURRIER: Are there any questions of the witness? (No response.) If not the witness may be excused.

WITNESS BLANKENSHIP: Thank you, sir.

MR. SPURRIER: If there are no further comments in the case, we will move on to Case No. 493.

C E R T I F I C A T E

I, Agnes Coombs, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the Oil Conservation Commission, State of New Mexico, in the matter of Case No. 492, Thorn Unit Area, taken at the Offices of the Oil Conservation Commission, Santa Fe, New Mexico, February 24, 1953, is a true and correct record of all said proceedings.

Dated at Santa Fe, New Mexico, this 26th day of February, 1953.

Agnes Coombs
Reporter

Ev # 1

CASE 992

February 19, 1953

Subject: Thorn Unit Agreement
Application, Otero
County, New Mexico
and
San Juan 32-5 Unit
Agreement Application,
San Juan and Rio Arriba
Counties, New Mexico

Stanolind Oil and Gas Company
Oil and Gas Building
Fort Worth, Texas

Attention: Mr. Oliver Seth

Gentlemen:

We are in receipt of applications requesting unitization
of lands in the Thorn Unit Area in Otero County, New Mexico
and the San Juan-32-5 Unit Area in San Juan and Rio Arriba
Counties, New Mexico. The fees pertaining to these Unit
Agreements have been submitted to this office on this date.

Yours very truly,

E. S. Walker
E. S. WALKER
Commissioner of Public Lands

cc: U. S. Geological Survey
Roswell, New Mexico (3)
Oil Conservation Commission
Santa Fe, New Mexico (1)

ot

C
O
P
Y

J. O. SETH
A. K. MONTGOMERY
OLIVER SETH
WM. FEDERICI
JUSTIN T. REID

SETH AND MONTGOMERY
ATTORNEYS AND COUNSELORS AT LAW
III SAN FRANCISCO ST.
SANTA FE, NEW MEXICO

April 20, 1953

OIL CONSERVATION COMMISSION
State Capitol Building
Santa Fe, New Mexico

Gentlemen:

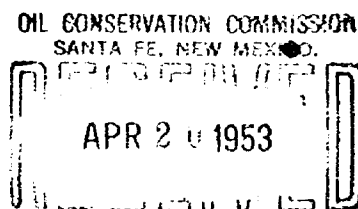
Re: Thorn Unit
Otero County

Enclosed herewith is an approved and conformed
copy of the Thorn Unit Agreement which was the
subject of the hearing in Case No. 492, being
~~potentially~~ Order No. R-284, dated February 27,
1953.

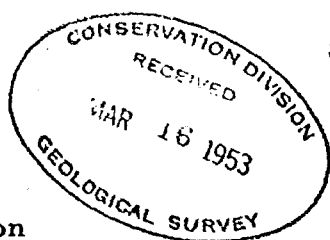
Very truly yours,

Oliver Seth

OS:f
Enc.



UNIT AGREEMENT
THORN UNIT AREA
COUNTY OF OTERO
STATE OF NEW MEXICO



14-08-001-533
INDEX

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MAR 5 1953
U. S. GEOLOGICAL SURVEY
ROSWELL, NEW MEXICO

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Exhibit "A" (Map)

Exhibit "B" (Description of interests subject to agreement)

UNIT AGREEMENT FOR THE DEVELOPMENT AND
OPERATION OF THE THORN UNIT AREA,
COUNTY OF OTERO, STATE OF NEW MEXICO

THIS AGREEMENT, entered into as of the 19th day of February,
1953, by and between the parties subscribing, ratifying, or consenting hereto,
and herein referred to as the "parties hereto";

WITNESSETH:

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

WHEREAS, the term "Working Interest" as used herein shall mean the
interest held in unitized substances or in lands containing unitized substances
by virtue of a lease, operating agreement, fee title, or otherwise, which is
chargeable with and obligated to pay or bear all or a portion of the cost of drill-
ing, developing, producing, and operating the land under the unit or cooperative
agreement. The right delegated to the unit operator as such by this unit agree-
ment is not to be regarded as a working interest; and

WHEREAS, the act of February 25, 1920, 41 Stat. 437, as amended by
the act of August 8, 1946, 60 Stat. 950, 30 U.S.C. Secs. 181, et seq., authorizes
Federal lessees and their representatives to unite with each other, or jointly
or separately with others, in collectively adopting and operating a cooperative
or 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 Commissioner of Public Lands of the State of New
Mexico is authorized by an Act of the Legislature (Chap. 88, Laws 1943) to
consent to or approve this agreement on behalf of the State of New Mexico, in-
sofar as it covers and includes lands and mineral interests of the State of New
Mexico; and

WHEREAS, the Oil Conservation Commission of the State of New Mexico is authorized by an Act of the Legislature (Chap. 168, Laws 1949) to approve this agreement and the conservation provisions hereof; and

WHEREAS, the parties hereto hold sufficient interests in the Thorn Unit Area covering the land hereinafter described to give reasonably effective control of operations therein; and

WHEREAS, it is the purpose of the parties hereto to conserve natural resources, prevent waste, and secure 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 below-defined unit area, and agree severally among themselves as follows:

1. ENABLING ACT AND REGULATIONS: The act of February 25, 1920, as amended, supra, and all valid pertinent regulations, including operating and unit plan regulations, heretofore issued thereunder or valid pertinent and reasonable regulations hereafter issued thereunder are accepted and made a part of this agreement as to Federal lands, provided such regulations are not inconsistent with the terms of this agreement; and as to non-Federal lands, the oil and gas operating regulations in effect as of the effective date hereof governing drilling and producing operations, not inconsistent with the terms hereof or the laws of the State in which the non-Federal land is located, are hereby accepted and made a part of this agreement.

2. UNIT AREA: The following-described land is hereby designated and recognized as constituting the unit area:

NEW MEXICO PRINCIPAL MERIDIAN, NEW MEXICO

T21S-R14E

Sec. 2: All
Sec. 3: All
Sec. 10: All
Sec. 11: All
Sec. 14: All
Sec. 15: All
Sec. 22: All
Sec. 23: All

Total Unit Area embraces ^{5430.46}~~5,440.46~~ acres, more or less.

Exhibit "A" attached hereto is a map showing the unit area and the boundaries and identity of tracts and leases in said 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, percentage, and kind of ownership of oil and gas interests in all land in the unit area. 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 in the unit area render such revision necessary, or when requested by the Oil and Gas Supervisor, hereinafter referred to as "Supervisor", and not less than five copies of the revised exhibits shall be filed with the Supervisor, and two copies each with the Commissioner of Public Lands of the State of New Mexico, hereinafter referred to as "Commissioner", and the Oil Conservation Commission, hereinafter referred to as "Commission".

The above-described unit area shall when practicable be expanded to include therein any additional tract or tracts regarded as reasonably neces-

sary or advisable for the purposes of this agreement, or shall be contracted to exclude lands not within any participating area whenever such expansion or contraction is necessary or advisable to conform with the purposes of this agreement. Such expansion or contraction shall be effected in the following manner:

(a) Unit Operator, on its own motion or on demand of the Director of the Geological Survey, hereinafter referred to as "Director", or on demand of the Commissioner shall prepare a notice of proposed expansion or contraction describing the contemplated changes in the boundaries of the unit area, the reasons therefor, and the proposed effective date thereof.

(b) Said notice shall be delivered to the Supervisor and Commissioner, and copies thereof mailed to the last known address of each working interest owner, lessee, and lessor whose interests are affected, advising that 30 days will be allowed for submission to the Unit Operator of any objections.

(c) Upon expiration of the 30-day period provided in the preceding item (b) hereof, Unit Operator shall file with the Supervisor and Commissioner evidence of mailing of the notice of expansion or contraction and a copy of any objections thereto which have been filed with the Unit Operator.

(d) After due consideration of all pertinent information, the expansion or contraction shall, upon approval by the Director and Commissioner, become effective as of the date prescribed in the notice thereof.

All land committed to this agreement shall constitute land referred to herein as "unitized land" or "land subject to this agreement".

3. UNITIZED SUBSTANCES: All oil and gas in any and all formations of the unitized land are unitized under the terms of this agreement and herein are called "unitized substances".

4. UNIT OPERATOR: Stanolind Oil and Gas Company is hereby designated as Unit Operator and by signature hereto as Unit Operator agrees

and consents to accept the duties and obligations of Unit Operator for the discovery, 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 interest in unitized substances, and the term "working interest owner" when used herein shall include or refer to Unit Operator as the owner of a working interest when such an interest is owned by it.

5. RESIGNATION OR REMOVAL OF UNIT OPERATOR: Unit Operator shall have the right to resign at any time prior to the establishment of a participating area or areas hereunder, 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 6 months after notice of intention to resign has been served by Unit Operator on all working interest owners, the Director and the Commissioner, and until all wells then drilled hereunder are placed in a satisfactory condition for suspension or abandonment whichever is required by the Supervisor and Commissioner, unless a new Unit Operator shall have been selected and approved and shall have taken over and assumed the duties and obligations of Unit Operator prior to the expiration of said period.

Unit Operator shall have the right to resign in like manner and subject to like limitations as above provided at any time a participating area established hereunder is in existence, but until a successor unit operator is selected and approved as hereinafter provided, the working interest owners shall be jointly responsible for performance of the duties of unit operator, and shall not later than 30 days before such resignation becomes effective appoint a common agent to represent them in any action to be taken hereunder.

The resignation of Unit Operator shall not release Unit Operator from any liability for any default by it hereunder occurring prior to the effective date of its resignation.

The Unit Operator may, upon default or failure in the performance of its duties or obligations hereunder, be subject to removal by the same percentage vote of the owners of working interests determined in like manner as herein provided for the selection of a new Unit Operator. Such removal shall be effective upon notice thereof to the Director and Commissioner.

The resignation or removal of Unit Operator under this agreement shall not terminate its 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 equipment, materials, and appurtenances used in conducting the unit operations and owned by the working interest owners to the new duly qualified successor Unit Operator or to the owners thereof if no such new Unit Operator is elected, to be used for the purpose of conducting unit operations hereunder. Nothing herein shall be construed as authorizing removal of any material, equipment and appurtenances needed for the preservation of any wells.

6. SUCCESSOR UNIT OPERATOR: Whenever the Unit Operator shall tender his or its resignation as Unit Operator or shall be removed as herein-above provided, the owners of the working interests in the participating areas or areas according to their respective acreage interests in such participating area or areas, or, until a participating area shall have been established, the owners of the working interests according to their respective acreage interests in all unitized land, shall by majority vote select a successor Unit Operator; Provided, That, if a majority but less than 75 per cent of the working interests qualified to vote are owned by one party to this agreement, a concurring vote of one or more additional working interest owners shall be required to select a new operator. 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 approved by the Director and Commissioner. If no successor Unit Operator is selected and qualified as herein provided, the Director and Commissioner at their election may declare this unit agreement terminated.

7. ACCOUNTING PROVISIONS AND UNIT OPERATING AGREEMENT: If the Unit Operator is not the sole owner of working interests, costs and expenses incurred by Unit Operator in conducting unit operations hereunder shall be paid and apportioned among and borne by the owners of working interests, all in accordance with the agreement or agreements entered into by and between the Unit Operator and the owners of working interests, whether one or more, separately or collectively. Any agreement or agreements entered into between the working interest owners and the Unit Operator as provided in this section, whether one or more, are herein referred to as the "unit operating agreement". 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 as between Unit Operator and the working interest owners as may be agreed upon by Unit Operator and the working interest owners; 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 unit agreement, and in case of any inconsistency or conflict between the unit agreement and the unit operating agreement, this unit agreement shall prevail. Three true copies of any unit operating agreement executed pursuant to this section shall be filed with the Supervisor and one true copy with the Commissioner.

8. 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. 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 under this agreement the Unit Operator, in its capacity as Unit Operator, shall exercise the rights of possession and use vested in the parties hereto only for the purposes herein specified.

9. DRILLING TO DISCOVERY: Within 6 months after the effective date hereof, the Unit Operator shall begin to drill an adequate test well at a location approved by the Supervisor if such location is upon lands of the United States, and if upon State lands or Patented lands, such location shall be approved by the Commission, unless on such effective date a well is being drilled conformably with the terms hereof, and thereafter continue such drilling diligently until the Pre-Cambrian formation has been tested or until at a lesser depth unitized substances shall be discovered which can be produced in paying quantities (to wit: quantities sufficient to repay the costs of drilling, and producing operations, with a reasonable profit) or the Unit Operator shall at any time establish to the satisfaction of the Supervisor as to wells on Federal lands, or the Commission as to wells on State lands or Patented lands that further drilling of said well would be unwarranted or impracticable, provided, however, that Unit Operator shall not in any event be required to drill said well to a depth in excess of 4,500 feet. Until the discovery of a deposit of unitized substances capable of being produced in paying quantities, the Unit Operator shall continue drilling diligently one well at a time, allowing not more than 6 months between the completion of one well and the beginning of the next well, until a well capable of producing unitized substances

in paying quantities is completed to the satisfaction of said Supervisor and Commission, or until it is reasonably proved that the unitized land is incapable of producing unitized substances in paying quantities in the formations drilled hereunder. Nothing in this section shall be deemed to limit the right of the Unit Operator to resign as provided in Section 5 hereof, or as requiring Unit Operator to commence or continue any drilling during the period pending such resignation becoming effective in order to comply with the requirements of this section. The Director and Commissioner may modify the drilling requirements of this section by granting reasonable extensions of time when, in their option, such action is warranted.

Upon failure to comply with the drilling provisions of this section, the Director and Commissioner may, after reasonable notice to the Unit Operator, and each working interest owner, lessee, and lessor at their last known addresses, declare this unit agreement terminated.

10. PLAN OF FURTHER DEVELOPMENT AND OPERATION:

Within 6 months after completion of a well capable of producing unitized substances in paying quantities, the Unit Operator shall submit for the approval of the Supervisor, the Commissioner and the Commission an acceptable plan of development and operation for the unitized land which, when approved by the Supervisor, the Commissioner, and the Commission, shall constitute the further drilling and operating obligations of the Unit Operator under this agreement for the period specified therein. Thereafter, from time to time before the expiration of any existing plan, the Unit Operator shall submit for the approval of the Supervisor, the Commissioner, and the Commission a plan for an additional specified period for the development and operation of the unitized land. Any plan submitted pursuant to this section shall provide for the exploration of the unitized area and for the determination of the area or areas thereof capable of producing unitized substances in paying quantities in each and every productive formation and shall be as complete

and adequate as the Supervisor, the Commissioner, and the Commission may determine to be necessary for timely development and proper conservation of the oil and gas resources of the unitized area and shall (a) specify the number and locations of any wells to be drilled and the proposed order and time for such drilling; and (b) to the extent practicable specify the operating practices regarded as necessary and advisable for proper conservation of natural resources. Separate plans may be submitted for separate productive zones, subject to the approval of the Supervisor, the Commissioner and the Commission. Said plan or plans shall be modified or supplemented when necessary to meet changed conditions or to protect the interests of all parties to this agreement. Reasonable diligence shall be exercised in complying with the obligations of the approved plan of development. The Supervisor and the Commissioner are authorized to grant a reasonable extension of the 6-month period herein prescribed for submission of an initial plan of development where such action is justified because of unusual conditions or circumstances. After completion hereunder of a well capable of producing any unitized substance in paying quantities, no further wells, except such as may be necessary to afford protection against operations not under this agreement or such as may be specifically approved by the Supervisor and the Commissioner, shall be drilled except in accordance with a plan of development approved as herein provided.

11. PARTICIPATION AFTER DISCOVERY: Upon completion of a well capable of producing unitized substances in paying quantities or as soon thereafter as required by the Supervisor and Commissioner, the Unit Operator shall submit for approval by the Director, the Commissioner and the Commission, a schedule, based on subdivisions of the public-land survey or aliquot parts thereof, of all unitized land then regarded as reasonably proved to be productive of unitized substances in paying quantities; all lands in said schedule on approval of the Director, the Commissioner and the

Commission to constitute a participating area, effective as of the date of first production. Said schedule also shall set forth the percentage of unitized substances to be allocated as herein provided to each unitized tract in the participating area so established, and shall govern the allocation of production from and after the date the participating area becomes effective. A separate participating area shall be established in like manner for each separate pool or deposit of unitized substances or for any group thereof produced as a single pool or zone, and any two or more participating areas so established may be combined into one with the consent of the owners of all working interests in the lands within the participating areas so to be combined, on approval of the Director, the Commissioner, and the Commission. The participating area or areas so established shall be revised from time to time, subject to like approval, whenever such action appears proper as a result of further drilling operations or otherwise, to include additional land then regarded as reasonably proved to be productive in paying quantities, or to exclude land then regarded as reasonably proved not to be productive and the percentage of allocation shall also be revised accordingly. The effective date of any revision shall be the first of the month in which is obtained the knowledge or information on which such revision is predicated, unless a more appropriate effective date is specified in the schedule. No land shall be excluded from a participating area on account of depletion of the unitized substances.

It is the intent of this section that a participating area shall represent the area known or reasonably estimated to be productive in paying quantities; but, regardless of any revision of the participating area, 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, the Commissioner, and the Commission as

to the proper definition or redefinition of a participating area, or until a participating area has, or areas have, been established as provided herein, the portion of all payments affected thereby may be impounded in a manner mutually acceptable to the owners of working interests, except royalties due the United States and the State of New Mexico, which shall be determined by the Supervisor and the Commissioner respectively and the amount thereof deposited, as directed by the Supervisor and the Commissioner, respectively, to be held as unearned money until a participating area is finally approved and then applied as earned or returned in accordance with a determination of the sum due as Federal and State royalty on the basis of such approved participating area.

Whenever it is determined, subject to the approval of the Supervisor, as to wells on Federal land, the Commissioner as to wells on State land, and the Commission as to Patented land, that a well drilled under this agreement is not capable of production in paying quantities and inclusion of the land on which it is situated in a participating area is unwarranted, production from such well shall, for the purposes of settlement among all parties other than working interest owners, be allocated to the land on which the well is located so long as such land is not within a participating area established for the pool or deposit from which such production is obtained. Settlement for working interest benefits from such a well shall be made as provided in the unit operating agreement.

12. ALLOCATION OF PRODUCTION: All unitized substances produced from each participating area established under this agreement, except any part thereof used in conformity with good operating practices within the unitized area for drilling, operating, camp and other production or development purposes, for repressuring or recycling in accordance with a plan of development approved by the Supervisor, the Commissioner and the Commission, or unavoidably lost, shall be deemed to be produced

equally on an acreage basis from the several tracts of unitized land of the participating area established for such production and, for the purpose of determining any benefits accruing under this agreement, each such tract of unitized land shall have allocated to it such percentage of said production as the number of acres of such tract included in said participating area bears to the total acres of unitized land in said participating area. It is hereby agreed that production of unitized substances from a participating area shall be allocated as provided herein regardless of whether any wells are drilled on any particular part or tract of said participating area. If any gas produced from one participating area is used for repressuring or recycling purposes in another participating area, the first gas withdrawn from such last-mentioned participating area for sale during the life of this agreement shall be considered to be the gas so transferred until an amount equal to that transferred shall be so produced for sale and such gas shall be allocated to the participating area from which initially produced as constituted at the time of such final production.

13. DEVELOPMENT OR OPERATION OF NON-PARTICIPATING LAND OR FORMATIONS: Any party hereto owning or controlling the working interest in any unitized land having thereon a regular well location may with the respective approval of the Supervisor, the Commissioner or the Commission at such party's sole risk, cost, and expense drill a well to test any formation for which a participating area has not been established or to test any formation for which a participating area has been established if such location is not within said participating area, unless within 90 days of receipt of notice from said party of his intention to drill the well the Unit Operator elects and commences to drill such well in like manner as other wells are drilled by the Unit Operator under this agreement.

If any well drilled as aforesaid by a working interest owner results in production such that the land upon which it is situated may properly

be included in a participating area, such participating area shall be established or 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 as aforesaid by a working interest owner obtains production in quantities insufficient to justify the inclusion in a participating area of the land upon which such well is situated, such well may be operated and produced by the party drilling the same subject to the conservation requirements of this agreement. The royalties in amount or value of production from any such well shall be paid as specified in the underlying lease and agreements affected.

14. ROYALTY SETTLEMENT: The United States and the State of New Mexico and all royalty owners who, under existing contract, are entitled to take in kind a share of the substances now unitized hereunder produced from any tract, shall hereafter be entitled to the right to take in kind their share of the unitized substances allocated to such tract, and Unit Operator, or in case of the operation of a well by a working interest owner as herein in special cases provided for, such working interest owner, 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 royalties due under their leases.

If gas obtained from lands not subject to this agreement is introduced into any participating area hereunder, for use in repressuring, stimulation of production, or increasing ultimate recovery, which shall be

in conformity with a plan first approved by the Supervisor and the Commissioner, a like amount of gas, after settlement as herein provided for any gas transferred from any other participating area and with due allowance for loss or depletion from any cause, may be withdrawn from the formation into which the gas was introduced, royalty free as to dry gas, but not as to the products extracted therefrom; provided that such withdrawal shall be at such time as may be provided in the plan of operations or as may otherwise be consented to by the Supervisor, the Commissioner and the Commission as conforming to good petroleum engineering practice; and provided further, that such right of withdrawal shall terminate on the termination of this unit agreement.

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 regulation; 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 each participating area were a single consolidated lease.

15. 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 subject to this agreement shall be paid at the rate specified in the respective leases from the United States unless such rental or minimum royalty is waived, suspended, or reduced by law or by approval of the Secretary or his duly authorized representative. Rentals

on State of New Mexico lands subject to this agreement shall be paid at the rates specified in the respective leases, or may be reduced and suspended upon the order of the Commissioner of Public Lands of the State of New Mexico pursuant to applicable laws and regulations.

With respect to any lease on non-Federal land containing provisions which would terminate such lease unless drilling operations were within the time therein specified commenced upon the land covered thereby or rentals paid for the privilege of deferring such drilling operations, the rentals required thereby shall, notwithstanding any other provision of this agreement, be deemed to accrue and become payable during the term thereof as extended by this agreement and until the required drilling operations are commenced upon the land covered thereby or some portion of such land is included within a participating area.

16. 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 State or Federal law or regulation.

17. 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 or pursuant to applicable regulations pay a fair and reasonable compensatory royalty as determined by the Supervisor and the Commissioner.

18. LEASES AND CONTRACTS CONFORMED AND EXTENDED: The terms, conditions, and provisions of all leases, subleases, and other contracts relating to exploration, drilling, development, or operation for oil or gas of 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 holding interests embracing unitized land of the United States or of the State of New Mexico hereby consent that the Secretary of the Interior,

hereinafter referred to as "Secretary", and the Commissioner, respectively, shall, and said Secretary and Commissioner by their approval hereof, or by the approval hereof by their duly authorized representative, does hereby establish, alter, change, or revoke the drilling, producing, rental, minimum royalty, and royalty requirements of Federal and State leases committed hereto and the regulations in respect thereto to conform said requirements to the provisions of this agreement, and, without limiting the generality of the foregoing, all leases, subleases, 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 and producing operations performed hereunder upon any tract of unitized lands will 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 the land therein embraced.

(c) Suspension of drilling or producing operations on all unitized lands pursuant to direction or consent of the Secretary or his duly authorized representative and on all unitized lands of the State of New Mexico pursuant to the direction or consent of the Commissioner 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, sublease or contract relating to the exploration, drilling, development or operation for oil or gas of lands other than those of

the United States, committed to this agreement, which, but 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) Any Federal lease for a fixed term of twenty (20) years or any renewal thereof or any part of such lease which is made subject to this agreement shall continue in force beyond the term provided therein until the termination hereof. Any other Federal lease committed hereto shall continue in force beyond the term so provided therein or by law as to the committed land so long as such land remains committed hereto, provided unitized substances are discovered in paying quantities within the unit area prior to the expiration date of the primary term of such lease.

(f) Each sublease or contract relating to the operation and development of unitized substances from lands of the United States committed to this agreement, which by its terms would expire prior to the time at which the underlying lease, as extended by the immediately preceding paragraph, will expire, 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 the underlying lease as such term is herein extended.

(g) Any lease having only a portion of its lands committed hereto shall be segregated as to the portion committed and the portion not committed, and the terms of such lease shall apply separately to such segregated portions commencing as of the effective date hereof. In the event any such lease provides for a lump-sum rental payment, such payment shall be prorated between the portions so segregated in proportion to the acreage of the respective tracts.

19. 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, royalty, or other 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, photostatic, or certified copy of the instrument of transfer.

20. EFFECTIVE DATE AND TERM: This agreement shall become effective upon approval by the Secretary and the Commissioner or their duly authorized representatives and shall terminate five years from said effective date unless (a) such date of expiration is extended by the Director and Commissioner, or (b) it is reasonably determined prior to the expiration of the fixed term or any extension thereof that the unitized land is incapable of production of unitized substances in paying quantities in the formations tested hereunder and after notice of intention to terminate the agreement on such ground is given by the Unit Operator to all parties in interest at their last known addresses, the agreement is terminated with the approval of the Director and the Commissioner, or (c) a valuable discovery of unitized substances has been made on unitized land during said initial term or any extension thereof, in which event the agreement shall remain in effect for such term and so long as unitized substances can be produced in paying quantities, i. e., in this particular instance in quantities sufficient to pay for the cost of producing same from wells on unitized land within any participating area established hereunder and, should production cease, so long thereafter as diligent operations are in progress for the restoration of production or discovery of new production and so long thereafter as the unitized substances so discovered can be produced as aforesaid, or (d) it is terminated as heretofore provided in this agreement.

This agreement may be terminated at any time by not less than 75 per centum, on an acreage basis, of the owners of working interests

signatory hereto, with the approval of the Director and the Commissioner; notice of any such approval to be given by the Unit Operator to all parties hereto.

21. RATE OF PROSPECTING, DEVELOPMENT, AND PRODUCTION:

The Director is hereby vested with authority to alter or modify from time to time in his discretion the quantity and rate of production under this agreement when such quantity and rate is not fixed pursuant to Federal or State law or does not conform to any state-wide voluntary conservation or allocation program, which is established, recognized, and generally adhered to by the majority of operators in such State, 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. Without regard to the foregoing, the Director is also hereby vested with authority to alter or modify from time to time in his discretion the rate of prospecting and development and the quantity and rate of production under this agreement when such alteration or modification is in the interest of attaining the conservation objectives stated in this agreement and is not in violation of any applicable Federal or State law; provided further that no such alteration or modification shall be effective as to any land of the State of New Mexico as to the rate of prospecting and development in the absence of the specific written approval thereof by the Commissioner and as to any lands of the State of New Mexico or privately-owned lands subject to this agreement as to the quantity and rate of production in the absence of specific written approval thereof by the Commission.

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 15 days from notice.

22. CONFLICT OF SUPERVISION: Neither the Unit Operator nor the working interest owners nor any of them shall be subject to any

forfeiture, termination, or expiration of any rights hereunder or under any leases or contracts subject hereto, or to any penalty or liability for delay or failure in whole or in part to comply therewith to the extent that the said Unit Operator, working interest owners or any of them are hindered, delayed, or prevented from complying therewith by reason of failure of the Unit Operator to obtain with the exercise of due diligence the concurrence of the representatives of the United States and the representatives of the State of New Mexico in and about any matters or thing concerning which it is required herein that such concurrence be obtained. The parties hereto, including the Commission, agree that all powers and authority vested in the Commission in and by any provisions of this contract are vested in the Commission and shall be exercised by it pursuant to the provisions of the laws of the State of New Mexico and subject in any case to appeal or judicial review as may now or hereafter be provided by the laws of the State of New Mexico.

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

24. NOTICES: All notices, demands or statements required hereunder to be given or rendered to the parties hereto shall be deemed fully given if given in writing and personally delivered to the party or sent by postpaid 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 may have furnished in writing to party sending the notice, demand or statement.

25. 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 law of the State wherein said unitized lands are located, or of the United States, or regulations issued thereunder in any way affecting such party, or as a waiver by any such party of any right beyond his or its authority to waive.

26. UNAVOIDABLE DELAY: All obligations under this agreement requiring the Unit Operator to commence or continue drilling or to operate on or produce unitized substances from any of the lands 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 agencies, unavoidable accidents, 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.

27. FAIR EMPLOYMENT: The Unit Operator shall not discriminate against any employee or applicant for employment because of race, creed, color or national origin, and an identical provision shall be incorporated in all sub-contracts.

28. LOSS OF TITLE: In the event title to any tract of unitized land shall fail and the true owner cannot be induced to join in this unit agreement, such tract shall be automatically regarded as not committed hereto and there shall be such readjustment of future costs and benefits as may be required on account of the loss of such title. In the event of a dispute as to title as to any royalty, working interest, or other interests subject thereto, payment or delivery on account thereof may be withheld without liability for interest until the dispute is finally settled; provided, that, as to Federal and State land or leases, no payments of funds due the United States or the State

of New Mexico should be withheld, but such funds shall be deposited as directed by the Supervisor and the Commissioner of Public Lands of the State of New Mexico, respectively, 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.

29. NON-JOINDER AND SUBSEQUENT JOINDER: If the owner of any substantial interest in a tract within the unit area fails or refuses to subscribe or consent to this agreement, the owner of the working interest in that tract may withdraw said tract from this agreement by written notice to the Director, the Commissioner and the Unit Operator prior to the approval of this agreement by the Director and the Commissioner. Any oil or gas interests in lands within the unit area not committed hereto prior to submission of this agreement for final approval may thereafter be committed hereto by the owner or owners thereof subscribing or consenting to this agreement, and, if the interest is a working interest, by the owner of such interest also subscribing to the unit operating agreement. After operations are commenced hereunder, the right of subsequent joinder, as provided in this section, by a working interest owner is subject to such requirements or approvals, if any, pertaining to such joinder, as may be provided for in the unit operating agreement. After final approval hereof joinder by a non-working interest owner must be consented to in writing by the working interest owner committed hereto and responsible for the payment of any benefits that may accrue hereunder in behalf of such non-working interest. Prior to final approval hereof, joinder by any owner of a non-working interest must be accompanied by appropriate joinder by the owner of the corresponding working interest in order for the interest to be regarded as effectively committed hereto. Except as may otherwise herein be provided subsequent joinders

to this agreement shall be effective as of the first day of the month following the filing with the Supervisor and the Commissioner of duly executed counterparts of all or any papers necessary to establish effective commitment of any tract to this agreement unless objection to such joinder is duly made within 60 days by the Director or Commissioner.

30. COUNTERPARTS: This agreement may be executed in any number of counterparts no one of which needs to be executed by all parties or may be ratified or consented to by separate instrument in writing specifically referring hereto and shall be binding upon all those parties who have executed such a counterpart, ratification, or consent hereto with the same force and effect as if all such 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 lands within the above-described unit area.

31. SURRENDER: Nothing in this agreement shall prohibit the exercise by any working interest owner of the right to surrender vested in such party in any lease, sub-lease, or operating agreement as to all or any part of the lands covered thereby, provided that each party who will or might acquire such working interest by such surrender or by forfeiture as hereafter set forth, is bound by the terms of this agreement.

If as a result of any such surrender, the working interest rights as to such lands become vested in any party other than the fee owner of the unitized substances, said party shall forfeit such rights and no further benefits from operations hereunder as to said land shall accrue to such party, unless within ninety (90) days thereafter said party shall execute this agreement and the unit operating agreement as to the working interest acquired through such surrender, effective as though such land had remained continuously subject to this agreement and the unit operating agreement. And in the event such agreements are not so executed, the party next in the chain of title shall be and become the owner of such working interest at

the end of such ninety (90) day period, with the same force and effect as though such working interest had been surrendered to such party.

If as the result of any such surrender or forfeiture the working interest rights as to such lands become vested in the fee owner of the unitized substances, such owner may:

(1) Execute this agreement and the unit operating agreement as a working interest owner, effective as though such land had remained continuously subject to this agreement and the unit operating agreement.

(2) Again lease such lands but only under the condition that the holder of such lease shall within thirty (30) days after such lands are so leased execute this agreement and the unit operating agreement as to each participating area theretofore established hereunder, effective as though such land has remained continuously subject to this agreement and the unit operating agreement.

(3) Operate or provide for the operation of such land independently of this agreement as to any part thereof or any oil or gas deposits therein not then included within a participating area.

If the fee owner of the unitized substances does not execute this agreement and the unit operating agreement as a working interest owner or again lease such lands as above provided with respect to each existing participating area, within six (6) months after any such surrender or forfeiture, such fee owner shall be deemed to have waived the right to execute the unit operating agreement or lease such lands as to each such participating area, and to have agreed, in consideration for the compensation hereinafter provided, that operations hereunder as to any such participating area or areas shall not be affected by such surrender.

For any period the working interest in any lands are not expressly committed to the unit operating agreement as the result of any such surrender or forfeiture, the benefits and obligations of operations accruing to such lands

under this agreement and the unit operating agreement shall be shared by the remaining owners of unitized working interests in accordance with their respective participating working interest ownerships in any such participating area or areas, and such owners of working interests shall compensate the fee owner of unitized substances in such lands by paying sums equal to the rentals, minimum royalties, and royalties applicable to such lands under the lease in effect when the lands were unitized, as to such participating area or areas.

Upon commitment of a working interest to this agreement and the unit operating agreement as provided in this section, an appropriate accounting and settlement shall be made, to reflect the retroactive effect of the commitment, for all benefits accruing to or payments and expenditures made or incurred on behalf of such surrendered working interest during the period between the date of surrender and the date of recommitment, and payment of any moneys found to be owing by such an accounting shall be made as between the parties then signatory to the unit operating agreement and this agreement within thirty (30) days after the recommitment. The right to become a party to this agreement and the unit operating agreement as a working interest owner by reason of a surrender or forfeiture as provided in this section shall not be defeated by the non-existence of a unit operating agreement and in the event no unit operating agreement is in existence and a mutually acceptable agreement between the proper parties thereto cannot be consummated, the Supervisor may prescribe such reasonable and equitable agreement as he deems warranted under the circumstances.

Nothing in this section shall be deemed to limit the right of joinder or subsequent joinder to this agreement as provided elsewhere in this agreement. The exercise of any right vested in a working interest owner to reassign such working interest to the party from whom obtained shall be subject to the same conditions as set forth in this section in regard to the exercise of a right to surrender.

32. TAXES: The working interest owners shall render and pay for their account and the account of the royalty owners all valid taxes on or measured by the unitized substances in and under or that may be produced, gathered and sold from the land subject to this contract after the effective date of this agreement, or upon the proceeds or net proceeds derived therefrom. The working interest owners on each tract shall and may charge the proper proportion of said taxes to the royalty owners having interests in said tract, and may currently retain and deduct sufficient of the unitized substances or derivative products, or net proceeds thereof from the allocated share of each royalty owner to secure reimbursement for the taxes so paid. No such taxes shall be charged to the United States or the State of New Mexico or to any lessor who has a contract with his lessee which requires the lessee to pay such taxes.

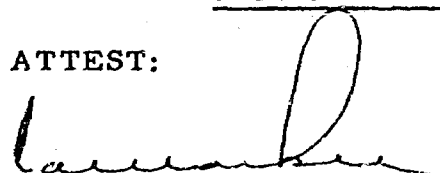
33. NO PARTNERSHIP: It is expressly agreed that the relation of the parties hereto is that of independent contractors and nothing in this agreement contained, expressed or implied, nor any operations conducted hereunder, shall create or be deemed to have created a partnership or association between the parties hereto or any of them.

IN WITNESS WHEREOF, the parties hereto have caused this agreement to be executed and have set opposite their respective names the date of execution.

UNIT OPERATOR AND WORKING INTEREST OWNER

ATTEST:

DATE: STANOLIND OIL AND GAS COMPANY


Assistant Secretary

FEB 19 1953

By


Vice President

Address: P.O. Box 591, Tulsa 2, Oklahoma



WORKING INTEREST OWNERS

ATTEST:

DATE:

Secretary By _____
President

Address: _____

ATTEST:

DATE:

Secretary By _____
President

Address: _____

OTHER PARTIES

Address: _____ Date: _____

Address: _____ Date: _____

Address: _____ Date: _____

Address: _____ Date: _____

Address: _____ Date: _____

Address: _____ Date: _____

Address: _____ Date: _____

Address: _____ Date: _____

STATE OF Oklahoma)
COUNTY OF Tulsa)

On this 19th day of February, 1953, before me appeared
J. E. Rouse to me personally known, who, being
by me duly sworn, did say that he is the Vice President of
STANOLIND OIL AND GAS COMPANY and that the seal affixed to said instrument is the
corporate seal of said corporation, and that said instrument was signed and sealed
in behalf of said corporation by authority of its Board of Directors, and said
J. E. Rouse acknowledged said instrument to be
the free act and deed of said corporation.

Given under my hand and notarial seal this 19th day of February,
1953.

My commission expires:
My Commission Expires October 4, 1955

Maxine M. Adams
Notary Public

STATE OF _____)
COUNTY OF _____)

On this _____ day of _____, 19____, before me appeared
_____, to me personally known, who, being
by me duly sworn, did say that he is the _____ President of _____
and that the seal affixed to said instrument is the
corporate seal of said corporation, and that said instrument was signed and sealed
in behalf of said corporation by authority of its Board of Directors, and said
_____ acknowledged said instrument to be
the free act and deed of said corporation.

Given under my hand and notarial seal this _____ day of _____,
19____.

My commission expires:

Notary Public

STATE OF _____)
COUNTY OF _____)

On this _____ day of _____, 19____, before me appeared
_____, to me personally known, who, being
by me duly sworn, did say that he is the _____ President of _____
and that the seal affixed to said instrument is the
corporate seal of said corporation, and that said instrument was signed and sealed
in behalf of said corporation by authority of its Board of Directors, and said
_____ acknowledged said instrument to be
the free act and deed of said corporation.

Given under my hand and notarial seal this _____ day of _____,
19____.

My commission expires:

Notary Public

CERTIFICATE - DETERMINATION

Pursuant to the authority vested in the Secretary of the Interior, under the act approved February 25, 1920, 41 Stat. 437, 30 U.S.C. secs. 181 et seq., as amended by the act of August 8, 1946, 60 Stat. 950, and delegated to the Director of the Geological Survey pursuant to Departmental Order No. 2365 of October 8, 1947, 43 CFR sec. 4.611, 12 F.R. 6784, I do hereby:

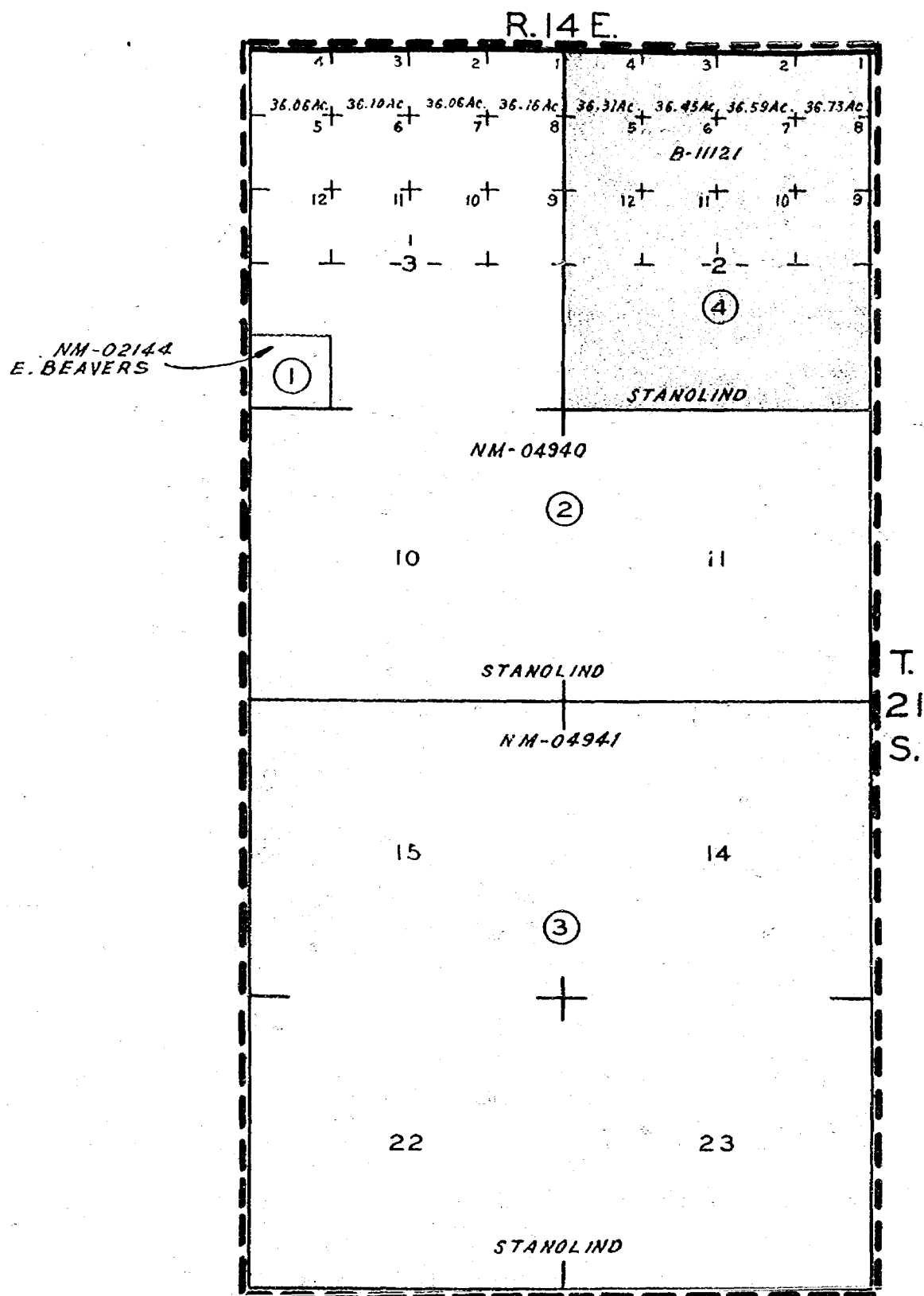
A. Approve the attached agreement for the development and operation of the Thorn Unit Area, State of New Mexico.

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 MAR 30 1953

Thomas B. Nolan
Acting Director, United States Geological Survey



LEGEND

- UNIT BOUNDARY
- TRACT BOUNDARY
- FEDERAL LAND
- STATE LAND
- ① TRACT NUMBER

EXHIBIT "A"
TO ACCOMPANY
THORN UNIT AGREEMENT
OTERO COUNTY, NEW MEXICO
SCALE: 2"=1 MILE

EXHIBIT "B"

SCHEDULE SHOWING THE PERCENTAGE AND KIND OF OWNERSHIP OF OIL AND GAS INTERESTS IN ALL LAND IN THE THORN UNIT AREA, OTERO COUNTY, NEW MEXICO

| Tract No. | Description | Number of Acres | Serial Number and Effective Date of Lease | Landowner and Per Cent of Royalty | Record Owner of Lease or Application | Overriding Royalty Owner and Percentage | Working Interest Owner and Percentage |
|-----------------------------|--|--------------------|---|-----------------------------------|---|--|---------------------------------------|
| <u>Federal Lands</u> | | | | | | | |
| <u>T21S-R14E</u> | | | | | | | |
| 1 | Sec. 3: SW/4 SW/4 | 40.00 | NM-02144 3-1-51 | USA-12-1/2% | Erdice Beavers | None | Erdice Beavers - 87-1/2% |
| 2 | Sec. 3: Lots 1 thru 12, N/2 S/2, S/2 SE/4, SE/4 SW/4 | 2.00 38 | NM-04940 4-1-51 | USA-12-1/2% | Albert M. Senter, Jr. and wife, Mary Senter | None | Stanolind - 87-1/2% |
| <i>BLM decision 4-16-51</i> | | | | | | | |
| 3 | Sec. 14: All Sec. 15: All Sec. 22: All Sec. 23: All | 2,560.00 | NM-04941 4-1-51 | USA-12-1/2% | Hazel D. Quitzau | None | Stanolind - 87-1/2% |
| <u>State Lands</u> | | | | | | | |
| <u>T21S-R14E</u> | | | | | | | |
| 4 | Sec. 2: All | 786.08 | B-11121 3-17-44 | State of New Mexico | Stanolind Oil and Gas R-S. Powell Company | F. P. Powell and Lotta Powell, his wife - 3% | Stanolind - 84-1/2% |

RECAPITULATION

| <u>Land</u> | <u>Acres</u> | <u>Percentage</u> |
|-------------|------------------------------|------------------------|
| Federal | 4,444.38 4,644.38 | 85.17 85.50 |
| State | 786.08 | 14.53 14.50 |
| Totals | 5,230.46 5,430.46 | 100.00 |

RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Thorn Unit Area, County of Otero, State of New Mexico, in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interest are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number or counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his heirs, devisees, assigns or successors in interest.

SIGNATURES AND ADDRESSES

| | |
|----------------------------|---------------------------|
| Name <u>Eudice Beavers</u> | Name <u>A. R. Beavers</u> |
| Address <u>Box 402</u> | Address <u>Box 402</u> |
| <u>Lovington, N. M.</u> | <u>Lovington, N. M.</u> |
| Name _____ | Name _____ |
| Address _____ | Address _____ |
| _____ | _____ |
| Name _____ | Name _____ |
| Address _____ | Address _____ |
| _____ | _____ |

STATE OF NEW MEXICO)
COUNTY OF LEA)

On this 16th day of February, 19 53, before me personally appeared Erdice Beavers and husband, H.R. Beavers to me known to be the persons described in and who executed and delivered the foregoing instrument, and acknowledged to me that they executed the same as their free act and deed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this 16th day of February, 19 53.

My commission expires:

April 23, 1954

Mary Stenburgh
Notary Public

STATE OF _____)
COUNTY OF _____)

On this _____ day of _____, 19 _____, before me personally appeared _____ to me known to be the person described in and who executed and delivered the foregoing instrument, and acknowledged to me that _____ executed the same as _____ free act and deed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this _____ day of _____, 19 _____.

My commission expires:

Notary Public

STATE OF _____)
COUNTY OF _____)

On this _____ day of _____, 19 _____, before me appeared _____, to me personally known, who, being by me duly sworn, did say that he is the _____ President of _____ and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said _____ acknowledged said instrument to be the free act and deed of said corporation.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this _____ day of _____, 19 _____.

My commission expires:

Notary Public

RECEIVED
2-24-53
MEXICO
CINC

RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Thorn Unit Area, County of Otero, State of New Mexico, in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests; agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interest are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number or counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his heirs, devisees, assigns or successors in interest.

SIGNATURES AND ADDRESSES

| | |
|---------------|--|
| Name _____ | Name <u>Lotta Powell</u> |
| Address _____ | Address <u>3317 Liberty Heights Ave,</u> |
| _____ | <u>Baltimore, 15, Md.</u> |
| Name _____ | Name <u>L. Powell</u> |
| Address _____ | Address <u>3317 Liberty Heights Ave,</u> |
| _____ | <u>Baltimore, 15, Md.</u> |
| Name _____ | Name _____ |
| Address _____ | Address _____ |
| _____ | _____ |

STATE OF MARYLAND)
CITY)
COUNTY OF BALTIMORE)

On this 19th day of February, 1953, before me personally appeared F. P. Powell and Lotta Powell to me known to be the person s described in and who executed and delivered the foregoing instrument, and acknowledged to me that they executed the same as their free act and deed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this 19th day of February, 1953.

My commission expires:

May 4 1953

Gerard T. Binger
Notary Public

STATE OF _____)
COUNTY OF _____)

On this _____ day of _____, 19____, before me personally appeared _____ to me known to be the person _____ described in and who executed and delivered the foregoing instrument, and acknowledged to me that _____ executed the same as _____ free act and deed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this _____ day of _____, 19____.

My commission expires:

Notary Public

STATE OF _____)
COUNTY OF _____)

On this _____ day of _____, 19____, before me appeared _____, to me personally known, who, being by me duly sworn, did say that he is the _____ President of _____ and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said _____ acknowledged said instrument to be the free act and deed of said corporation.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this _____ day of _____, 19____.

My commission expires:

Notary Public

OPTION FOR ASSIGNMENT OF OIL AND GAS LEASE

This option, made this 19th day of February, A. D., 1951, by and between
Albert M. Senter, Jr., and Mary Senter, his wife,
mailing address 621 Taft Ave., Albuquerque, N.M., hereinafter called
lessor, party of the first part, and Stanolind Oil and Gas Company
mailing address Tulsa, Oklahoma
 hereinafter called assignee, party of the second part, WITNESSETH:

Whereas, Albert M. Senter, Jr. has filed an application for an oil and gas lease under the Act of Congress, approved February 25, 1920 (41 Stat. 437), as amended, bearing Serial No. NM 04940, said application bearing date February 13, 1951, and covering the following described land in the County of Otero and the State of New Mexico

TOWNSHIP 21 SOUTH, RANGE 14 EAST

Section 3: Lots 1 through 12;
N/2 S/2; S/2 SE/4; SE/4 SW/4
Section 10: All
Section 11: All

and containing 2,024.38 acres, more or less.

S&S Team was denied access to the site on 11/11/2011. The site was closed to the public and the site was not accessible to the public. The site was closed to the public and the site was not accessible to the public.

For and in consideration of the sum of One Dollar (\$1.00) and other valuable consideration, the receipt of which is hereby acknowledged, and which is acknowledged to be sufficient to support all the rights and privileges hereby granted, lessee hereby grants unto the assignee, or to assignee's qualified heirs, personal representatives, successors, nominees and assigns, the right and option to acquire by assignment all of the right, title and interest of the lessee, his heirs, personal representatives or assigns, in and to the above described lease, when and if issued, to the extent that it covers or may cover the above described land, or any part thereof, such assignment to be in manner, form and substance satisfactory and acceptable to assignee, and to be free and clear of any and all liens, incumbrances or outstanding interests except as hereinbelow set out:

NCHS

The optional right hereby granted is for the purpose of enabling the assignee to do and perform such geological or geophysical exploration as assignee may desire on and in the vicinity of said land at any time hereafter and until the termination of said option, including the right to drill core holes and perform seismograph or other work thereon. If the above described lease has issued, as above set out, then this option must be exercised by assignee within two years from and after the date hereof; but if the lease has not been issued and the application therefor is still pending before the Department of the Interior, said option period shall be for the term of two years from and after the date of the lease; provided however, in either case, that if all or part of the land covered hereby is included in a cooperative or unit plan of development under said Act of Congress, as amended, duly executed by the parties hereto, and submitted to the Secretary of the Interior for final approval prior to the expiration of the option period, then as to such land so included, this option shall not expire, and the rights granted hereunder shall be extended until 30 days after final approval or disapproval of said plan by the Secretary.

In the event said lease has not been issued, lessee agrees to execute and file all documents and papers and to do all things necessary to secure the prompt issuance of said lease, and to promptly furnish assignee with all papers and notices and requirements received from the Department of the Interior.

If any rentals become due under said lease or lease application and prior to the expiration of said option period, assignee, on notice from the lessee, shall either pay said rentals as to all of the above described land, or as to part, and relinquish this option as to the land on which assignee elects not to pay the rentals, and lessee shall thereupon have the privilege of paying said rentals as to the relinquished land and of maintaining the lease as to such land for his own account.

19462

Election to exercise said option by assignee may be made personally or by written notice deposited in the United States mail, addressed to the lessee at the above named address prior to the expiration of the option period, and by delivering to lessee or by depositing in the mail to lessee's address in like manner and time lessee's check in the amount of \$104 per acre for the acreage on which assignee desires to exercise said option, or in lieu thereof said notice and payment may within said time be mailed to the First National Bank of Albuquerque, New Mexico, which bank or its successors is hereby appointed as the agent of the lessee for the receipt and deposit of such notice and payment, irrespective of any change of owner of the above described land, and the option shall be deemed to be continued for the full term of the option as to the remaining land, except to the extent that assignee shall expressly relinquish it; and assignee may at any time thereafter exercise said option as to part of the above described land, and either continue said option as to the remaining land or relinquish it, or continue the option as to part and relinquish as to part. For the purpose of notice hereunder the above named address shall remain as the address of the parties hereto, unless and until written notice of change of address or change of depository bank is actually served on the other party, whereupon the new address shall be the address for the purpose hereof.

Lessee agrees to keep and maintain said lease in full force and effect during the option period, and will not relinquish or suffer the forfeiture of the same, and will furnish assignee with all communications and notices from the United States relating to said lease, and upon the exercise of said option will deliver to assignee, on demand, on forms submitted by assignee, a good and sufficient assignment of said lease, and will execute and deliver such other consents, affidavits, amended assignments, or other papers which may be found necessary to give full effect to said assignment.

If said lease shall expire while the option hereby granted is still in force and effect, lessee agrees upon request of assignee, to timely make application for the extension, renewal, exchange or conversion of said lease, as may be permitted by law and regulation, and to take all other steps necessary to cause lessee's rights in and to a lease on said land to be perpetuated, and this option, and the rights hereby granted to assignee shall attach to any such extension or renewal of said lease, or to any exchange, conversion or new lease that may be issued pursuant to said application.

Lessee hereby consents that the above described land may be made the subject of or committed to a unit or cooperative plan of development under said Act of Congress, as amended, and hereby makes, constitutes and appoints the assignee, or any executive officer of the assignee, if said party be a corporation, irrevocably, as its attorney-in-fact, in and to the U.S.G.P. place and stand, at any time during said option period, or after the exercise of said option, to commit said land or any part thereof to the extent of any interest held, retained or reserved by the lessee therein, to any such unit or cooperative plan which may be prescribed or approved by the Secretary of the Interior, involving any area regarded by the Secretary of the Interior, or his representative, as logical for unitization and to execute such plan on behalf of the lessee with the understanding that such plan may provide for the pooling and allocation of production within such participating area as may be established or approved by the Secretary or his representative, upon a proportionate acreage or other equitable basis as may be prescribed or approved by said Secretary or his representative and such plan may contain such other provisions as may be inserted at the discretion of the assignee, all to be effective upon the final approval of said plan by the Secretary of the Interior, and to execute all instruments and do all things necessary to make said unit plan effective.

In the event assignee desires to commence drilling or development operations on said land after the date of exercise of this option as to any part thereof and before assignee's assignment has been approved by the Department of the Interior, lessee agrees upon request to give assignee such "Designation of Operator" and to take such other steps without cost or liability to lessee as may be necessary to induce the Department of the Interior to grant to assignee the right to commence such operations.

The provisions hereof shall be deemed to be covenants running with the lease and binding on, and inuring to the benefit of the heirs, successors and assigns of the parties hereto.

Failure to exercise said option within the time limited shall have the effect of terminating this instrument and all rights granted thereby as to any land on which the option is not exercised.

Executed by the lessee the day and year first above written.

Albert M. Senter, Jr.
Albert M. Senter, Jr.

Mary Senter
Mary Senter

STATE OF NEW MEXICO)
COUNTY OF BERNALILLO)
SS)

On this 20 day of February, 1951, before me personally appeared Albert M. Senter, Jr., and wife, Mary Senter, to me known to be the persons described in and who executed the foregoing instrument and acknowledged that they executed the same as their free act and deed.

Given under my hand and Notarial Seal the 20 day of February, A. D., 1951.

[Signature]
Notary Public

My Commission expires: 7/28/52



Election to exercise said option by assignee may be made personally or by written notice deposited in the United States mail, addressed to the lessee at the above named address prior to the expiration of the option period, and by delivering to lessee or by depositing in the mail to lessee's address in like manner and time lessee's check in the amount of 10¢ per acre for the acreage on which assignee desires to exercise said option, or in lieu thereof said notice and payment may within said time be mailed to the First National Bank of Albuquerque, New Mexico, which bank or its successors is hereby appointed as the agent of the lessee for the receipt and deposit of such notice and payment, irrespective of any change of ownership of lessee's interest hereunder. Assignee may likewise at any time during the option period exercise said option as to part of the above described land, and the option shall be deemed to be continued for the full term of the option as to the remaining land, except to the extent that assignee shall expressly relinquish it; and assignee may at any time thereafter likewise exercise said option as to part of the above described land, and either continue said option as to the remaining land or relinquish it, or continue the option as to part and relinquish as to part. For the purpose of notice hereunder the above named addresses shall remain as the addresses of the parties hereto, unless and until written notice of change of address or change of depository bank is actually served on the other party, whereupon the new address shall be the address for the purpose hereof.

Lessee agrees to keep and maintain said lease in full force and effect during the option period, and will not relinquish or suffer the forfeiture of the same, and will furnish assignee with all communications and notices from the United States relating to said lease, and upon the exercise of said option will deliver to assignee, on demand, on forms submitted by assignee, a good and sufficient assignment of said lease, and will execute and deliver such other consents, affidavits, amended assignments, or other papers which may be found necessary to give full effect to said assignment.

If said lease shall expire while the option hereby granted is still in force and effect, lessee agrees upon request of assignee, to timely make application for the extension, renewal, exchange or conversion of said lease, as may be permitted by law and regulation, and to take all other steps necessary to cause lessee's rights in and to a lease on said land to be perpetuated, and this option, and the rights hereby granted to assignee shall attach to any such extension or renewal of said lease, or to any exchange, conversion or new lease that may be issued pursuant to said application.

Lessee hereby consents that the above described land may be made the subject of or committed to a unit or cooperative plan of development under said Act of Congress, as amended, and hereby makes, constitutes and appoints the assignee, or any executive officer of the assignee, if said party be a corporation, irrevocably, as Attorney in fact, in their place and stead, at any time during said option period, or after the exercise of said option, to commit said land or any part thereof to the extent of any interest held, retained or reserved by the lessee therein, to any such unit or cooperative plan which may be prescribed or approved by the Secretary of the Interior, involving any area regarded by the Secretary of the Interior, or his representatives, as logical for unitization and to execute such plan on behalf of the lessee with the understanding that such plan may provide for the pooling and allocation of production within such participating area as may be established or approved by the Secretary or his representative, upon a proportionate acreage or other equitable basis as may be prescribed or approved by said Secretary or his representative and such plan may contain such other provisions as may be inserted at the discretion of the assignee, all to be effective upon the final approval of said plan by the Secretary of the Interior, and to execute all instruments and do all things necessary to make said unit plan effective.

In the event assignee desires to commence drilling or development operations on said land after the date of exercise of this option as to any part thereof and before assignee's assignment has been approved by the Department of the Interior, lessee agrees upon request to give assignee such "Designation of Operator" and to take such other steps without cost or liability to lessee as may be necessary to induce the Department of the Interior to grant to assignee the right to commence such operations.

The provisions hereof shall be deemed to be covenants running with the lease and binding on, and inuring to the benefit of the heirs, successors and assigns of the parties hereto.

Failure to exercise said option within the time limited shall have the effect of terminating this instrument and all rights granted thereby as to any land on which the option is not exercised.

Executed by the lessee the day and year first above written.

Albert M. Senter Jr.
Albert M. Senter, Jr.

Mary Senter
Mary Senter

STATE OF NEW MEXICO)
COUNTY OF BERNALILLO) SS

On this 20 day of February, 1951, before me personally appeared Albert M. Senter, Jr., and wife, Mary Senter, to me known to be the persons described in and who executed the foregoing instrument and acknowledged that they executed the same as their free act and deed.

Given under my hand and Notarial Seal the 20 day of February, A. D., 1951.



My Commission expires: 7/28/52

[Signature]
Notary Public

Whereas, hazel D. witzau has filed an application for an oil and gas lease under the Act of Congress, approved February 25, 1920 (41 Stat. 437), as amended, bearing Serial No. NM 04941, said application bearing date February 13, 1951, and covering the following described land in the County of Otero and the State of New Mexico

Section 14: All
Section 15: All
Section 22: All
Section 23: All

SUBJECT MATTER OF THIS MESSAGE IS UNCLASSIFIED AND DATE 06-08-2007 BY SP-6 JAC/KRM/STP
THIS MESSAGE IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE

For and in consideration of the sum of One Dollar (\$1.00) and other valuable consideration, the receipt of which is hereby acknowledged, and which is acknowledged to be sufficient to support all the rights and privileges hereby granted, lessee hereby grants unto the assignee, or to assignee's qualified heirs, personal representatives, successors, nominees and assigns, the right and option to acquire by assignment all of the right, title and interest of the lessee, his heirs, personal representatives or assigns, in and to the above described lease, when and if issued, to the extent that it covers or may cover the above described land, or any part thereof, such assignment to be in manner, form and substance satisfactory and acceptable to assignee, and to be free and clear of any and all liens, incumbrances or outstanding interests except as hereinbelow set out:

10. 10.12.2019

If any rentals become due under said lease or lease application and prior to the expiration of said option period, assignee, on notice from the lessee, shall either pay said rentals as to all of the above described land, or as to part, and relinquish this option as to the land on which assignee elects not to pay the rentals, and lessee shall thereupon have the privilege of paying said rentals as to the relinquished land and of maintaining the lease as to such land for his own account.

Election to exercise said option by assignee may be made personally or by written notice deposited in the United States mail, addressed to the lessee at the above named address prior to the expiration of the option period, and by delivering to lessee or by depositing in the mail to lessee's address in like manner and time lessee's check in the amount of 10¢ per acre for the acreage on which assignee desires to exercise said option, or in lieu thereof said notice and payment may within said time be mailed to the Colorado National Bank of Denver, Colorado, which bank or its successors is hereby appointed as the agent of the lessee for the receipt and deposit of such notice and payment, irrespective of any change of ownership of lessee's interest hereunder. Assignee may likewise at any time during the option period exercise said option as to part of the above described land, and the option shall be deemed to be continued for the full term of the option as to the remaining land, except to the extent that assignee shall expressly relinquish it; and assignee may at any time thereafter likewise exercise said option as to part of the above described land, and either continue said option as to the remaining land or relinquish it, or continue the option as to part and relinquish as to part. For the purpose of notice hereunder the above named addresses shall remain as the addresses of the parties hereto, unless and until written notice of change of address or change of depository bank is actually served on the other party, whereupon the new address shall be the address for the purpose hereof.

Lessee agrees to keep and maintain said lease in full force and effect during the option period, and will not relinquish or suffer the forfeiture of the same, and will furnish assignee with all communications and notices from the United States relating to said lease, and upon the exercise of said option will deliver to assignee, on demand, on forms submitted by assignee, a good and sufficient assignment of said lease, and will execute and deliver such other consents, affidavits, amended assignments, or other papers which may be found necessary to give full effect to said assignment.

If said lease shall expire while the option hereby granted is still in force and effect, lessee agrees upon request of assignee, to timely make application for the extension, renewal, exchange or conversion of said lease, as may be permitted by law and regulation, and to take all other steps necessary to cause lessee's rights in and to a lease on said land to be perpetuated, and this option, and the rights hereby granted to assignee shall attach to any such extension or renewal of said lease, or to any exchange, conversion or new lease that may be issued pursuant to said application.

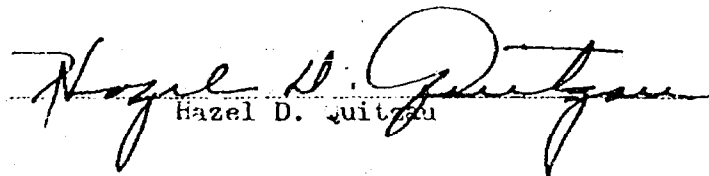
Lessee hereby consents that the above described land may be made the subject of or committed to a unit or cooperative plan of development under said Act of Congress, as amended, and hereby makes, constitutes and appoints the assignee, or any executive officer of the assignee, if said party be a corporation, irrevocably, as her attorney in fact, in her place and stead, at any time during said option period, or after the exercise of said option, to commit said land or any part thereof to the extent of any interest held, retained or reserved by the lessee therein, to any such unit or cooperative plan which may be prescribed or approved by the Secretary of the Interior, involving any area regarded by the Secretary of the Interior, or his representatives, as logical for unitization and to execute such plan on behalf of the lessee with the understanding that such plan may provide for the pooling and allocation of production within such participating area as may be established or approved by the Secretary or his representative, upon a proportionate acreage or other equitable basis as may be prescribed or approved by said Secretary or his representative and such plan may contain such other provisions as may be inserted at the discretion of the assignee, all to be effective upon the final approval of said plan by the Secretary of the Interior, and to execute all instruments and do all things necessary to make said unit plan effective.

In the event assignee desires to commence drilling or development operations on said land after the date of exercise of this option as to any part thereof and before assignee's assignment has been approved by the Department of the Interior, lessee agrees upon request to give assignee such "Designation of Operator" and to take such other steps without cost or liability to lessee as may be necessary to induce the Department of the Interior to grant to assignee the right to commence such operations.

The provisions hereof shall be deemed to be covenants running with the lease and binding on, and inuring to the benefit of the heirs, successors and assigns of the parties hereto.

Failure to exercise said option within the time limited shall have the effect of terminating this instrument and all rights granted thereby as to any land on which the option is not exercised.

Executed by the lessee the day and year first above written.

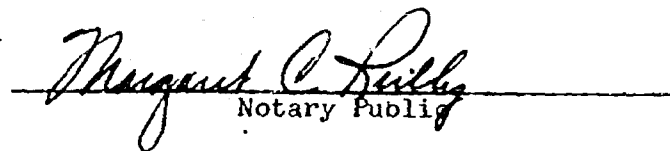

Hazel D. Quitzau

STATE OF COLORADO)
CITY AND COUNTY OF DENVER) SS

On this 23rd day of February, 1951, before me personally appeared Hazel D. Quitzau, to me known to be the person described in and who executed the foregoing instrument and acknowledged that she executed the same as her free act and deed.

Given under my hand and Notarial Seal the 23rd day of February, A. D., 1951.

My Commission expires: Feb. 15-1954


Notary Public

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING HELD
BY THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO FOR THE
PURPOSE OF CONSIDERING THE MATTER OF
THE APPLICATION OF STABILIZED OIL AND
GAS COMPANY FOR THE APPROVAL OF A UNIT
AGREEMENT FOR THE THORN UNIT AREA,
EMBRACING 5,510.46 ACRES, MORE OR LESS,
LOCATED IN TOWNSHIP 21 NORTH, RANGE 14
EAST, T.M.P.M., OTERO COUNTY, NEW MEXICO.

CASE NO. 494

ORDER NO. 2-214

ORDER OF THE COMMISSION

BY THE COMMISSION:

This matter having come on for hearing at 9:00 o'clock a.m. on February 24, 1953, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the Commission.

NOW, on this 27th day of February, 1953, the Commission, a quorum being present, having before it for consideration the said application and the evidence introduced in support thereof, and being fully advised in the premises:

FINDS:

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

That the proposed unit agreement and plan will in principal tend to promote the conservation of oil and gas and to prevent waste;

IT IS THEREFORE ORDERED:

Section 1. That this Order shall be known as the:

"THORN UNIT AGREEMENT ORDER".

Section 2. That the plan by which the project or unit will be operated shall be embraced in the form of a unit agreement for the development and operation of the Thorn Unit Area referred to in the petition of the petitioner and filed with the petition. Such plan shall be known as the Thorn Unit Agreement Plan.

Section 3. The Thorn Unit Agreement Plan shall be and is hereby approved in principle as a proper conservation measure, provided, however, that notwithstanding any of the provisions contained in said Unit Agreement this approval shall not be construed as waiving or relinquishing in any manner any rights, title or obligations which now or may hereafter be vested in the State of New Mexico or the Commission by law relative to the conservation of oil and gas.

ORDER OF THE COMMISSIONER OF PUBLIC LANDS AND DEVELOPMENT OF NEW MEXICO
RELATIVE TO THE UNITIZATION OF CERTAIN OIL AND GAS LANDS
IN THE STATE OF NEW MEXICO

Section 1. The Unit Area shall be:

THE PUBLIC LANDS SURVEYED, NEW MEXICO

Section 2.

Sec. 2, All
Sec. 3, All
Sec. 4, All
Sec. 5, All
Sec. 6, All
Sec. 7, All
Sec. 8, All
Sec. 9, All
Sec. 10, All
Sec. 11, All
Sec. 12, All
Sec. 13, All
Sec. 14, All
Sec. 15, All
Sec. 16, All
Sec. 17, All
Sec. 18, All
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Sec. 93, All
Sec. 94, All
Sec. 95, All
Sec. 96, All
Sec. 97, All
Sec. 98, All
Sec. 99, All
Sec. 100, All

Total Unit Area embraces 3,410.46 acres, more or less.

Section 3. That the unit operator shall file with the Commission an executed original or executed counterpart of the Unit Agreement not later than thirty (30) days after the effective date thereof.

Section 4. That any party owning rights in the unitized area who did not consent to said unit agreement before the effective day thereof may thereafter become a party thereto by subscribing to such agreement or counterpart thereof or by ratifying the same. The unit operator shall file with the Commission within thirty (30) days an original or such counterpart of ratification.

Section 5. That this Order shall become effective upon the approval thereof by the Commissioner of Public Lands of the State of New Mexico and the Director of the United States Geological Survey, and shall terminate upon the termination of the unit agreement. The last unit operator shall immediately notify the Commission in writing of such termination.

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

STATE OF NEW MEXICO OIL CONSERVATION COMMISSION

E. J. Parker
CHAIRMAN

MEMBER

R. R. Gorman
MEMBER

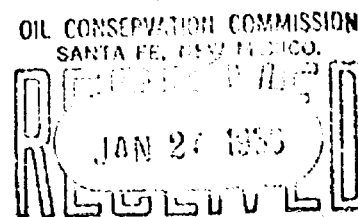
The undersigned Commissioner of Public Lands of the State of New Mexico, having considered the application of Stanland Oil and Gas Company for approval of a Unit Agreement covering lands in Otero County, New Mexico, described in the said Unit Agreement, and the Commissioner has considered the application and the evidence offered by the petitioner at the hearing before the Oil Conservation Commission of New Mexico on the 24th day of February, 1953, finds:

1. That the Thorne Unit Agreement will result in the production of oil and gas and the better utilization of resources.
2. That under the operation of the proposed Unit Agreement the State of New Mexico will receive its fair share of the recoverable oil and gas in place under the unit area.
3. That the said agreement is in the best interests of the State of New Mexico.

The said agreement is hereby approved.

Dated at Santa Fe, New Mexico, this _____
February, 1953.

[Signature]
Commissioner of Public Lands



BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF
STANOLIND OIL AND GAS COMPANY FOR
THE APPROVAL OF A UNIT AGREEMENT FOR THE
THORN UNIT AREA, EMBRACING 5,650.46 ACRES,
MORE OR LESS, LOCATED IN TOWNSHIP 21 SOUTH,
RANGE 14 EAST, N.M.P.M., OTERO COUNTY,
NEW MEXICO

CASE NO. 492

A P P L I C A T I O N

An application is hereby made by Stanolind Oil and Gas Company, a corporation, for approval by the Oil Conservation Commission, of a unit agreement entitled "Unit Agreement for the Development and Operation of the Thorn Unit Area, County of Otero, State of New Mexico", the said agreement having been entered into between the applicant herein as the Unit Operator and certain working interest owners and royalty owners as have, or may hereafter, subscribe to or consent to the agreement.

The Thorn Unit embraces the following described lands located in Otero County, New Mexico, to-wit:

NEW MEXICO PRINCIPAL MERIDIAN, NEW MEXICO

T-21-S, R-14-E

Sec. 2, All
Sec. 3, All
Sec. 9: E/2 SE/4
Sec. 10, All
Sec. 11, All
Sec. 14, All
Sec. 15, All
Sec. 16: E/2 E/2
Sec. 22, All
Sec. 23, All

Total Unit Area embraces 5,650.46 acres, more or less.

At the hearing hereinafter requested, the requisite number of signed copies of the unit agreement will be submitted for approval, and it is requested that the same be returned to the applicant in order that it may file the necessary counterparts thereof with the Department of the Interior of the United States for the purpose of obtaining final approval of the agreement by the Secretary of the Interior. After approval of the agreement by the Secretary of the Interior a complete and signed copy of the unit agreement will be filed in the Office of the Commissioner of Public Lands of the State of New Mexico. An unsigned copy of the unit agreement is being filed herewith in the office of the Commission for a temporary record pending the receipt of the final completed copy.

The form of unit agreement has previously been considered by the Commissioner of Public Lands. Geological evidence concerning the structure affected by this unitization will be submitted to the Commissioner of Public Lands and at the hearing hereinafter requested.

With reference to the lands embraced in this unit, there is attached to the unsigned copy of the unit agreement, hereinafter filed, a map of the unit area on which is shown the ownership of the various lands embraced in the said unit. The applicant is continuing efforts to obtain commitments to the unit agreement from those owners of interests who have not yet joined, and a full showing of the commitments will be made at the time of the hearing hereinafter requested.

Within six (6) months after the date the unit agreement becomes effective the unit operator is obligated to commence drilling operations on an adequate test well. Should commercial production be discovered, the unitized operation will assure an orderly development program based on structural position and will enable productive operations to be conducted in accordance with the best over-all reservoir practices. Development and operation will be conducted in accordance with the plans having the joint approval of Federal and State authorities. Under this agreement the State of New Mexico will receive its fair share of the oil and gas and this will be allocated to it on an acreage basis in any and all participating areas that may be established. This unit agreement is in all respects to the best interests of the State of New Mexico and tends to eliminate waste and promote conservation of oil and gas.

The unit agreement makes express provision that additional parties may join and subject their interests to the said agreement after its final approval. The Commission is respectfully requested to set this matter and application down for hearing and following said hearing to give its approval to the unit agreement.

Respectfully submitted this 23rd day of January, 1953.

STANOLIND OIL AND GAS COMPANY

By C. F. Bedford
Its Agent and Attorney in Fact

RGH:dhs