

CASE 2836: Application of UNION OIL
COMPANY for approval of the WEST
MCDONALD UNIT AGREEMENT.

2836

his, Transcript,

Exhibits, Etc.

MAIN OFFICE OCC

1964 JUN 12 AM 10:34

2836

June 12, 1964

Union Oil Company of California
Suite 300
Security National Bank Building
Roswell, New Mexico

Re: West McDonald Unit, Lea County,
New Mexico
Termination

Attention: Mr. W. M. Stanley

Gentlemen:

This office received your letter of May 22, 1964 signed by all of the working interest owners with acreage committed to the West McDonald Unit, requesting official termination of the West McDonald Unit. The Commissioner of Public Lands approves the termination of West McDonald Unit, Lea County, New Mexico, to become effective as of March 9, 1964. We are enclosing three copies of your letter of May 22, 1964 approved by the Commissioner. This approval is merely a formality as we believe you would like official approval for your files.

We wish to thank you for your prompt handling of this termination.

Very truly yours,

E. S. JOHNNY WALKER
COMMISSIONER OF PUBLIC LANDS

BY:

(Mrs.) Marian M. Rhea, Supervisor
Unit Division

ESJW/mmr/min
cc: Oil Conservation Commission
Enclosures - 3

100 JUL 11 AM 1963

2826

July 10, 1963

Union Oil Company of California
112 East 4th Street
Roswell, New Mexico

Re: West McDonald Unit, Lea
County, New Mexico

Gentlemen:

The Commissioner of Public Lands approved as of July
5, 1963 the West McDonald Unit, Lea County, New Mexico.

We are handing to your Mr. Hoffman four Certificates
of Approval. Also enclosed is Official Receipt No. G-2044J
in the amount of Thirty (\$30.00) Dollars which covers the
filing fee.

Very truly yours,

E. S. JOHNNY WALKER
COMMISSIONER OF PUBLIC LANDS

BY:
(Mrs.) Marlen M. Rhea, Supervisor,
Unit Division

ESJW/mar/a
encl.

cc: Oil Conservation Commission
Santa Fe, New Mexico

Hervey, Dow & Hinkle
Box 10
Roswell, New Mexico
Attention: Mr. Clarence E. Hinkle

APR 14 1958
REPORT ON THE GEOLOGY OF THE PROPOSED
WEST McDONALD UNIT
LEA COUNTY, NEW MEXICO

BY John C. Pearson
District Geologist
Union Oil Company of California
Roswell, New Mexico

SUMMARY

The proposed West McDonald Unit consists of 2,320 acres in T 14 S, R 35 E, north central Lea County, New Mexico. Within the limits of the unit, it is believed that a structural closure exists at the Strawn datum. One well has been drilled within the unit outline to date, the Union Oil Co. of Calif. No. 1-17 State which was completed as an Upper Strawn oil discovery after reaching a total depth of 11,576 feet in the Strawn. In order to develop and evaluate this discovery and to test for additional deeper and/or shallower pays, the Union Oil Company of California intends to drill a 13,700-foot Chester exploratory well 3/4 miles northeast of the Union No. 1-17 State. The purpose of the requested Unit is to insure orderly development of the Strawn and any oil or gas production subsequently found within the unit.

INTRODUCTION

The West McDonald Unit is located in T 14 S, R 35 E, Lea County, New Mexico, in a sparsely explored synclinal depression of the Permian Basin Northwestern Shelf. This synclinal depression, referred to as the Tatum Basin, is bounded to the east and west by two prominent anticlinal trends, the Saunders-Bagley and the Denton-Gladiola trends, respectively. The southern flank of the Tatum Basin is formed by a series of deep-seated anticlines plunging northward from the Central Basin Platform into the center of the Basin. The northern limit of the basin is poorly defined but approximates the northern edge of the Permian Basin. The Basin is filled by Pennsylvanian and early Permian (Wolfcamp) shelf and shallow basinal sediments. The overlying younger Permian strata consist entirely of shelf facies, and dip gently to the south and southeast, into the San Simon Channel, a later depositional feature located approximately twenty miles south of the Tatum Basin.

The closest developed oil fields to the Unit are Caudill (Wolfcamp and Devonian) Field, ten miles to the southeast and Ranger Lake (Upper Pennsylvanian) Field, ten miles to the northwest. A recent Wolfcamp oil discovery has been made four miles to the southwest (Sinclair and Texas Crude No. 1-23 State) and an exploratory well six miles to the east was completed in 1957 as a Chester (Upper Mississippian) gas well; neither of these discoveries has been developed to date.

GEOLOGY

Attached to this report is a structure map contoured on the top of the Strawn. Although extensive seismic surveys have been carried out in the region by Union Oil Company, no consistent mappable reflection has been found at the Strawn level. Consequently, this map is based largely on well data. Locally, however, seismic dip components have been honored in the contouring.

As shown on this map, the West McDonald Unit is centered on a structural closure formed by the intersection of a deep-seated, low relief, north-south anticline and the east-west Strawn shelf edge. This shelf edge is a relatively steep basinward slope which separates thick (800' ±) Strawn shelf carbonates in the West McDonald area and northward from thin (250' ±) basinal limestones to the south. This slope forms the south flank of the structure.

Within the proposed Unit outline, one well has been drilled to date. The Union No. 1-17 State was completed on April 16, 1963 for 326 barrels of oil per day, plus 9% water, from perforations between 11,478 and 11,490 feet, near the top of the Strawn. This well was drilled to a total depth of 11,576 feet in the Upper Strawn. The section encountered was as follows:

0	-	2,037 feet	Undifferentiated Tertiary, Triassic and Upper Permian continental deposits
2,037-		3,000 feet	Upper Permian Rustler and Salado anhydrite, redbeds, dolomite and salt
3,000-		6,445 feet	Upper Permian Tansill, Yates, Seven Rivers, Queen and San Andres dolomite and sand.
6,445-		8,200 feet	Lower Permian (Leonard) Yeso dolomite and sand
8,200-		9,720 feet	Lower Permian (Leonard) Abo dolomite and shale
9,720-		10,330 feet	Lower Permian (Upper Wolfcamp) limestone and variegated shale
10,330-		10,755 feet	Lower Permian (Lower Wolfcamp) dark shale and limestone, in part porous
10,755-		11,465 feet	Upper Pennsylvanian (Cisco and Canyon) Limestone and dolomite, cavernous or porous in part
11,465-		11,567 feet	Lower Pennsylvanian (Upper Strawn) limestone, porous and oil productive between 11,478 and 11,490 feet

PROPOSED WELL

Upon approval of the West McDonald Unit, Union Oil Company of California intends to drill a 12,700-foot Upper Mississippian (Chester) test in the SW NW of Section 9, T 14 S, R 35 E, three-quarters of a mile northeast of the Union No. 1-17 State. This well is expected to extend and evaluate the Upper Strawn production discovered in the No. 1-17 State. Other objectives include

the porous limestones and dolomites in the Lower Wolfcamp and Upper Pennsylvanian which were water-bearing in the No. 1-17 State but which are potentially oil productive higher structurally. The proposed well is to be drilled through the Lower Pennsylvanian section--not penetrated in the No. 1-17 State for mechanical reasons--to test Atoka and Morrow sands and the Chester (Upper Mississippian) limestone, potentially gas productive in this region.

The proposed Unit is necessary to ensure orderly development of the Strawn production discovered in the No. 1-17 State, and any additional oil or gas production found by the planned deeper exploratory well. The information required to establish proper well spacing is not as yet available, and unnecessary wells or poor drainage patterns might result from unco-ordinated development drilling.

REPORT ON THE GEOLOGY OF THE PROPOSED
WEST McDONALD UNIT
LEA COUNTY, NEW MEXICO

BY John C. Pearson
District Geologist
Union Oil Company of California
Roswell, New Mexico

SUMMARY

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The proposed Unit is necessary to ensure orderly development of the Strawn production discovered in the No. 1-17 State, and any additional oil or gas production found by the planned deeper exploratory well. The information required to establish proper well spacing is not as yet available, and unnecessary wells or poor drainage patterns might result from unco-ordinated development drilling.

No. 18-63

DOCKET: EXAMINER HEARING - WEDNESDAY - JUNE 26, 1963

9 A.M. - GIL CONSERVATION COMMISSION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or
Elvis A. Utz, as Alternate Examiner:

CASE 2821: (Continued from June 5, 1963 examiner hearing)

Application of D. W. Falls, Inc., for an extension of
Order No. R-2213, San Juan County, New Mexico. Applicant,
in the above-styled cause, seeks the extension of Order
No. R-2213, which order assigned a temporary deliverability
for allowable purposes to applicant's Federal Well No. 2-11,
located in Unit O of Section 11, Township 28 North, Range
13 West, Basin-Dakota Gas Pool, San Juan County, New Mexico.

CASE 2833: Application of Tenneco Oil Company for approval of a unit
agreement, San Juan County, New Mexico. Applicant, in the
above-styled cause, seeks approval of the Central Cha Cha
Unit Area comprising 674.05 acres, more or less, of Federal
land located in Sections 30 and 31, Township 29 North, Range
13 West, San Juan County, New Mexico.

CASE 2834: Application of Tom Brown Drilling Company for a unit agree-
ment, Eddy County, New Mexico. Applicant, in the above-
styled cause, seeks approval of the Runyan Ranch Unit Area
comprising 10,890.12 acres of State and Federal lands in
Township 19 South, Range 21 East, Eddy County, New Mexico.

CASE 2835: Application of Jake L. Hamon for a unit agreement, Lea
County, New Mexico. Applicant, in the above-styled cause,
seeks approval of the Southeast Bell Lake Unit Area com-
prising 9,597.09 acres of State, Federal and Fee lands in
Townships 24 and 25 South, Ranges 34 and 35 East, Lea County,
New Mexico.

CASE 2836: Application of Union Oil Company of California for a unit
agreement, Lea County, New Mexico. Applicant, in the
above-styled cause, seeks approval of the West McDonald
Unit Area comprising 2,320 acres of State and Fee lands in
Township 14 South, Range 35 East, Lea County, New Mexico.

CASE 2837: Application of Continental Oil Company for a unit agreement,
Chaves County, New Mexico. Applicant, in the above-styled
cause, seeks approval of the Eastcap Queen Pool Unit Area

comprising 1680 acres of State and Fee lands, located in Township 14 South, Range 31 East, Chaves County, New Mexico.

- CASE 2838: Application of Continental Oil Company for a waterflood project, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Queen formation, Caprock Queen Pool, through 17 wells located in Sections 22, 23, 27, 34, and 35, Township 14 South, Range 31 East, Chaves County, New Mexico.
- CASE 2839: Application of Amerada Petroleum Corporation for a multiple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an amendment of Order No. R-1750-A to permit the multiple completion (tubingless), of its Wimberley Well No. 13, located in Unit M of Section 24, Township 25 South, Range 37 East, Lea County, New Mexico, to permit the production of gas from the Langlie Mattix Pool, the production of oil from the Justis-Blinebry Oil Pool, and the disposal of salt water into the San Andres formation through parallel strings of casing cemented in a common well bore.
- CASE 2840: Application of Amerada Petroleum Corporation for a non-standard gas proration unit. Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 120-acre non-standard gas proration unit comprising the S/2 NE/4 and NW/4 SE/4 of Section 19, Township 21 South, Range 37 East, Blinebry Gas Pool, Lea County, New Mexico, to be dedicated to its L. G. Warlick "A" Well No. 2 located in Unit J of said Section 19.
- CASE 2841: Application of Shell Oil Company for an unorthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to drill its Middleton Federal Well No. B-1 at an unorthodox location 660 feet from the North and West lines of Section 31, Township 19 South, Range 32 East, Lusk-Morrow Gas Pool, Lea County, New Mexico.
- CASE 2842: Application of Compass Exploration, Inc. for an amendment of Commission Order No. R-2462, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks an amendment of Order No. R-2462 concerning the Largo Gallup Gas Pool to provide 320-acre gas well spacing and an increase in the maximum allowable for each spacing unit from 500 to 1,000 MCF per day.

- CASE 2843: Application of Gulf Oil Corporation for a special gas well test, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to produce and flare approximately 3000 MCF of gas per day for a period of not less than 6 nor more than 9 days from its Hackberry Hills Unit Well No. 1, located in Unit O of Section 1, Township 22 South, Range 25 East, Eddy County, New Mexico, to determine if the gas reserves in place justify the expense of a pipeline to the nearest market outlet.
- CASE 2844: Application of Sinclair Oil & Gas Company for the creation of the Teas Pennsylvanian Gas Pool and for special temporary pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Pennsylvanian Gas Pool for its Mahaffey-Federal (ARC) Well No. 1, located in Unit C of Section 14, Township 20 South, Range 33 East, Lea County, New Mexico, and for the establishment of temporary pool rules therefor, including a provision for 640 acre spacing units.
- CASE 2845: Application of Sinclair Oil & Gas Company for an exception to Order No. R-1670, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order permitting its Barber Gas Unit Well No. 1, located in Unit E of Section 8, Township 20 South, Range 37 East, Eumont Gas Pool, Lea County, New Mexico, to produce 600 MCF of gas per month in exception to the shut-in provisions of Rule 15(A) of Order No. R-1670, said gas to be utilized in the oil well gas-lift system on applicant's B. J. Barber Lease.
- CASE 2846: Application of Ralph Lowe to create a new pool for Upper Pennsylvanian gas production, and for special pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new gas pool for Upper Pennsylvanian Gas production in Section 21, Township 21 South, Range 24 East, and the establishment of temporary pool rules therefor, including a provision for 640-acre spacing and a provision restricting well locations.

Case 2836

J. M. HERVEY 1874-1953
HIRAM M. DOW
CLARENCE E. HINKLE
W. E. BONDURANT, JR.
GEORGE H. HUNKER, JR.
HOWARD C. BRAYTON
S. B. CHRISTY IV
LEWIS C. COX, JR.
PAUL W. EATON, JR.
CONRAD E. COFFIELD
HAROLD L. HENSLEY, JR.

LAW OFFICES
HERVEY, DOW & HINKLE
HINKLE BUILDING
ROSWELL, NEW MEXICO

June 18, 1963

TELEPHONE 622-6510
AREA CODE 505
POST OFFICE BOX 10

Mr. A. L. Porter, Jr.
Secretary-Director
New Mexico Oil Conservation Commission
State Land Office Building
Santa Fe, New Mexico

Dear Mr. Porter:

At our request you have heretofore advertised for hearing for approval of the West McDonald Unit Area embracing State and Fee lands in Township 14 South, Range 35 East, N.M.P.M., Lea County, New Mexico, which is Case No. 2836 on the examiner's docket for June 26. We enclose in triplicate Application of the Union Oil Company of California for approval of this Unit, together with three copies of the proposed Unit Agreement which should complete your files in connection with this matter.

Yours sincerely,

HERVEY, DOW & HINKLE

By 

CEH: jy

cc: Union Oil Company of California
300 Security National Building
Roswell, New Mexico
Attention: Mr. W. M. Stanley

T-14-S
R-35-E

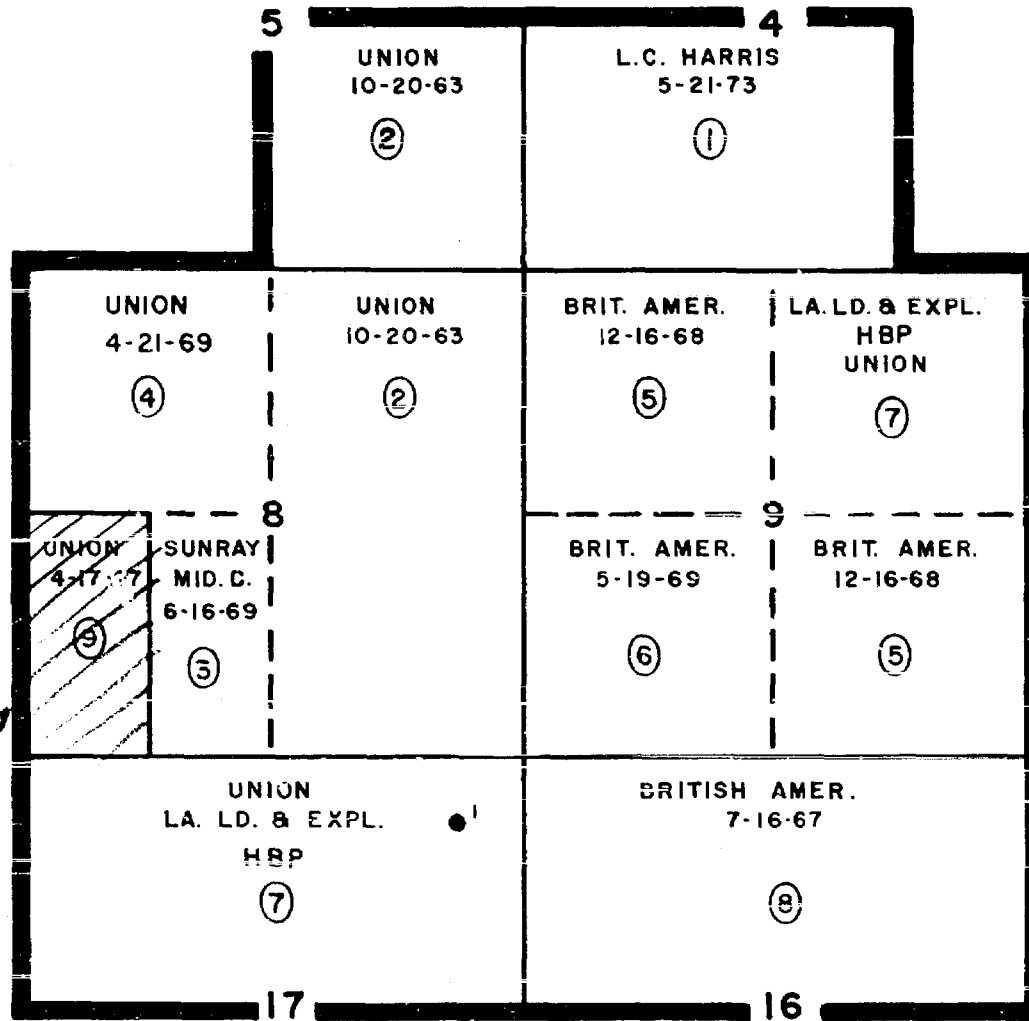


EXHIBIT "A"

WEST McDONALD UNIT

LEA COUNTY, NEW MEXICO

LEGEND

SCALE 1"=2000'

TRACT NUMBER AS LISTED ON EXHIBIT "B"

①

UNIT OUTLINE

2240 ACRES OF STATE LAND &

80 ACRES OF FEE LAND

T-14-S
R-35-E

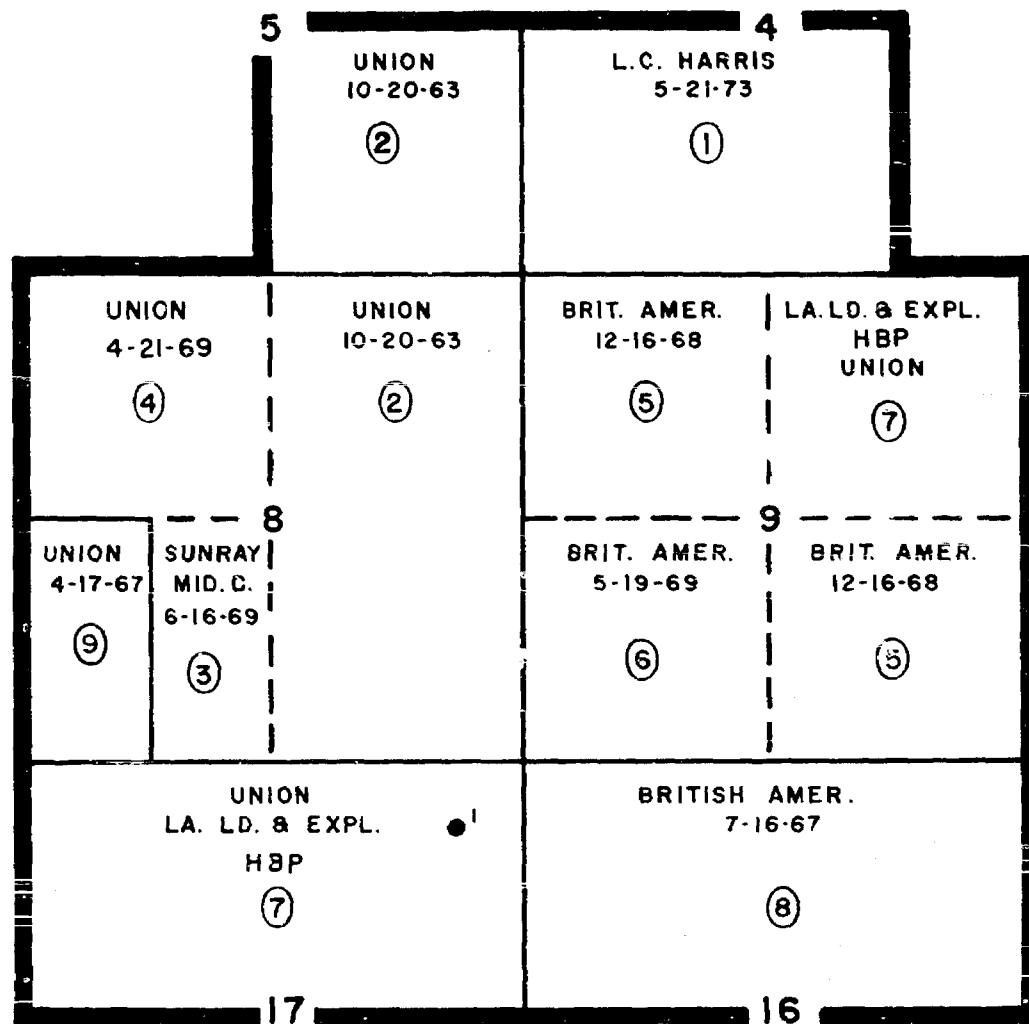


EXHIBIT "A"

WEST McDONALD UNIT

LEA COUNTY, NEW MEXICO

LEGEND

SCALE 1"=2000'

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TRACT NUMBER AS LISTED ON
EXHIBIT "B"



UNIT OUTLINE



2240 ACRES OF STATE LAND &
80 ACRES OF FEE LAND

J. M. HERVEY 1874-1953
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HAROLD L. HENSLEY, JR.

LAW OFFICES
HERVEY, DOW & HINKLE

HINKLE BUILDING
ROSWELL, NEW MEXICO

July 5, 1963

TELEPHONE 622-3310
AREA CODE 505
POST OFFICE BOX 10

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

Attention: Mr. A. L. Porter, Jr.
Secretary-Director

Re: West McDonald Unit Agreement
OCC Case No. 2836
Order No. R-2509
Union Oil Company of California

Gentlemen:

We enclose for your information and to be inserted in connection with the Unit Agreement forms heretofore filed with you redraft of pages 5 and 6 which were requested by the Commissioner of Public Lands. The only change actually appearing is the last paragraph on page 6, making it clear that a certain well which has heretofore been completed on the unit area will not be considered as a unit well.

Yours very truly,

HERVEY, DOW & HINKLE

By 

CEH:jy

Encl.

interest benefits accruing hereunder shall be apportioned among the owners of the unitized working interests in accordance with an operating agreement entered into by and between the unit operator and the owners of such 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 "Operating Agreement". No such 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 inconsistencies or conflict between this unit agreement and the operating agreement, this unit agreement shall prevail.

7. 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, allocation and distributing the unitized substances are hereby delegated to and shall be exercised by the unit operator as herein provided. Acceptable evidence of the 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.

8. DRILLING TO DISCOVERY: The unit operator shall, on or before July 10, 1963, commence operations upon an adequate test well for oil and gas upon some part of the lands embraced within the unit area and drill said well with due diligence to a depth sufficient to

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8. DRILLING TO DISCOVERY: The unit operator shall, on or before July 10, 1963, commence operations upon an adequate test well for oil and gas upon some part of the lands embraced within the unit area and drill said well with due diligence to a depth sufficient to

test the Chester Series of the Mississippian period or to such a depth as unitized substances shall be discovered in paying quantities at a lesser depth or until it shall, in the opinion of unit operator, be determined that the further drilling of said well shall 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 13,700 feet. Until a discovery of a deposit of unitized substances capable of being produced in paying quantities (to-wit: quantities sufficient to repay the costs of drilling and producing operations with a reasonable profit) unit operator shall continue drilling diligently, one well at a time, allowing not more than six 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 the Commissioner, or until it is reasonably proven to the satisfaction of the unit operator that the unitized land is incapable of producing unitized substances in paying quantities in the formation drilled hereunder.

The Commissioner may modify the drilling requirements of this section by granting reasonable extensions of time when in his opinion such action is warranted. Upon failure to comply with the drilling provisions of this article the 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, and all rights, privileges and obligations granted and assumed by this unit agreement shall cease and terminate as of such date.

In the event the initial test well is completed as a dry hole or well not capable of producing unitized substances in paying quantities, the well heretofore completed by unit operator in the NE $\frac{1}{4}$ of Section 17, Township 14 South, Range 35 East, N.M.P.M., shall not be considered for the purposes of this agreement as a discovery of unitized substances which would continue this agreement in effect or relieve unit operator from the further drilling obligations hereinabove provided in order to continue this agreement in effect.

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The Commissioner may modify the drilling requirements of this section by granting reasonable extensions of time when in his opinion such action is warranted. Upon failure to comply with the drilling provisions of this article the 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, and all rights, privileges and obligations granted and assumed by this unit agreement shall cease and terminate as of such date.

In the event the initial test well is completed as a dry hole or well not capable of producing unitized substances in paying quantities, the well heretofore completed by unit operator in the NE $\frac{1}{4}$ of Section 17, Township 14 South, Range 35 East, N.M.P.M., shall not be considered for the purposes of this agreement as a discovery of unitized substances which would continue this agreement in effect or relieve unit operator from the further drilling obligations hereinabove provided in order to continue this agreement in effect.

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July 9, 1963

Case 2836

2836

Office Commissioner of Public Lands
Land Office Building
Santa Fe, New Mexico

Re: West McDonald Unit
T-14-S, R-25-E
Lee County, New Mexico

Gentlemen:

We hand you herewith two duplicate originals of the Unit Agreement and one duplicate original of the Unit Operating Agreement providing for the drilling of a 13,700 foot Chester test in the SW $\frac{1}{4}$ of Section 9, T-14-S, R-25-E, Lee County, New Mexico. These agreements require that such test must be started on or before July 10, 1963.

The West McDonald Unit area embraces a total of 2320 acres of which 2240 acres are State owned minerals and 80 acres are minerals owned in fee by individuals. These fee owners have been invited to join the Unit and have declined.

Record ownership of leases within the Unit area, together with percentages and status of commitment to the Unit is as follows:

<u>Record Owner</u>	<u>No. Acs.</u>	<u>Percentage</u>	<u>Status</u>
Union	720	31.0345	Committed
British American	800	34.4828	Committed
Louisiana Land & Expl.	400	20.4097	Committed
L. C. Harris	240	10.3448	Committed
Sunray-EE	80	3.4482	Not Committed
	<u>2320</u>	<u>100.0000%</u>	

(Working Interest - 96.5517% Committed - 3.4482% Not Committed)

Preliminary approval to this Unit has been given by the State Land Office and a formal examiners hearing before the New Mexico Oil Conservation Commission was held on June 26, 1963. Order No. R-2509 dated July 2, 1963 approving this Unit has been issued by the Commission.

Office Commissioner Public Lands

-2-

July 9, 1963

We respectfully request that the attached material be examined and if it fulfills your requirements, please issue a certificate of approval by the Commissioner of Public Lands.

Yours very truly,

UNION OIL COMPANY OF CALIFORNIA



W. H. Stanley
Reswell District Landman

WHS:jbh

Encs.

cc: New Mexico Oil Conservation Commission
w/copy of Unit Agreement

UNIT AGREEMENT
FOR THE DEVELOPMENT AND OPERATION
OF THE
WEST McDONALD UNIT AREA
LEA COUNTY, NEW MEXICO

THIS AGREEMENT, entered into as of the 28th day of June, 1963, by and between the parties subscribing, ratifying or consenting hereto, and herein sometimes referred to as the "parties hereto",

W I T N E S S E T H:

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

WHEREAS, the Commissioner of Public Lands of the State of New Mexico is authorized by an Act of the Legislature (Chap. 7, Art. 11, Sec. 39, N.M. Statutes 1953 Annot.), to consent to and approve the development and operation of State lands under agreements made by lessees of State land jointly or severally with other lessees where such agreements provide for the unit operation or development of part of or all of any oil or gas pool, field or area; and

WHEREAS, the Commissioner of Public Lands of the State of New Mexico is authorized by an Act of the Legislature (Chap. 7, Art. 11, Sec. 41, N.M. Statutes 1953 Annot.) to amend with the approval of lessee, evidenced by the lessee's execution of such agreement or otherwise, any oil and gas lease embracing State lands so that the length of the term of said lease may coincide with the term of such agreements for the unit operation and development of part or all of any oil or gas pool, field or area; and

WHEREAS, the Oil Conservation Commission of the State of New Mexico (hereinafter referred to as the "Commission") is authorized by an Act of the Legislature (Chap. 65, Art. 3, Sec. 14, N.M. Statutes 1953 Annot.) to approve this agreement and the conservation provisions hereof; and

WHEREAS, the parties hereto hold sufficient interests in the West McDonald 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. UNIT AREA: The following described land is hereby designated and recognized as constituting the unit area:

Township 14 South, Range 35 East, N.M.P.M.

Section 4: $W\frac{1}{2}SE\frac{1}{4}$, $SW\frac{1}{4}$
Section 5: $SE\frac{1}{4}$
Section 8: All
Section 9: All
Section 16: $N\frac{1}{2}$
Section 17: $N\frac{1}{2}$

containing 2,320 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 rights in all lands 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 on 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 revisions necessary or when requested by the Commissioner of Public Lands of the State of New Mexico, hereinafter referred to as "Commissioner".

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

2. UNITIZED SUBSTANCES: All oil, gas and associated hydrocarbon substances in any and all formations of the unitized lands are unitized under the terms of this agreement and herein are called "unitized substances".

3. UNIT OPERATOR: Union Oil Company of California, with offices at Roswell, New Mexico, is hereby designated as unit operator and by signature hereto commits to this agreement all interest in unitized substances vested in it as set forth in Exhibit B, and agrees and consents to accept the duties and obligations of unit operator for the discovery, development and production of unitized substances as provided herein. Whenever reference is made herein to the unit operator, such reference means the unit operator acting in that capacity and not as an owner of interests in unitized substances, and the term "working interest owner" when used herein shall include or refer to unit operator as the owner of a working interest when such an interest is owned by it.

4. RESIGNATION OR REMOVAL OF UNIT OPERATOR: Unit operator shall have the right to resign at any time but such resignation shall not become effective until a successor unit operator has been selected and approved in the manner provided for in Section 5 of this agreement. The resignation of the unit operator shall not release the unit operator from any liability or any default by it hereunder occurring prior to the effective date of its resignation.

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 Commissioner.

The resignation or removal of the unit operator under this agreement shall not terminate his right, title or interest as the owner of a working interest or other interest in unitized substances, but upon the resignation or removal of unit operator becoming effective, such unit operator shall deliver possession of all 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.

5. SUCCESSOR UNIT OPERATOR: Whenever the unit operator shall resign as unit operator or shall be removed as hereinabove provided, the owners of the working interests according to their respective acreage interests in all unitized land shall by a majority vote select a successor unit operator; provided that, if a majority but less than seventy-five percent (75%) of the working interests qualified to vote is owned by one party to this agreement, a concurring vote of sufficient additional parties, so as to constitute in the aggregate not less than seventy-five percent (75%) of the total working interests, 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 Commissioner. If no successor unit operator is selected and qualified as herein provided, the Commissioner at his election may declare this unit agreement terminated.

6. ACCOUNTING PROVISIONS: The unit operator shall pay in the first instance all costs and expenses incurred in conducting unit operations hereunder, and such costs and expenses and the working

interest benefits accruing hereunder shall be apportioned among the owners of the unitized working interests in accordance with an operating agreement entered into by and between the unit operator and the owners of such 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 "Operating Agreement". No such 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 inconsistencies or conflict between this unit agreement and the operating agreement, this unit agreement shall prevail.

7. 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, allocation and distributing the unitized substances are hereby delegated to and shall be exercised by the unit operator as herein provided. Acceptable evidence of the 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.

8. DRILLING TO DISCOVERY: The unit operator shall, on or before July 10, 1963, commence operations upon an adequate test well for oil and gas upon some part of the lands embraced within the unit area and drill said well with due diligence to a depth sufficient to

test the Chester Series of the Mississippian period or to such a depth as unitized substances shall be discovered in paying quantities at a lesser depth or until it shall, in the opinion of unit operator, be determined that the further drilling of said well shall 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 13,700 feet. Until a discovery of a deposit of unitized substances capable of being produced in paying quantities (to-wit: quantities sufficient to repay the costs of drilling and producing operations with a reasonable profit) unit operator shall continue drilling diligently, one well at a time, allowing not more than six 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 the Commissioner, or until it is reasonably proven to the satisfaction of the unit operator that the unitized land is incapable of producing unitized substances in paying quantities in the formation drilled hereunder.

The Commissioner may modify the drilling requirements of this section by granting reasonable extensions of time when in his opinion such action is warranted. Upon failure to comply with the drilling provisions of this article the 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, and all rights, privileges and obligations granted and assumed by this unit agreement shall cease and terminate as of such date.

In the event the initial test well is completed as a dry hole or well not capable of producing unitized substances in paying quantities, the well heretofore completed by unit operator in the NE $\frac{1}{4}$ of Section 17, Township 14 South, Range 35 East, N.M.P.M., shall not be considered for the purposes of this agreement as a discovery of unitized substances which would continue this agreement in effect or relieve unit operator from the further drilling obligations hereinabove provided in order to continue this agreement in effect.

9. OBLIGATIONS OF UNIT OPERATOR AFTER DISCOVERY OF

UNITIZED SUBSTANCES: Should unitized substances in paying quantities be discovered upon the unit area the unit operator shall on or before six (6) months from the time of the completion of the initial discovery well and within thirty (30) days after the expiration of each twelve-month period thereafter file a report with the Commissioner and the Commission of the status of the development of the unit area and the development contemplated for the following twelve-month period.

It is understood that one of the main considerations for the approval of this agreement by the Commissioner of Public Lands is to secure the orderly development of the unitized lands in accordance with good conservation practices so as to obtain the greatest ultimate recovery of unitized substances.

After discovery of unitized substances in paying quantities, unit operator shall proceed with diligence to reasonably develop the unitized area as a reasonably prudent operator would develop such area under the same or similar circumstances; provided, however, a well shall be commenced on Tract No. 2 described on Exhibit "B" within one year from the effective date of this agreement.

If the unitoperator should fail to comply with the above covenant for reasonable development, this agreement may be terminated by the Commissioner as to all lands of the State of New Mexico embracing undeveloped regular well spacing or proration units but in such event the basis of participation by the working interest owners shall remain the same as if this agreement had not been terminated as to such lands; provided, however, the Commissioner shall give notice to the unit operator and the lessees of record in the manner prescribed by Sec. 7-11-14, N.M. Statutes 1953 Annotated, of intention to cancel on account of any alleged breach of said covenant for reasonable development and any decision entered thereunder shall be subject to appeal in the manner prescribed by Sec. 7-11-17, N.M. Statutes 1953 Annotated and, provided further, in any event the unit operator shall be given a reasonable opportunity after a final

determination within which to remedy any default, failing in which this agreement shall be terminated as to all lands of the State of New Mexico embracing undeveloped regular well spacing or proration units.

10. PARTICIPATION AFTER DISCOVERY: Upon completion of a well capable of producing unitized substances in paying quantities, the owners of working interests shall participate in the production therefrom and in all other producing wells which may be drilled pursuant hereto in the proportions that their respective leasehold interests covered hereby on an acreage basis bears to the total number of acres committed to this unit agreement (unless otherwise provided by the unit operating agreement), and such unitized substances shall be deemed to have been produced from the respective leasehold interests participating therein. For the purpose of determining any benefits accruing under this agreement and the distribution of the royalties payable to the State of New Mexico and other lessors, each separate lease shall have allocated to it such percentage of said production as the number of acres in each lease respectively committed to this agreement bears to the total number of acres committed hereto.

Notwithstanding any provisions contained herein to the contrary, each working interest owner shall have the right to take such owner's proportionate share of the unitized substances in kind or to personally sell or dispose of the same, and nothing herein contained shall be construed as giving or granting to the unit operator the right to sell or otherwise dispose of the proportionate share of any working interest owner without specific authorization from time to time so to do.

11. ALLOCATION OF PRODUCTION: All unitized substances produced from each tract in the unitized area established under this agreement, except any part thereof used for production or development

purposes hereunder, or unavoidably lost, shall be deemed to be produced equally on an acreage basis from the several tracts of the unitized land, and for the purpose of determining any benefits that accrue on an acreage basis, each such tract shall have allocated to it such percentage of said production as its area bears to the entire unitized area; subject, however, to such reallocation among the working interest owners as may be provided by the unit operating agreement. It is hereby agreed that production of unitized substances from the unitized area shall be allocated as provided herein, regardless of whether any wells are drilled on any particular tract of said unitized area.

12. PAYMENT OF RENTALS, ROYALTIES AND OVERRIDING ROYALTIES:

All rentals due the State of New Mexico shall be paid by the respective lease owners in accordance with the terms of their leases.

All royalties due the State of New Mexico under the terms of the leases committed to this agreement shall be computed and paid on the basis of all unitized substances allocated to the respective leases committed hereto; provided, however, the State shall be entitled to take in kind its share of the unitized substances allocated to the respective leases, and in such case the unit operator shall make deliveries of such royalty oil in accordance with the terms of the respective leases.

All rentals, if any, due under any leases embracing lands other than the State of New Mexico, shall be paid by the respective lease owners in accordance with the terms of their leases and all royalties due under the terms of any such leases shall be paid on the basis of all unitized substances allocated to the respective leases committed hereto.

If the unit operator introduces gas obtained from sources other than the unitized substances into any producing formation for the purpose of repressuring, stimulating or increasing the ultimate

recovery of unitized substances therefrom, a like amount of gas, if available, 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 a plan of operation consented to by the Commissioner and approved by 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.

If any lease committed hereto is now, or hereafter becomes, burdened with an overriding royalty, payment out of production or other charge in addition to the usual royalty, the owner of each such lease shall bear and assume the same out of the unitized substances allocated to the lands embraced in each such lease as provided herein.

13. LEASES AND CONTRACTS CONFORMED AND EXTENDED INsofar AS THEY APPLY TO LANDS WITHIN THE UNITIZED AREA: The terms, conditions and provisions of all leases, subleases, operating agreements and other contracts relating to the exploration, drilling, development or operation for oil or gas of the lands committed to this agreement, shall as of the effective date hereof, be and the same are hereby expressly modified and amended insofar as they apply to lands within the unitized area to the extent necessary to make the same conform to the provisions hereof and so that the respective terms of said leases and agreements will be extended insofar as necessary to coincide with the term of this agreement and the approval of this agreement by the Commissioner and the respective lessors and lessees shall be effective to conform the provisions and extend the term of each such lease as to lands within the unitized area to the provisions and term of this agreement; but

otherwise to remain in full force and effect. Each lease committed to this agreement, insofar as it applies to lands within the unitized area, shall continue in force beyond the term provided therein so long as this agreement remains in effect provided drilling operations upon the initial test well provided for herein shall have been commenced or said well is in the process of being drilled by the unit operator prior to the expiration of the shortest term lease committed to this agreement. Termination of this agreement shall not affect any lease which pursuant to the terms thereof or any applicable laws would continue in full force and effect thereafter. The commencement, completion, continued operation or production of a well or wells for unitized substances on the unit area shall be construed and considered as the commencement, completion, continued operation or production on each of the leasehold interests committed to this agreement and operations or production pursuant to this agreement shall be deemed to be operations upon and production from each leasehold interest committed hereto and there shall be no obligation on the part of the unit operator or any of the owners of the respective leasehold interests committed hereto to drill offsets to wells as between the leasehold interests committed to this agreement, except as may be provided in Section 9 hereof.

Any lease embracing lands of the State of New Mexico having only a portion of its lands committed hereto shall be segregated as to the portion committed and as to the portion not committed and the terms of such leases shall apply separately as to such segregated portions commencing as of the effective date hereof. Notwithstanding any of the provisions of this agreement to the contrary, any lease embracing lands of the State of New Mexico having only a portion of its lands committed hereto shall continue in full force and effect beyond the term provided therein as to all lands embraced in such lease, if oil and gas, or either of them, are discovered and

are capable of being produced in paying quantities from some part of the lands embraced in such lease committed to this agreement at the expiration of the secondary term of such lease; or if, at the expiration of the secondary term, the lessee or the unit operator is then engaged in bona fide drilling or reworking operations on some part of the lands embraced therein, said lease shall remain in full force and effect so long as such operations are being diligently prosecuted, and if they result in the production of oil or gas, said lease shall continue in full force and effect as to all of the lands embraced therein, so long thereafter as oil and gas, or either of them, are being produced in paying quantities from any portion of said lands.

14. 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 laws or regulations.

15. DRAINAGE: In the event a well or wells producing oil or gas in paying quantities should be brought in on land adjacent to the unit area and draining unitized substances from the lands embraced therein, unit operator shall drill such offset well or wells as a reasonably prudent operator would drill under the same or similar circumstances.

16. COVENANTS RUN WITH LAND: The covenants herein shall be construed to be covenants running with the land with respect to the interests 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, royalty or other interest subject hereto shall be binding upon unit operator until the first day of the calendar month after the unit operator is furnished with

the original, photostatic or certified copy of the recorded instrument of transfer.

17. EFFECTIVE DATE AND TERM: This agreement shall become effective upon approval by the Commissioner and shall terminate in two years after such date unless (a) such date of expiration is extended by the Commissioner, or (b) a valuable discovery of unitized substances has been made on unitized lands during said initial term or any extension thereof in which case this agreement shall remain in effect so long as unitized substances can be produced from the unitized land in paying quantities, 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. This agreement may be terminated at any time by not less than seventy-five percent (75%) on an acreage basis of the owners of the working interest signatory hereto with the approval of the Commissioner. Likewise, the failure to comply with the drilling requirements of Section 8 hereof may subject this agreement to termination as provided in said section.

18. RATE OF PRODUCTION: All production and the disposal thereof shall be in conformity with allocations, allotments and quotas made or fixed by the Commission and in conformity with all applicable laws and lawful regulations.

19. APPEARANCES: Unit operator shall, after notice to other parties affected, have the right to appear for and on behalf of any and all interests affected hereby before the Commissioner of Public Lands and the New Mexico Oil Conservation Commission, and to appeal from orders issued under the regulations of the Commissioner or Commission or to apply for relief from any of said regulations or in any proceedings on its own behalf relative to operations pending before the Commissioner or Commission; provided, however,

that any other interested party shall also have the right at his own expense to appear and to participate in any such proceeding.

20. 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 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 the party sending the notice, demand or statement.

21. 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, war, 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.

22. LOSS OF TITLE: In the event title to any tract of unitized land or substantial interest therein shall fail and the true owner cannot be induced to join the unit agreement so that such tract is not committed to this agreement or the operation thereof hereunder becomes impracticable as a result thereof, such tract may be eliminated from the unitized area, and the interest of the parties readjusted as a result of such tract being eliminated from the unitized area. In the event of a dispute as to the title to any royalty, working or other interest subject hereto, the unit operator may withhold payment or delivery of the allocated portion

of the unitized substances involved on account thereof without liability for interest until the dispute is finally settled, provided that no payments of funds due the State of New Mexico shall be withheld. Unit operator as such is relieved from any responsibility for any defect or failure of any title hereunder.

23. SUBSEQUENT JOINDER: Any oil or gas interest in lands within the unit area not committed hereto prior to the submission of this agreement for final approval by the Commissioner may be committed hereto by the owner or owners of such rights subscribing or consenting to this agreement or executing a ratification thereof, and if such owner is also a working interest owner, by subscribing to the operating agreement providing for the allocation of costs of exploration, development and operation; provided, however, 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. A subsequent joinder shall be effective as of the first day of the month following the filing with and approval by the Commissioner of duly executed counterparts of the instrument or instruments committing the interest of such owner to this agreement, but such joining party or parties before participating in any benefits hereunder shall be required to assume and pay to unit operator their proportionate share of the unit expense incurred prior to such party's or parties' joinder in the unit agreement, and the unit operator shall make appropriate adjustments caused by such joinder, without any retroactive adjustment of revenue.

24. 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 instruments in writing specifically referring hereto, and shall

be binding upon all those parties who have executed such a counter-
part, 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.

IN WITNESS WHEREOF, the undersigned parties hereto have
caused this agreement to be executed as of the respective dates set
forth opposite their signatures.

UNION OIL COMPANY OF CALIFORNIA
By *John H. ...* Attorney in Fact PH

Address: 619 West Texas
Midland, Texas

UNIT OPERATOR AND WORKING INTEREST
OWNER.

BRITISH-AMERICAN OIL PRODUCING COMPANY

By _____

Address: _____

LOUISIANA LAND & EXPLORATION COMPANY

By _____

Address: _____

SUNRAY DX OIL COMPANY

By _____

Address: _____

ATTEST:

Secretary

Date

ATTEST:

Secretary

Date

ATTEST:

Secretary

Date

ATTEST:

Secretary

Date

Marion V. Harris

L. C. Harris

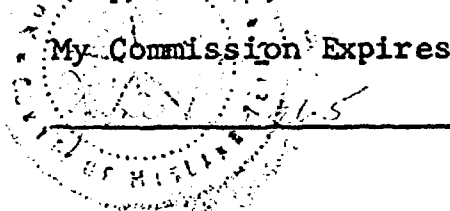
WORKING INTEREST OWNERS.

Date

STATE OF Texas }
COUNTY OF Dallas } ss.

The foregoing instrument was acknowledged before me this 3rd
day of March, 1963, by John H. Harris,
(Attorney in Fact of UNION OIL COMPANY OF CALIFORNIA, a
corporation, on behalf of said corporation.

My Commission Expires:



Edward H. Shan
Notary Public

STATE OF _____ }
COUNTY OF _____ } ss.

The foregoing instrument was acknowledged before me this _____
day of _____, 1963, by _____,
of BRITISH-AMERICAN OIL PRODUCING COMPANY, a
corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____ }
COUNTY OF _____ } ss.

The foregoing instrument was acknowledged before me this _____
day of _____, 1963, by _____,
of LOUISIANA LAND & EXPLORATION COMPANY, a
corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____ }
COUNTY OF _____ } ss.

The foregoing instrument was acknowledged before me this _____
day of _____, 1963, by _____,
of SUNRAY DX OIL COMPANY, a
corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

be binding upon all those parties who have executed such a counter-
part, 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.

IN WITNESS WHEREOF, the undersigned parties hereto have
caused this agreement to be executed as of the respective dates set
forth opposite their signatures.

UNION OIL COMPANY OF CALIFORNIA

By _____

Address: _____

ATTEST:

Secretary

Date

UNIT OPERATOR AND WORKING INTEREST
OWNER.

BRITISH-AMERICAN OIL PRODUCING COMPANY

By _____

Address: _____

ATTEST:

Secretary

Date

LOUISIANA LAND & EXPLORATION COMPANY

By *E. L. Williamson*

Vice President

Address: 1500 American Bank Building

New Orleans 12, Louisiana

ATTEST:

[Signature]
Asst. Secretary

Date: June 28, 1963

SUNRAY DX OIL COMPANY

By _____

Address: _____

ATTEST:

Secretary

Date

Marion V. Harris

L. C. Harris

WORKING INTEREST OWNERS.

Date

STATE OF _____ }
COUNTY OF _____ } ss.

The foregoing instrument was acknowledged before me this _____
day of _____, 1963, by _____,
of UNION OIL COMPANY OF CALIFORNIA, a _____
corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____ }
COUNTY OF _____ } ss.

The foregoing instrument was acknowledged before me this _____
day of _____, 1963, by _____,
of BRITISH-AMERICAN OIL PRODUCING COMPANY, a _____
corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF LOUISIANA
PARISH OF ORLEANS

On this 28th day of June, 1963, before me appeared E.L.WILLIAMSON, to
me personally known, who, being by me duly sworn, did say that he is VICE PRESIDENT
of THE LOUISIANA LAND AND EXPLORATION COMPANY, a Maryland corporation and that the
seal affixed to the foregoing 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 appearer acknowledged said instrument
to be the free act and deed of said corporation.

MY COMMISSION EXPIRES:

At my Death

NOTARY PUBLIC

STATE OF _____ }
COUNTY OF _____ } ss.

The foregoing instrument was acknowledged before me this _____
day of _____, 1963, by _____,
of SUNRAY DX OIL COMPANY, a _____
corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

be binding upon all those parties who have executed such a counter-
part, 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.

IN WITNESS WHEREOF, the undersigned parties hereto have
caused this agreement to be executed as of the respective dates set
forth opposite their signatures.

UNION OIL COMPANY OF CALIFORNIA

By _____

Address: _____

ATTEST:

Secretary

Date

UNIT OPERATOR AND WORKING INTEREST
OWNER.

THE BRITISH-AMERICAN OIL PRODUCING COMPANY

By J. L. Hearn

ATTORNEY-IN-FACT

Address: P. O. BOX 749
DALLAS, TEXAS

APPROVED	
LAND	<u>JD</u>
LEGAL	<u>JD</u>
PROD.	
ACCTG	
OTHER	

~~ATTEST:~~

~~_____
Secretary~~

~~_____
Date~~

LOUISIANA LAND & EXPLORATION COMPANY

By _____

Address: _____

ATTEST:

Secretary

Date

SUNRAY DX OIL COMPANY

By _____

Address: _____

ATTEST:

Secretary

Date

Marion V. Harris

L. C. Harris

WORKING INTEREST OWNERS.

Date

STATE OF _____ }
COUNTY OF _____ } ss.

The foregoing instrument was acknowledged before me this _____
day of _____, 1963, by _____,
of UNION OIL COMPANY OF CALIFORNIA, a _____
corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF Texas }
COUNTY OF Dallas } ss.

The foregoing instrument was acknowledged before me this 8th
day of July, 1963, by J. L. HOLLIS,
ATTORNEY-IN-FACT of BRITISH-AMERICAN OIL PRODUCING COMPANY, a
Delaware corporation, on behalf of said corporation.

My Commission Expires:

Patsy Gant
Notary Public

PATSY GANT, Notary Public
in and for Dallas County, Texas

My Commission Expires June 1, 1965

STATE OF _____ }
COUNTY OF _____ } ss.

The foregoing instrument was acknowledged before me this _____
day of _____, 1963, by _____,
of LOUISIANA LAND & EXPLORATION COMPANY, a
corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____ }
COUNTY OF _____ } ss.

The foregoing instrument was acknowledged before me this _____
day of _____, 1963, by _____,
of SUNRAY DX OIL COMPANY, a _____
corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

Marion V. Harris
Marion V. Harris

L. C. Harris
L. C. Harris

June 21, 1963
Date

WORKING INTEREST OWNERS.

STATE OF _____ }
COUNTY OF _____ } ss.

The foregoing instrument was acknowledged before me this _____
day of _____, 1963, by _____,
_____ of UNION OIL COMPANY OF CALIFORNIA, a _____
corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____ }
COUNTY OF _____ } ss.

The foregoing instrument was acknowledged before me this _____
day of _____, 1963, by _____,
_____ of BRITISH-AMERICAN OIL PRODUCING COMPANY, a _____
corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____ }
COUNTY OF _____ } ss.

The foregoing instrument was acknowledged before me this _____
day of _____, 1963, by _____,
_____ of LOUISIANA LAND & EXPLORATION COMPANY, a _____
corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____ }
COUNTY OF _____ } ss.

The foregoing instrument was acknowledged before me this _____
day of _____, 1963, by _____,
_____ of SUNRAY DX OIL COMPANY, a _____
corporation, on behalf of said corporation.

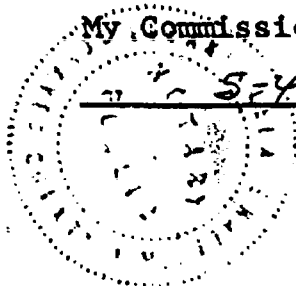
My Commission Expires:

Notary Public

STATE OF NEW MEXICO }
COUNTY OF CHAVES } ss.

The foregoing instrument was acknowledged before me this 21st
day of June, 1963, by L. C. Harris and Marion V. Harris, his
wife.

My Commission Expires:



Eleanor R. Harris
Notary Public

T-14-S
R-35-E

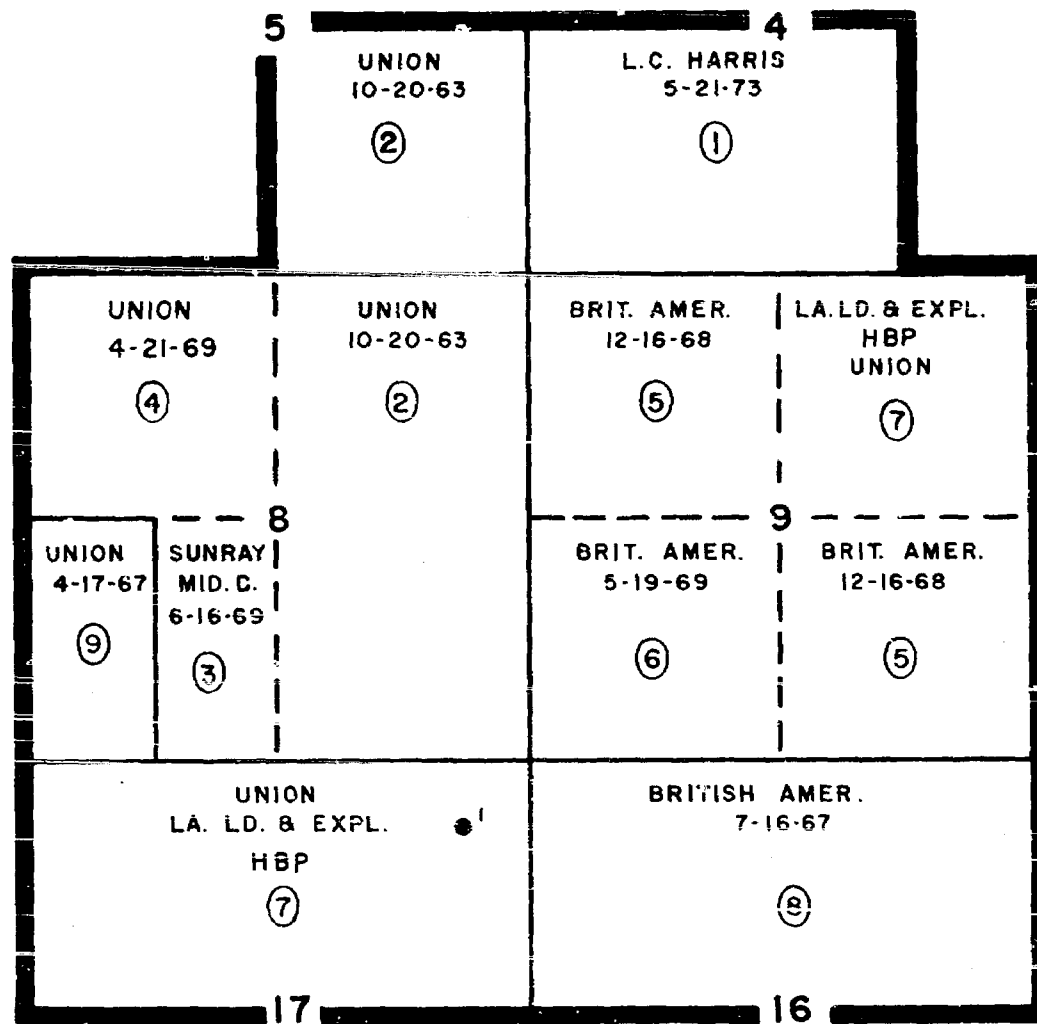


EXHIBIT "A"

WEST McDONALD UNIT

LEA COUNTY, NEW MEXICO

LEGEND

SCALE 1"=2000'

①

TRACT NUMBER AS LISTED ON
EXHIBIT "B"

UNIT OUTLINE

UNIT OUTLINE

2240 ACRES OF STATE LAND &
80 ACRES OF FEE LAND

2240 ACRES OF STATE LAND &
80 ACRES OF FEE LAND

WEST McDONALD UNIT, LEA COUNTY, NEW MEXICO

Tract No.	Description of Land	No. of Acres	Lease No. & Expiration Date	Basic Royalty & Owner	Tessee of Record	Over-riding Royalty	Ownership of Working Interest
T-14-S, R-35-E, NEPM, Lee County, N. M.:							
STATE LANDS:							
1	Sec. 4: SW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$	240	5-21-73	12-1/2% - State	L. C. Harris	None	L. C. Harris
2	Sec. 5: SW $\frac{1}{4}$ Sec. 8: E $\frac{1}{2}$	480	E-7501 10-20-63	12-1/2% - State	Union Oil Co. of California	None	Union Oil Co. of California
3	Sec. 8: E $\frac{1}{2}$ SW $\frac{1}{4}$	80	OG-5555 6-16-69	12-1/2% - State	Sunray Oil Co.	None	Sunray Oil Co.
4	Sec. 8: NW $\frac{1}{4}$	160	OG-5350-1 4-21-69	12-1/2% - State	Union Oil Co. of California	6.25% - Harris	Union Oil Co. of California
5	Sec. 9: NW $\frac{1}{4}$, SE $\frac{1}{4}$	320	OG-4902 12-16-68	12-1/2% - State	British-American Oil Producing Co.	None	British-American Oil Prod. Co.
6	Sec. 9: SW $\frac{1}{4}$	160	OG-5481 5-19-69	12-1/2% - State	British-American Oil Producing Co.	None	British-American Oil Prod. Co.
7	Sec. 9: NE $\frac{1}{4}$ Sec. 17: NW $\frac{1}{4}$	480	OG-7114 HBP	12-1/2% - State	Louisiana Land & Exploration Co.	None	Louisiana Land & Exploration Co. - 50% Union Oil Co. of California - 50%
8	Sec. 16: NW $\frac{1}{4}$	320	OG-1031 7-16-67	12-1/2% - State	British-American Oil Producing Co.	None	British-American Oil Prod. Co.
TOTAL: 8 TRACTS, STATE OF NEW MEXICO LANDS, COMPRISING 2,240 ACRES.							
FEE LANDS:							
9	Sec. 8: W $\frac{1}{2}$ SW $\frac{1}{4}$	80	Fee 4-17-67	12-1/2% - Mrs. C.D. Lee - 6 $\frac{1}{2}$ % Mrs. C.W. Musick - 6 $\frac{1}{2}$ %	Union Oil Co. of California	None	Union Oil Co. of California
TOTAL: 1 TRACT, FEE LANDS, COMPRISING 80 ACRES.							
GRAND TOTAL: 9 TRACTS COMPRISING 2,320 ACRES.							

UNIT AGREEMENT
FOR THE DEVELOPMENT AND OPERATION
OF THE
WEST McDONALD UNIT AREA
LEA COUNTY, NEW MEXICO

THIS AGREEMENT, entered into as of the _____ day of June, 1963, by and between the parties subscribing, ratifying or consenting hereto, and herein sometimes referred to as the "parties hereto",

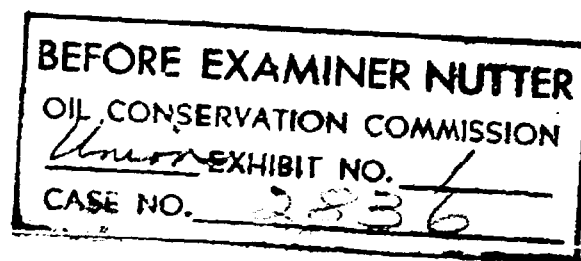
W I T N E S S E T H:

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

WHEREAS, the Commissioner of Public Lands of the State of New Mexico is authorized by an Act of the Legislature (Chap. 7, Art. 11, Sec. 39, N.M. Statutes 1953 Annot.), to consent to and approve the development and operation of State lands under agreements made by lessees of State land jointly or severally with other lessees where such agreements provide for the unit operation or development of part of or all of any oil or gas pool, field or area; and

WHEREAS, the Commissioner of Public Lands of the State of New Mexico is authorized by an Act of the Legislature (Chap. 7, Art. 11, Sec. 41, N.M. Statutes 1953 Annot.) to amend with the approval of lessee, evidenced by the lessee's execution of such agreement or otherwise, any oil and gas lease embracing State lands so that the length of the term of said lease may coincide with the term of such agreements for the unit operation and development of part or all of any oil or gas pool, field or area; and

WHEREAS, the Oil Conservation Commission of the State of New Mexico (hereinafter referred to as the "Commission") is authorized by an Act of the Legislature (Chap. 65, Art. 3, Sec. 14, N.M. Statutes 1953 Annot.) to approve this agreement and the conservation provisions hereof; and



WHEREAS, the parties hereto hold sufficient interests in the West McDonald 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. UNIT AREA: The following described land is hereby designated and recognized as constituting the unit area:

Township 14 South, Range 35 East, N.M.P.M.

Section 4: $W\frac{1}{2}SE\frac{1}{4}$, $SW\frac{1}{4}$
Section 5: $SE\frac{1}{4}$
Section 8: All
Section 9: All
Section 16: $N\frac{1}{2}$
Section 17: $N\frac{1}{2}$

containing 2,320 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 rights in all lands 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 on 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 revisions necessary or when requested by the Commissioner of Public Lands of the State of New Mexico, hereinafter referred to as "Commissioner".

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

2. UNITIZED SUBSTANCES: All oil, gas and associated hydrocarbon substances in any and all formations of the unitized lands are unitized under the terms of this agreement and herein are called "unitized substances".

3. UNIT OPERATOR: Union Oil Company of California, with offices at Roswell, New Mexico, is hereby designated as unit operator and by signature hereto commits to this agreement all interest in unitized substances vested in it as set forth in Exhibit B, and agrees and consents to accept the duties and obligations of unit operator for the discovery, development and production of unitized substances as provided herein. Whenever reference is made herein to the unit operator, such reference means the unit operator acting in that capacity and not as an owner of interests in unitized substances, and the term "working interest owner" when used herein shall include or refer to unit operator as the owner of a working interest when such an interest is owned by it.

4. RESIGNATION OR REMOVAL OF UNIT OPERATOR: Unit operator shall have the right to resign at any time but such resignation shall not become effective until a successor unit operator has been selected and approved in the manner provided for in Section 5 of this agreement. The resignation of the unit operator shall not release the unit operator from any liability or any default by it hereunder occurring prior to the effective date of its resignation.

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 Commissioner.

The resignation or removal of the unit operator under this agreement shall not terminate his right, title or interest as the owner of a working interest or other interest in unitized substances, but upon the resignation or removal of unit operator becoming effective, such unit operator shall deliver possession of all 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.

5. SUCCESSOR UNIT OPERATOR: Whenever the unit operator shall resign as unit operator or shall be removed as hereinabove provided, the owners of the working interests according to their respective acreage interests in all unitized land shall by a majority vote select a successor unit operator; provided that, if a majority but less than seventy-five percent (75%) of the working interests qualified to vote is owned by one party to this agreement, a concurring vote of sufficient additional parties, so as to constitute in the aggregate not less than seventy-five percent (75%) of the total working interests, 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 Commissioner. If no successor unit operator is selected and qualified as herein provided, the Commissioner at his election may declare this unit agreement terminated.

6. ACCOUNTING PROVISIONS: The unit operator shall pay in the first instance all costs and expenses incurred in conducting unit operations hereunder, and such costs and expenses and the working

interest benefits accruing hereunder shall be apportioned among the owners of the unitized working interests in accordance with an operating agreement entered into by and between the unit operator and the owners of such 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 "Operating Agreement". No such 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 inconsistencies or conflict between this unit agreement and the operating agreement, this unit agreement shall prevail.

7. 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, allocation and distributing the unitized substances are hereby delegated to and shall be exercised by the unit operator as herein provided. Acceptable evidence of the 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.

8. DRILLING TO DISCOVERY: The unit operator shall, on or before July 10, 1963, commence operations upon an adequate test well for oil and gas upon some part of the lands embraced within the unit

area and shall drill said well with due diligence to a depth sufficient to test the Chester Series of the Mississippian period or to such a depth as unitized substances shall be discovered in paying quantities at a lesser depth or until it shall, in the opinion of unit operator, be determined that the further drilling of said well shall 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 13,700 feet. Until a discovery of a deposit of unitized substances capable of being produced in paying quantities (to-wit: quantities sufficient to repay the costs of drilling and producing operations with a reasonable profit) unit operator shall continue drilling diligently, one well at a time, allowing not more than six 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 the Commissioner, or until it is reasonably proven to the satisfaction of the unit operator that the unitized land is incapable of producing unitized substances in paying quantities in the formation drilled hereunder.

Any well commenced prior to the effective date of this agreement upon the unit area and drilled to the depth provided herein for the drilling of an initial test well shall be considered as complying with the drilling requirements hereof with respect to the initial well. The Commissioner may modify the drilling requirements of this section by granting reasonable extensions of time when in his opinion such action is warranted. Upon failure to comply with the drilling provisions of this article the 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, and all rights, privileges and obligations granted and assumed by this unit agreement shall cease and terminate as of such date.

9. OBLIGATIONS OF UNIT OPERATOR AFTER DISCOVERY OF

UNITIZED SUBSTANCES: Should unitized substances in paying quantities be discovered upon the unit area the unit operator shall on or before six (6) months from the time of the completion of the initial discovery well and within thirty (30) days after the expiration of each twelve-month period thereafter file a report with the Commissioner and the Commission of the status of the development of the unit area and the development contemplated for the following twelve-month period.

It is understood that one of the main considerations for the approval of this agreement by the Commissioner of Public Lands is to secure the orderly development of the unitized lands in accordance with good conservation practices so as to obtain the greatest ultimate recovery of unitized substances.

After discovery of unitized substances in paying quantities, unit operator shall proceed with diligence to reasonably develop the unitized area as a reasonably prudent operator would develop such area under the same or similar circumstances; provided, however, a well shall be commenced on Tract No. 2 described on Exhibit "B" within one year from the effective date of this agreement.

If the unit operator should fail to comply with the above covenant for reasonable development, this agreement may be terminated by the Commissioner as to all lands of the State of New Mexico embracing undeveloped regular well spacing or proration units but in such event the basis of participation by the working interest owners shall remain the same as if this agreement had not been terminated as to such lands; provided, however, the Commissioner shall give notice to the unit operator and the lessees of record in the manner prescribed by Sec. 7-11-14, N.M. Statutes 1953 Annotated, of intention to cancel on account of any alleged breach of said covenant for reasonable development and any decision entered thereunder shall be subject to appeal in the manner prescribed by Sec. 7-11-17, N.M. Statutes 1953 Annotated and, provided further, in any event the unit operator shall be given a reasonable opportunity after a final

determination within which to remedy any default, failing in which this agreement shall be terminated as to all lands of the State of New Mexico embracing undeveloped regular well spacing or proration units.

10. PARTICIPATION AFTER DISCOVERY: Upon completion of a well capable of producing unitized substances in paying quantities, the owners of working interests shall participate in the production therefrom and in all other producing wells which may be drilled pursuant hereto in the proportions that their respective leasehold interests covered hereby on an acreage basis bears to the total number of acres committed to this unit agreement (unless otherwise provided by the unit operating agreement), and such unitized substances shall be deemed to have been produced from the respective leasehold interests participating therein. For the purpose of determining any benefits accruing under this agreement and the distribution of the royalties payable to the State of New Mexico and other lessors, each separate lease shall have allocated to it such percentage of said production as the number of acres in each lease respectively committed to this agreement bears to the total number of acres committed hereto.

Notwithstanding any provisions contained herein to the contrary, each working interest owner shall have the right to take such owner's proportionate share of the unitized substances in kind or to personally sell or dispose of the same, and nothing herein contained shall be construed as giving or granting to the unit operator the right to sell or otherwise dispose of the proportionate share of any working interest owner without specific authorization from time to time so to do.

11. ALLOCATION OF PRODUCTION: All unitized substances produced from each tract in the unitized area established under this agreement, except any part thereof used for production or development

purposes hereunder, or unavoidably lost, shall be deemed to be produced equally on an acreage basis from the several tracts of the unitized land, and for the purpose of determining any benefits that accrue on an acreage basis, each such tract shall have allocated to it such percentage of said production as its area bears to the entire unitized area; subject, however, to such reallocation among the working interest owners as may be provided by the unit operating agreement. It is hereby agreed that production of unitized substances from the unitized area shall be allocated as provided herein, regardless of whether any wells are drilled on any particular tract of said unitized area.

12. PAYMENT OF RENTALS, ROYALTIES AND OVERRIDING ROYALTIES:

All rentals due the State of New Mexico shall be paid by the respective lease owners in accordance with the terms of their leases.

All royalties due the State of New Mexico under the terms of the leases committed to this agreement shall be computed and paid on the basis of all unitized substances allocated to the respective leases committed hereto; provided, however, the State shall be entitled to take in kind its share of the unitized substances allocated to the respective leases, and in such case the unit operator shall make deliveries of such royalty oil in accordance with the terms of the respective leases.

All rentals, if any, due under any leases embracing lands other than the State of New Mexico, shall be paid by the respective lease owners in accordance with the terms of their leases and all royalties due under the terms of any such leases shall be paid on the basis of all unitized substances allocated to the respective leases committed hereto.

If the unit operator introduces gas obtained from sources other than the unitized substances into any producing formation for the purpose of repressuring, stimulating or increasing the ultimate

recovery of unitized substances therefrom, a like amount of gas, if available, 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 a plan of operation consented to by the Commissioner and approved by 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.

If any lease committed hereto is now, or hereafter becomes, burdened with an overriding royalty, payment out of production or other charge in addition to the usual royalty, the owner of each such lease shall bear and assume the same out of the unitized substances allocated to the lands embraced in each such lease as provided herein.

13. LEASES AND CONTRACTS CONFORMED AND EXTENDED INsofar AS THEY APPLY TO LANDS WITHIN THE UNITIZED AREA: The terms, conditions and provisions of all leases, subleases, operating agreements and other contracts relating to the exploration, drilling, development or operation for oil or gas of the lands committed to this agreement, shall as of the effective date hereof, be and the same are hereby expressly modified and amended insofar as they apply to lands within the unitized area to the extent necessary to make the same conform to the provisions hereof and so that the respective terms of said leases and agreements will be extended insofar as necessary to coincide with the term of this agreement and the approval of this agreement by the Commissioner and the respective lessors and lessees shall be effective to conform the provisions and extend the term of each such lease as to lands within the unitized area to the provisions and term of this agreement; but

otherwise to remain in full force and effect. Each lease committed to this agreement, insofar as it applies to lands within the unitized area, shall continue in force beyond the term provided therein so long as this agreement remains in effect provided drilling operations upon the initial test well provided for herein shall have been commenced or said well is in the process of being drilled by the unit operator prior to the expiration of the shortest term lease committed to this agreement. Termination of this agreement shall not affect any lease which pursuant to the terms thereof or any applicable laws would continue in full force and effect thereafter. The commencement, completion, continued operation or production of a well or wells for unitized substances on the unit area shall be construed and considered as the commencement, completion, continued operation or production on each of the leasehold interests committed to this agreement and operations or production pursuant to this agreement shall be deemed to be operations upon and production from each leasehold interest committed hereto and there shall be no obligation on the part of the unit operator or any of the owners of the respective leasehold interests committed hereto to drill offsets to wells as between the leasehold interests committed to this agreement, except as may be provided in Section 9 hereof.

Any lease embracing lands of the State of New Mexico having only a portion of its lands committed hereto shall be segregated as to the portion committed and as to the portion not committed and the terms of such leases shall apply separately as to such segregated portions commencing as of the effective date hereof. Notwithstanding any of the provisions of this agreement to the contrary, any lease embracing lands of the State of New Mexico having only a portion of its lands committed hereto shall continue in full force and effect beyond the term provided therein as to all lands embraced in such lease, if oil and gas, or either of them, are discovered and

are capable of being produced in paying quantities from some part of the lands embraced in such lease committed to this agreement at the expiration of the secondary term of such lease; or if, at the expiration of the secondary term, the lessee or the unit operator is then engaged in bona fide drilling or reworking operations on some part of the lands embraced therein, said lease shall remain in full force and effect so long as such operations are being diligently prosecuted, and if they result in the production of oil or gas, said lease shall continue in full force and effect as to all of the lands embraced therein, so long thereafter as oil and gas, or either of them, are being produced in paying quantities from any portion of said lands.

14. 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 laws or regulations.

15. DRAINAGE: In the event a well or wells producing oil or gas in paying quantities should be brought in on land adjacent to the unit area and draining unitized substances from the lands embraced therein, unit operator shall drill such offset well or wells as a reasonably prudent operator would drill under the same or similar circumstances.

16. COVENANTS RUN WITH LAND: The covenants herein shall be construed to be covenants running with the land with respect to the interests 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, royalty or other interest subject hereto shall be binding upon unit operator until the first day of the calendar month after the unit operator is furnished with

the original, photostatic or certified copy of the recorded instrument of transfer.

17. EFFECTIVE DATE AND TERM: This agreement shall become effective upon approval by the Commissioner and shall terminate in two years after such date unless (a) such date of expiration is extended by the Commissioner, or (b) a valuable discovery of unitized substances has been made on unitized lands during said initial term or any extension thereof in which case this agreement shall remain in effect so long as unitized substances can be produced from the unitized land in paying quantities, 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. This agreement may be terminated at any time by not less than seventy-five percent (75%) on an acreage basis of the owners of the working interest signatory hereto with the approval of the Commissioner. Likewise, the failure to comply with the drilling requirements of Section 8 hereof may subject this agreement to termination as provided in said section.

18. RATE OF PRODUCTION: All production and the disposal thereof shall be in conformity with allocations, allotments and quotas made or fixed by the Commission and in conformity with all applicable laws and lawful regulations.

19. APPEARANCES: Unit operator shall, after notice to other parties affected, have the right to appear for and on behalf of any and all interests affected hereby before the Commissioner of Public Lands and the New Mexico Oil Conservation Commission, and to appeal from orders issued under the regulations of the Commissioner or Commission or to apply for relief from any of said regulations or in any proceedings on its own behalf relative to operations pending before the Commissioner or Commission; provided, however,

that any other interested party shall also have the right at his own expense to appear and to participate in any such proceeding.

20. 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 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 the party sending the notice, demand or statement.

21. 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, war, 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.

22. LOSS OF TITLE: In the event title to any tract of unitized land or substantial interest therein shall fail and the true owner cannot be induced to join the unit agreement so that such tract is not committed to this agreement or the operation thereof hereunder becomes impracticable as a result thereof, such tract may be eliminated from the unitized area, and the interest of the parties readjusted as a result of such tract being eliminated from the unitized area. In the event of a dispute as to the title to any royalty, working or other interest subject hereto, the unit operator may withhold payment or delivery of the allocated portion

of the unitized substances involved on account thereof without liability for interest until the dispute is finally settled, provided that no payments of funds due the State of New Mexico shall be withheld. Unit operator as such is relieved from any responsibility for any defect or failure of any title hereunder.

23. SUBSEQUENT JOINDER: Any oil or gas interest in lands within the unit area not committed hereto prior to the submission of this agreement for final approval by the Commissioner may be committed hereto by the owner or owners of such rights subscribing or consenting to this agreement or executing a ratification thereof, and if such owner is also a working interest owner, by subscribing to the operating agreement providing for the allocation of costs of exploration, development and operation; provided, however, 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. A subsequent joinder shall be effective as of the first day of the month following the filing with and approval by the Commissioner of duly executed counterparts of the instrument or instruments committing the interest of such owner to this agreement, but such joining party or parties before participating in any benefits hereunder shall be required to assume and pay to unit operator their proportionate share of the unit expense incurred prior to such party's or parties' joinder in the unit agreement, and the unit operator shall make appropriate adjustments caused by such joinder, without any retroactive adjustment of revenue.

24. 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 instruments in writing specifically referring hereto, and shall

be binding upon all those parties who have executed such a counter-
part, 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.

IN WITNESS WHEREOF, the undersigned parties hereto have
caused this agreement to be executed as of the respective dates set
forth opposite their signatures.

UNION OIL COMPANY OF CALIFORNIA

By _____

Address: _____

ATTEST:

Secretary

Date

UNIT OPERATOR AND WORKING INTEREST
OWNER.

BRITISH-AMERICAN OIL PRODUCING COMPANY

By _____

Address: _____

ATTEST:

Secretary

Date

LOUISIANA LAND & EXPLORATION COMPANY

By _____

Address: _____

ATTEST:

Secretary

Date

SUNRAY DX OIL COMPANY

By _____

Address: _____

ATTEST:

Secretary

Date

Marion V. Harris

L. C. Harris

WORKING INTEREST OWNERS.

Date

STATE OF _____ }
COUNTY OF _____ } ss.

The foregoing instrument was acknowledged before me this _____
day of _____, 1963, by _____
of UNION OIL COMPANY OF CALIFORNIA, a _____
corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____ }
COUNTY OF _____ } ss.

The foregoing instrument was acknowledged before me this _____
day of _____, 1963, by _____
of BRITISH-AMERICAN OIL PRODUCING COMPANY, a _____
corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____ }
COUNTY OF _____ } ss.

The foregoing instrument was acknowledged before me this _____
day of _____, 1963, by _____
of LOUISIANA LAND & EXPLORATION COMPANY, a _____
corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____ }
COUNTY OF _____ } ss.

The foregoing instrument was acknowledged before me this _____
day of _____, 1963, by _____
of SUNRAY OX OIL COMPANY, a _____
corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF NEW MEXICO }

COUNTY OF CHAVES }

ss.

The foregoing instrument was acknowledged before me this
day of _____, 1963, by L. C. Harris and Marion V. Harris, his
wife.

My Commission Expires:

Notary Public

REPORT ON THE GEOLOGY OF THE PROPOSED
WEST McDONALD UNIT
LEA COUNTY, NEW MEXICO

BY John C. Pearson
District Geologist
Union Oil Company of California
Roswell, New Mexico

SUMMARY

The proposed West McDonald Unit consists of 2,320 acres in T 14 S, R 35 E, north central Lea County, New Mexico. Within the limits of the unit, it is believed that a structural closure exists at the Strawn datum. One well has been drilled within the unit outline to date, the Union Oil Co. of Calif. No. 1-17 State which was completed as an Upper Strawn oil discovery after reaching a total depth of 11,576 feet in the Strawn. In order to develop and evaluate this discovery and to test for additional deeper and/or shallower pays, the Union Oil Company of California intends to drill a 13,700-foot Chester exploratory well 3/4 miles northeast of the Union No. 1-17 State. The purpose of the requested Unit is to insure orderly development of the Strawn and any oil or gas production subsequently found within the unit.

INTRODUCTION

The West McDonald Unit is located in T 14 S, R 35 E, Lea County, New Mexico, in a sparsely explored synclinal depression of the Permian Basin Northwestern Shelf. This synclinal depression, referred to as the Tatum Basin, is bounded to the east and west by two prominent anticlinal trends, the Saunders-Magley and the Denton-Gladiola trends, respectively. The southern flank of the Tatum Basin is formed by a series of deep-seated anticlines plunging northward from the Central Basin Platform into the center of the Basin. The northern limit of the basin is poorly defined but approximates the northern edge of the Permian Basin. The Basin is filled by Pennsylvanian and early Permian (Wolfcamp) shelf and shallow basinal sediments. The overlying younger Permian strata consist entirely of shelf facies, and dip gently to the south and southeast, into the San Simon Channel, a later depositional feature located approximately twenty miles south of the Tatum Basin.

The closest developed oil fields to the Unit are Caudill (Wolfcamp and Devonian) Field, ten miles to the southeast and Ranger Lake (Upper Pennsylvanian) Field, ten miles to the northwest. A recent Wolfcamp oil discovery has been made four miles to the southwest (Sinclair and Texas Crude No. 1-23 State) and an exploratory well six miles to the east was completed in 1957 as a Chester (Upper Mississippian) gas well; neither of these discoveries has been developed to date.

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

EXHIBIT NO. 2

CASE NO. 2836

GEOLOGY

Attached to this report is a structure map contoured on the top of the Strawn. Although extensive seismic surveys have been carried out in the region by Union Oil Company, no consistent mappable reflection has been found at the Strawn level. Consequently, this map is based largely on well data. Locally, however, seismic dip components have been honored in the contouring.

As shown on this map, the West McDonald Unit is centered on a structural closure formed by the intersection of a deep-seated, low relief, north-south anticline and the east-west Strawn shelf edge. This shelf edge is a relatively steep basinward slope which separates thick (800' ±) Strawn shelf carbonates in the West McDonald area and northward from thin (250' ±) basinal limestones to the south. This slope forms the south flank of the structure.

Within the proposed Unit outline, one well has been drilled to date. The Union No. 1-17 State was completed on April 16, 1963 for 326 barrels of oil per day, plus 9% water, from perforations between 11,478 and 11,490 feet, near the top of the Strawn. This well was drilled to a total depth of 11,576 feet in the Upper Strawn. The section encountered was as follows:

0	-	2,037 feet	Undifferentiated Tertiary, Triassic and Upper Permian continental deposits
2,037-		3,000 feet	Upper Permian Rustler and Salado anhydrite, redbeds, dolomite and salt
3,000-		6,445 feet	Upper Permian Tansill, Yates, Seven Rivers, Queen and San Andres dolomite and sand.
6,445-		8,200 feet	Lower Permian (Leonard) Yaso dolomite and sand
8,200-		9,720 feet	Lower Permian (Leonard) Abo dolomite and shale
9,720-		10,330 feet	Lower Permian (Upper Wolfcamp) limestone and variegated shale
10,330-		10,755 feet	Lower Permian (Lower Wolfcamp) dark shale and limestone, in part porous
10,755-		11,465 feet	Upper Pennsylvanian (Cisco and Canyon) Limestone and dolomite, cavernous or porous in part
11,465-		11,567 feet	Lower Pennsylvanian (Upper Strawn) limestone, porous and oil productive between 11,478 and 11,520 feet

PROPOSED WELL

Upon approval of the West McDonald Unit, Union Oil Company of California intends to drill a 13,700-foot Upper Mississippian (Chester) test in the SW NW of Section 9, T 14 S, R 35 E, three-quarters of a mile northeast of the Union No. 1-17 State. This well is expected to extend and evaluate the Upper Strawn production discovered in the No. 1-17 State. Other objectives include

PAGE 3

the porous limestones and dolomites in the Lower Wolfcamp and Upper Pennsylvanian which were water-bearing in the No. 1-17 State but which are potentially oil productive higher structurally. The proposed well is to be drilled through the Lower Pennsylvanian section--not penetrated in the No. 1-17 State for mechanical reasons--to test Atoka and Morrow sands and the Chester (Upper Mississippian) limestone, potentially gas productive in this region.

The proposed Unit is necessary to ensure orderly development of the Strawn production discovered in the No. 1-17 State, and any additional oil or gas production found by the planned deeper exploratory well. The information required to establish proper well spacing is not as yet available, and unnecessary wells or poor drainage patterns might result from unco-ordinated development drilling.

T-14-S
R-35-E

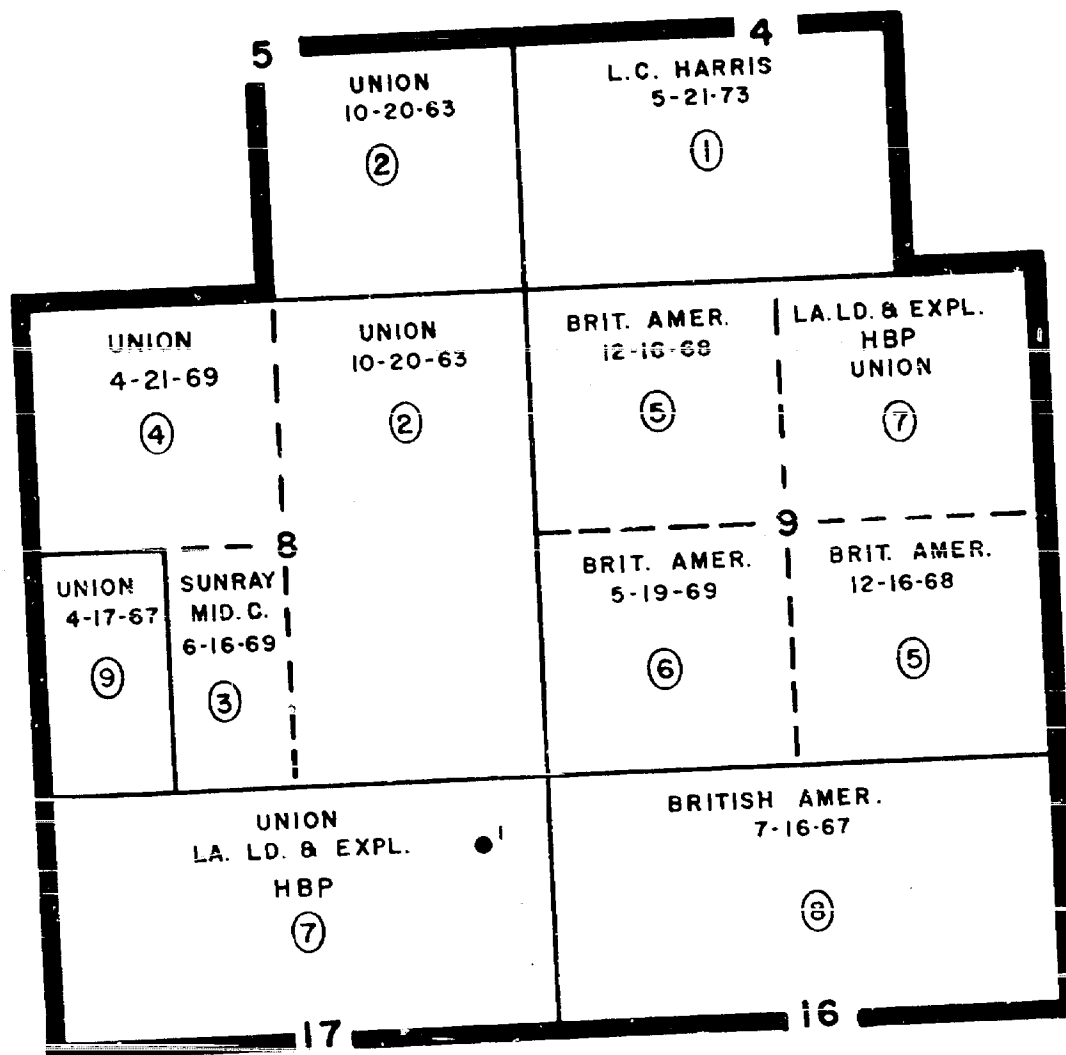


EXHIBIT "A"

WEST McDONALD UNIT
LEA COUNTY, NEW MEXICO

LEGEND

SCALE 1"=2000'

TRACT NUMBER AS LISTED ON
EXHIBIT "B"

①

UNIT OUTLINE

2240 ACRES OF STATE LAND &
80 ACRES OF FEE LAND

2836

T-14-S
R-35-E

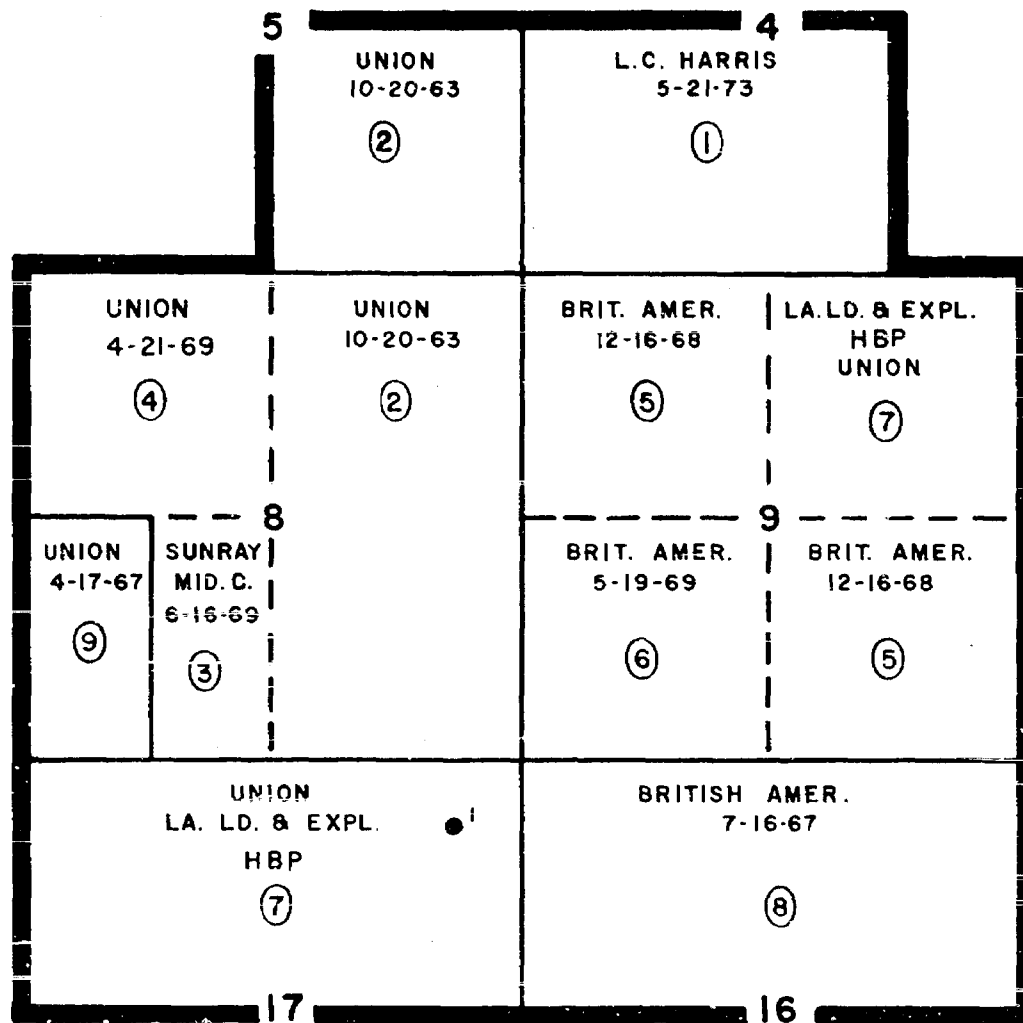


EXHIBIT "A"

WEST McDONALD UNIT

LEA COUNTY, NEW MEXICO

LEGEND

SCALE 1"=2000'

①

TRACT NUMBER AS LISTED ON
EXHIBIT "B"



UNIT OUTLINE



2240 ACRES OF STATE LAND &
80 ACRES OF FEE LAND

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PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
June 26, 1963

EXAMINER HEARING

IN THE MATTER OF:

Application of Union Oil Company
of California for a unit agreement,
Lea County, New Mexico. Applicant,
in the above-styled cause, seeks
approval of the West McDonald Unit
Area comprising 2,320 acres of State
and Fee lands in Township 14 South,
Range 35 East, Lea County, New
Mexico.

Case 2836

BEFORE: Daniel S. Nutter, Examiner.

TRANSCRIPT OF HEARING

MR. NUTTER: We will call Case 2836.

MR. DURRETT: Application of Union Oil Company of
California for a unit agreement, Lea County, New Mexico.

MR. BRATTON: Howard Bratton, appearing on behalf of
the applicant. We have one witness.

(Witness sworn.)

(Whereupon, Applicant's Exhi-
bits Nos. 1 through 3 were
marked for identification.)

JOHN PEARSON

called as a witness, having been first duly sworn, testified



as follows:

DIRECT EXAMINATION

BY MR. BRATTON:

Q Will you state your name, by whom you are employed and in what capacity?

A My name is John Pearson, employed by Union Oil Company of California, as District Geologist in Roswell, New Mexico.

Q Have you previously testified before this Commission as an expert witness?

A I have.

Q Are you familiar with the West McDonald Unit Area and the matters contained in the application now under consideration?

A I am.

Q Mr. Pearson, Exhibit 1 is the proposed unit agreement for the West McDonald Unit Area. As indicated on Exhibit A, is this an all-state unit with 2240 acres of state land and 80 acres of fee land, is that correct?

A This is correct.

Q Which are the 80 acres of fee?

A The 80 acres of fee are Tract No. 9 in Exhibit A, I believe.

Q So that's 80 acres on the complete west end of the unit, is that right?

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PAGE 4

A Right on the edge of the unit.

Q What is your status as to commitment to this unit, Mr. Pearson, of the working interest?

A We have verbal agreement to commit from all of the working interest owners within this unit with the exception of one 80-acre tract, and we have contacted this one 80-acre tract and have not yet received a commitment from them.

Q Which one is that?

A Tract No. 3, Sunray Mid-Continent.

Q That is the 80 acres which be the East Half of the Southwest of Section 8?

A Right.

Q Would the commitment or non-commitment of that affect the effectiveness of the unit operation?

A I don't believe it will.

Q Are you contacting such overriding royalty owners as there are in the area?

A We are contacting the royalty owners, yes.

Q And you are royalty owners too. This proposed unit agreement is the satisfactory standard form of state unit agreement?

A To my knowledge, it is a standard form of state unit, yes.



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Q There are one or two modifications, is that correct, due to the fact that there is an existing well in the area, and the form of those modifications have been agreed upon with the office of the State Land Commissioner?

A This is correct.

Q And subject to those being included, the area has been approved by the Land Commissioner as to form and area, is that correct?

A This is correct.

Q What does the unit agreement call for in the way of a test well?

A The unit agreement calls for the drilling of a 13,700 foot Mississippian well in Section 9, 14 South, 35 East, the Southeast of the Northwest Quarter.

Q It's the Southwest of the Northwest of 9?

A Right.

Q Shown in the Northeast of the Northeast of 17 there is an existing well in the unit area, is this correct?

A This is correct.

Q That is not to be a unit well, is that correct?

A It will not be a unit well.

Q It will be a unit well when production is obtained elsewhere?



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PAGE 6

A When production is established elsewhere.

Q Is Union to be the operator of this unit?

A Yes.

Q Turning then to your Exhibits 2 and 3, and actually referring to your Exhibit 3 which is your contour map, briefly state what you have in your Exhibit 2, which is the written report with relation to this contour map.

A Exhibit 3 is a structure contour map, contoured on top of the Strawn, the Lower Pennsylvanian. Substantially it's based on subsurface, that is well data; although we have a considerable seismic information in this region, we do not have a continuous seismic reflection which we can map in this area. Consequently, we are unable to make a seismic structure map. The one producing well shown within the unit outline on this map is producing from the Upper Strawn. Consequently, the structure, as mapped on the top of the Strawn, reflects to a degree the producing potential of this particular reservoir.

The Strawn shelf edge, which is the depositional feature of the basinward slope which separates thick Strawn limestone in the McDonald area, and northward 800 feet more or less from thin basinal Strawn limestone to the south 250 feet forms the south flank of the structure as mapped on Exhibit 3.

Q In your opinion, Mr. Pearson, does the proposed unit



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PHONE 243-6691

outline make an effective unit for the production of the unit-ized substance which you hope to obtain?

A In my opinion it does make an effective unit for the substances that we hope to obtain.

Q Based upon the limited information which you have available, does this represent a reasonable interpretation of the structure you hope to obtain, the productive structure?

A This is correct. The well information within this region is very limited; consequently this interpretation is based on a great deal of regional information, some detail locally, seismic information and well data, and in my opinion it is a reasonable interpretation of the available information.

Q In your opinion, Mr. Pearson, would the operation of this area under the unit agreement result in the greatest ultimate recovery of oil and gas?

A Yes.

Q Would operations under this unit agreement protect correlative rights in the area?

A Yes.

Q Mr. Pearson, do I understand that the proposed form of this unit agreement calls for commencing your test well by July 10th?

A This is correct.



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Q Is there anything further you care to state with respect to these exhibits?

A I might state one thing, that the existing well within the unit was completed at a total depth of 11,500 feet more or less in the Upper Strawn, and we are proposing to drill a deeper test on the proposed unit well to test the Atoka, Morrow and Chester. Consequently, this will be a deeper wildcat within this area.

Q So you would test your Strawn which you reasonably anticipate to be productive, and then go down to the wildcat objectives?

A Correct.

Q Were Exhibits 2 and 3 prepared by you?

A Yes, they were.

MR. BRATTON: We would offer in evidence Exhibits 1 through 3.

MR. NUTTER: Union's Exhibits 1 through 3 will be admitted in evidence.

(Whereupon, Applicant's Exhibits 1 through 3 were offered and admitted in evidence.)

MR. BRATTON: We have nothing further at this time.

MR. NUTTER: Any questions of Mr. Pearson?



CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Pearson, this structure map on the Strawn is prepared wholly from the wells that you have available to you in this area?

A Not entirely. With the seismic information that we had we could map local dip segments in specific areas, perhaps half a mile range, and hence this data has been honored on the map. We were unable to make a complete seismic structure map because the events that we were mapping, the dip segments were not continuous throughout the area.

Q You have maybe half a dozen or so wells on here which have penetrated into this depth that you can contour on this map?

A This is correct.

Q You are backed up by certain seismic information?

A Right.

Q The big bulge which we see there on the edge of the Strawn which encloses the area which is to be unitized, is that reflected on the seismic information?

A The seismic information indicates a north-south low relief anticlinal trend extending from the south of the map to the north part, which is in turn crossed by the ledge that I mapped early. The interest of the unit is at the intersection

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of the Strawn depositional shelf edge and the deep-seated low anticlinal trend of which we have seismic information.

Q You have a trough running north and south on the west edge and another one running north and south on the east side?

A Correct.

Q Penetrating into this Strawn shelf?

A Right.

Q Are those substantiated by seismic information?

A Insofar as deep reflections, the Devonian, and insofar as shallow reflections are concerned, yes. They are not specifically confirmed at the Strawn level, again, because we lack a Strawn reflection map in these specific areas.

Q This one well, which is completed on the unit, is completed in the Strawn, so it must have penetrated the Wolfcamp. Did that show anything in the Wolfcamp?

A The Wolfcamp limestones and Upper Pennsylvanian limestones and dolomites were porous and had slight shows in them and these we believe are potentially productive if we can reach a higher structural point within the unit.

Q The proposed unit is higher than the well that was drilled?

A We have some rather weak seismic information which would suggest that the proposed location could be higher than



the well that has been drilled to date. Hence the Wolfcamp and the Upper Pennsylvanian are potentialized objectives on this second map.

Q Did the well that was completed go past the Pennsylvanian at all?

A No, it bottomed in the Upper Strawn.

Q I see.

MR. NUTTER: Are there any further questions of Mr. Pearson? He may be excused.

(Witness excused.)

MR. NUTTER: Do you have anything further, Mr. Bratton?

MR. BRATTON: I would just like to state that the unit agreement does call for the commencement by July 10th, so we would appreciate any expeditious treatment that the Commission could afford.

MR. NUTTER: We'll try to get it out on July 9th.

MR. PEARSON: Thank you.

MR. BRATTON: Thank you, don't rush.

MR. NUTTER: Does anyone have anything they care to offer in Case 2836? We'll take the case under advisement and call a fifteen-minute recess.

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SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 2nd day of July, 1963.

Ada Dearnley
Notary Public-Court Reporter

My commission expires:

June 19, 1967.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2836 heard by me on 6/20, 1963.

[Signature]
Examiner
New Mexico Oil Conservation Commission



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FARMINGTON, N. M.
PHONE 325-1192

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
June 26, 1963

EXAMINER HEARING

IN THE MATTER OF:

Application of Union Oil Company
of California for a unit agreement,
Lea County, New Mexico. Applicant,) Case 2836
in the above-styled cause, seeks)
approval of the West McDonald Unit)
Area comprising 2,320 acres of State)
and Fee lands in Township 14 South,)
Range 35 East, Lea County, New)
Mexico.)

BEFORE: Daniel S. Nutter, Examiner.

TRANSCRIPT OF HEARING

MR. NUTTER: We will call Case 2836.

MR. DURRETT: Application of Union Oil Company of
California for a unit agreement, Lea County, New Mexico.

MR. BRATTON: Howard Bratton, appearing on behalf of
the applicant. We have one witness.

(Witness sworn.)

(Whereupon, Applicant's Exhi-
bits Nos. 1 through 3 were
marked for identification.)

JOHN PEARSON

called as a witness, having been first duly sworn, testified



as follows:

DIRECT EXAMINATION

BY MR. BRATTON:

Q Will you state your name, by whom you are employed and in what capacity?

A My name is John Pearson, employed by Union Oil Company of California, as District Geologist in Roswell, New Mexico.

Q Have you previously testified before this Commission as an expert witness?

A I have.

Q Are you familiar with the West McDonald Unit Area and the matters contained in the application now under consideration?

A I am.

Q Mr. Pearson, Exhibit 1 is the proposed unit agreement for the West McDonald Unit Area. As indicated on Exhibit A, is this an all-state unit with 2240 acres of state land and 80 acres of fee land, is that correct?

A This is correct.

Q Which are the 80 acres of fee?

A The 80 acres of fee are Tract No. 9 in Exhibit A, I believe.

Q So that's 80 acres on the complete west end of the unit, is that right?

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A Right on the edge of the unit.

Q What is your status as to commitment to this unit, Mr. Pearson, of the working interest?

A We have verbal agreement to commit from all of the working interest owners within this unit with the exception of one 80-acre tract, and we have contacted this one 80-acre tract and have not yet received a commitment from them.

Q Which one is that?

A Tract No. 3, Sunray Mid-Continent.

Q That is the 80 acres which be the East Half of the Southwest of Section 8?

A Right.

Q Would the commitment or non-commitment of that affect the effectiveness of the unit operation?

A I don't believe it will.

Q Are you contacting such overriding royalty owners as there are in the area?

A We are contacting the royalty owners, yes.

Q And you are royalty owners too. This proposed unit agreement is the satisfactory standard form of state unit agreement?

A To my knowledge, it is a standard form of state unit, yes.



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PHONE 983.3971

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PHONE 243.6691

Q There are one or two modifications, is that correct, due to the fact that there is an existing well in the area, and the form of those modifications have been agreed upon with the office of the State Land Commissioner?

A This is correct.

Q And subject to those being included, the area has been approved by the Land Commissioner as to form and area, is that correct?

A This is correct.

Q What does the unit agreement call for in the way of a test well?

A The unit agreement calls for the drilling of a 13,700 foot Mississippian well in Section 9, 14 South, 35 East, the Southeast of the Northwest Quarter.

Q It's the Southwest of the Northwest of 9?

A Right.

Q Shown in the Northeast of the Northeast of 17 there is an existing well in the unit area, is this correct?

A This is correct.

Q That is not to be a unit well, is that correct?

A It will not be a unit well.

Q It will be a unit well when production is obtained elsewhere?



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PHONE 325-1162

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PHONE 243-6691

A When production is established elsewhere.

Q Is Union to be the operator of this unit?

A Yes.

Q Turning then to your Exhibits 2 and 3, and actually referring to your Exhibit 3 which is your contour map, briefly state what you have in your Exhibit 2, which is the written report with relation to this contour map.

A Exhibit 3 is a structure contour map, contoured on top of the Strawn, the Lower Pennsylvanian. Substantially it's based on subsurface, that is well data; although we have a considerable seismic information in this region, we do not have a continuous seismic reflection which we can map in this area. Consequently, we are unable to make a seismic structure map. The one producing well shown within the unit outline on this map is producing from the Upper Strawn. Consequently, the structure, as mapped on the top of the Strawn, reflects to a degree the producing potential of this particular reservoir.

The Strawn shelf edge, which is the depositional feature of the basinward slope which separates thick Strawn limestone in the McDonald area, and northward 800 feet more or less from thin basinal Strawn limestone to the south 250 feet forms the south flank of the structure as mapped on Exhibit 3.

Q In your opinion, Mr. Pearson, does the proposed unit



outline make an effective unit for the production of the unit-ized substance which you hope to obtain?

A In my opinion it does make an effective unit for the substances that we hope to obtain.

Q Based upon the limited information which you have available, does this represent a reasonable interpretation of the structure you hope to obtain, the productive structure?

A This is correct. The well information within this region is very limited; consequently this interpretation is based on a great deal of regional information, some detail locally, seismic information and well data, and in my opinion it is a reasonable interpretation of the available information.

Q In your opinion, Mr. Pearson, would the operation of this area under the unit agreement result in the greatest ultimate recovery of oil and gas?

A Yes.

Q Would operations under this unit agreement protect correlative rights in the area?

A Yes.

Q Mr. Pearson, do I understand that the proposed form of this unit agreement calls for commencing your test well by July 10th?

A This is correct.



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Q Is there anything further you care to state with respect to these exhibits?

A I might state one thing, that the existing well within the unit was completed at a total depth of 11,500 feet more or less in the Upper Strawn, and we are proposing to drill a deeper test on the proposed unit well to test the Atoka, Morrow and Chester. Consequently, this will be a deeper wildcat within this area.

Q So you would test your Strawn which you reasonably anticipate to be productive, and then go down to the wildcat objectives?

A Correct.

Q Were Exhibits 2 and 3 prepared by you?

A Yes, they were.

MR. BRATTON: We would offer in evidence Exhibits 1 through 3.

MR. NUTTER: Union's Exhibits 1 through 3 will be admitted in evidence.

(Whereupon, Applicant's Exhibits 1 through 3 were offered and admitted in evidence.)

MR. BRATTON: We have nothing further at this time.

MR. NUTTER: Any questions of Mr. Pearson?



CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Pearson, this structure map on the Strawn is prepared wholly from the wells that you have available to you in this area?

A Not entirely. With the seismic information that we had we could map local dip segments in specific areas, perhaps half a mile range, and hence this data has been honored on the map. We were unable to make a complete seismic structure map because the events that we were mapping, the dip segments were not continuous throughout the area.

Q You have maybe half a dozen or so wells on here which have penetrated into this depth that you can contour on this map?

A This is correct.

Q You are backed up by certain seismic information?

A Right.

Q The big bulge which we see there on the edge of the Strawn which encloses the area which is to be unitized, is that reflected on the seismic information?

A The seismic information indicates a north-south low relief anticlinal trend extending from the south of the map to the north part, which is in turn crossed by the ledge that I mapped early. The interest of the unit is at the intersection

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of the Strawn depositional shelf edge and the deep-seated low anticlinal trend of which we have seismic information.

Q You have a trough running north and south on the west edge and another one running north and south on the east side?

A Correct.

Q Penetrating into this Strawn shelf?

A Right.

Q Are those substantiated by seismic information?

A Insofar as deep reflections, the Devonian, and insofar as shallow reflections are concerned, yes. They are not specifically confirmed at the Strawn level, again, because we lack a Strawn reflection map in these specific areas.

Q This one well, which is completed on the unit, is completed in the Strawn, so it must have penetrated the Wolfcamp. Did that show anything in the Wolfcamp?

A The Wolfcamp limestones and Upper Pennsylvanian limestones and dolomites were porous and had slight shows in them and these we believe are potentially productive if we can reach a higher structural point within the unit.

Q The proposed unit is higher than the well that was drilled?

A We have some rather weak seismic information which would suggest that the proposed location could be higher than



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the well that has been drilled to date. Hence the Wolfcamp and the Upper Pennsylvanian are potentialized objectives on this second map.

Q Did the well that was completed go past the Pennsylvanian at all?

A No, it bottomed in the Upper Strawn.

Q I see.

MR. NUTTER: Are there any further questions of Mr. Pearson? He may be excused.

(Witness excused.)

MR. NUTTER: Do you have anything further, Mr. Bratton?

MR. BRATTON: I would just like to state that the unit agreement does call for the commencement by July 10th, so we would appreciate any expeditious treatment that the Commission could afford.

MR. NUTTER: We'll try to get it out on July 9th.

MR. PEARSON: Thank you.

MR. BRATTON: Thank you, don't rush.

MR. NUTTER: Does anyone have anything they care to offer in Case 2836? We'll take the case under advisement and call a fifteen-minute recess.



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STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 2nd day of July, 1963.

Ada Dearnley
Notary Public-Court Reporter

My commission expires:

June 19, 1967.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2874. Heard by me on 6/26, 1963.

[Signature], Examiner
New Mexico Oil Conservation Commission



GOVERNOR
JACK M. CAMPBELL
CHAIRMAN

State of New Mexico
Oil Conservation Commission



LAND COMMISSIONER
E. S. JOHNNY WALKER
MEMBER

P. O. BOX 871
SANTA FE

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

July 2, 1963

Mr. Howard Bratton
Hervey, Dow & Hinkle
Attorneys at Law
P. O. Box 10
Roswell, New Mexico

Re: Case No. 2836
Order No. R-2509
Applicant:
Union Oil Company of Calif.

Dear Sir:

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

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

lr/

Carbon copy of order also sent to:

Hobbs OCC x

Artesia OCC

Astec OCC

OTHER

DRAFT
JMB/ces

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

Chair CASE No. 2836

Order No. R- 2509

APPLICATION OF UNION OIL COMPANY
OF CALIFORNIA FOR APPROVAL OF THE
WEST McDONALD UNIT AGREEMENT, LEA
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

~~June 28~~ This cause came on for hearing at 9 o'clock a.m. on ~~June 28~~, 1963, at Santa Fe, New Mexico, before Daniel S. Mutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

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

FINDS:

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

(2) That the applicant, Union Oil Company of California, seeks approval of the West McDonald Unit Agreement covering 2,220 acres, more or less, of State and Fee lands in Township 14 South, Range 35 East, NMPM, Lea County, New Mexico.

(3) That approval of the proposed West McDonald Unit Agreement will in principle tend to promote the conservation of oil and gas and the prevention of waste.

IT IS THEREFORE ORDERED:

(1) That the West McDonald Unit Agreement is hereby approved.

(2) That the plan under which the unit area shall be operated shall be embraced in the form of a unit agreement for the development and operation of the West McDonald Unit Area, and such plan shall be known as the West McDonald Unit Agreement Plan.

(3) That the West McDonald Unit Agreement Plan 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 right, duty, or obligation which is now, or may hereafter be, vested in the Oil Conservation Commission of New Mexico by law relative to the supervision and control of operations for the exploration and development of any lands committed to the West McDonald Unit, or relative to the production of oil or gas therefrom.

(4) (a) That the unit area shall be:

NEW MEXICO PRINCIPAL MERIDIAN

LEA COUNTY, NEW MEXICO
TOWNSHIP 14 SOUTH, RANGE 35 EAST

Section 4: SW/4 and W/2 SE/4
Section 5: SE/4
Section 8: All
Section 9: All
Section 16: N/2
Section 17: N/2

containing 2,320 acres, more or less.

(b) That the unit area may be enlarged or contracted as provided in said plan; provided, however, that administrative approval for expansion or contraction of the unit area must also be obtained from the Secretary-Director of the Commission.

(5) That the unit operator shall file with the Commission an executed original or executed counterpart of the West McDonald Unit Agreement within 30 days after the effective date thereof. In the event of subsequent joinder by any party or expansion or contraction of the unit area, the unit operator shall file with the Commission within 30 days thereafter counterparts of the unit agreement reflecting the subscription of those interests having joined or ratified.

(6) That this order shall become effective upon the approval of said unit agreement by the Commissioner of Public Lands for the State of New Mexico ~~and the Director of the United States Geological Survey~~, and shall terminate ipso facto upon the termination of said unit agreement. The last unit operator shall notify the Commission immediately in writing of such termination.

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

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

ORDER 1-12

BEFORE THE OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

Case
2836

APPLICATION FOR APPROVAL OF
THE WEST McDONALD UNIT AGREEMENT
LEA COUNTY, NEW MEXICO

New Mexico Oil Conservation Commission
Santa Fe, New Mexico.

Comes UNION OIL COMPANY OF CALIFORNIA, acting by and through the undersigned attorneys, Hervey, Dow & Hinkle of Roswell, New Mexico, and files herewith three copies of the proposed Unit Agreement for the development and operation of the West McDonald Unit Area, Lea County, New Mexico, and hereby makes application for approval of said Unit Agreement as provided by law and the rules and regulations of the New Mexico Oil Conservation Commission, and in support thereof shows:

1. That the proposed unit area covered by said agreement embraces 2,320 acres situated in Township 14 South, Range 35 East, N.M.P.M., more particularly described as follows:

Township 14 South, Range 35 East

Section 4: $SW\frac{1}{4}$ and $W\frac{1}{2}SE\frac{1}{4}$

Section 5: $SE\frac{1}{4}$

Section 8: All

Section 9: All

Section 16: $N\frac{1}{2}$

Section 17: $N\frac{1}{2}$

containing 2,320 acres, more or less.

2. That the lands embraced in the proposed unit consist of 2,240 acres of State land and 80 acres of fee land.

3. That applicant is informed and believes and upon such information and belief states that the proposed unit area contains all or substantially all of the geological or geophysical feature involved and that in the event of the discovery of oil or gas thereon that said Unit Agreement will permit the producing area to be developed and operated in the interest of conservation and the prevention of waste of unitized substances.

4. That it is contemplated that applicant will be the Operator of the unit area and it is proposed to drill a test well thereon pursuant to and to the depth provided by Section 8 of the proposed Unit Agreement.

5. That applicant believes that in the event oil or gas in paying quantities is discovered on the lands within the unit area, that the pool or field can be developed more economically and efficiently under the terms of said Unit Agreement, to the end that the maximum recovery of unitized substances will be obtained and that said Unit Agreement is in the interest of conservation and the prevention of waste as contemplated by the New Mexico Oil Conservation Commission statutes and regulations.

6. That upon an order being entered by the New Mexico Oil Conservation Commission approving said Unit Agreement, and after approval thereof by the Commissioner of Public Lands of the State of New Mexico, an approved copy will be filed with the New Mexico Oil Conservation Commission.

WHEREFORE, the undersigned applicant respectfully requests that a hearing be held before an examiner on the matter of the approval of said Unit Agreement and that upon said hearing, said

Unit Agreement be approved by the New Mexico Oil Conservation Commission as being in the interest of conservation and the prevention of waste.

DATED this 10th day of June, 1963.

Respectfully submitted,

UNION OIL COMPANY OF CALIFORNIA

By: 
Attorney

HERVEY, DOW & HINKLE

By: 

Attorneys for Union Oil Company of California
P. O. Box 10
Roswell, New Mexico

12
BEFORE THE OIL CONSERVATION COMMISSION
STATE OF NEW MEXICO

APPLICATION FOR APPROVAL OF
THE WEST McDONALD UNIT AGREEMENT
LEA COUNTY, NEW MEXICO

Case
2836

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

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Township 14 South, Range 35 East

Section 4: SW $\frac{1}{4}$ and W $\frac{1}{2}$ SE $\frac{1}{4}$

Section 5: SE $\frac{1}{4}$

Section 8: All

Section 9: All

Section 16: N $\frac{1}{2}$

Section 17: N $\frac{1}{2}$

containing 2,320 acres, more or less.

2. That the lands embraced in the proposed unit consist of 2,240 acres of State land and 80 acres of fee land.

3. That applicant is informed and believes and upon such information and belief states that the proposed unit area contains all or substantially all of the geological or geophysical feature involved and that in the event of the discovery of oil or gas thereon that said Unit Agreement will permit the producing area to be developed and operated in the interest of conservation and the prevention of waste of unitized substances.

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Unit Agreement be approved by the New Mexico Oil Conservation
Commission as being in the interest of conservation and the
prevention of waste.

DATED this 10th day of June 1963.

Respectfully submitted,
UNION OIL COMPANY OF CALIFORNIA

By: 
Attorney

HERVEY, DOW & HINKLE

By: 

Attorneys for Union Oil Company of California
P. O. Box 10
Roswell, New Mexico

BEFORE THE OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

APPLICATION FOR APPROVAL OF
THE WEST McDONALD UNIT AGREEMENT
LEA COUNTY, NEW MEXICO

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

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1. That the proposed unit area covered by said agreement embraces 2,320 acres situated in Township 14 South, Range 35 East, N.M.P.M., more particularly described as follows:

Township 14 South, Range 35 East

Section 4: SW $\frac{1}{4}$ and W $\frac{1}{2}$ SE $\frac{1}{4}$

Section 5: SE $\frac{1}{4}$

Section 8: All

Section 9: All

Section 16: N $\frac{1}{2}$

Section 17: N $\frac{1}{2}$

containing 2,320 acres, more or less.

Case 2836

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Commission as being in the interest of conservation and the
prevention of waste.


DATED this 10th day of June, 1963.

Respectfully submitted,

UNION OIL COMPANY OF CALIFORNIA

By: 
Attorney

HENVEY, DOW & HINKLE

By: 

Attorneys for Union Oil Company of California
P. O. Box 10
Roswell, New Mexico

**BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO**

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

CASE No. 2836
Order No. R-2509

**APPLICATION OF UNION OIL COMPANY
OF CALIFORNIA FOR APPROVAL OF THE
WEST McDONALD UNIT AGREEMENT, LEA
COUNTY, NEW MEXICO.**

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on June 26, 1963, at Santa Fe, New Mexico, before Daniel S. Mutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 2nd day of July, 1963, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Mutter, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Union Oil Company of California, seeks approval of the West McDonald Unit Agreement covering 2,320 acres, more or less, of State and Fee lands in Township 14 South, Range 35 East, NMPM, Lea County, New Mexico.

(3) That approval of the proposed West McDonald Unit Agreement will in principle tend to promote the conservation of oil and gas and the prevention of waste.

IT IS THEREFORE ORDERED:

(1) That the West McDonald Unit Agreement is hereby approved.

(2) That the plan under which the unit area shall be operated shall be embraced in the form of a unit agreement for the

CASE No. 2836
Order No. R-2509

development and operation of the West McDonald Unit Area, and such plan shall be known as the West McDonald Unit Agreement Plan.

(3) That the West McDonald Unit Agreement Plan 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 right, duty, or obligation which is now, or may hereafter be, vested in the Oil Conservation Commission of New Mexico by law relative to the supervision and control of operations for the exploration and development of any lands committed to the West McDonald Unit, or relative to the production of oil or gas therefrom.

(4) (a) That the unit area shall be:

NEW MEXICO PRINCIPAL MERIDIAN

LEA COUNTY, NEW MEXICO
TOWNSHIP 14 SOUTH, RANGE 35 EAST

Section 4: SW/4 and W/2 SE/4
Section 5: SE/4
Section 8: All
Section 9: All
Section 16: N/2
Section 17: N/2

containing 2,320 acres, more or less.

(b) That the unit area may be enlarged or contracted as provided in said plan; provided, however, that administrative approval for expansion or contraction of the unit area must also be obtained from the Secretary-Director of the Commission.

(5) That the unit operator shall file with the Commission an executed original or executed counterpart of the West McDonald Unit Agreement within 30 days after the effective date thereof. In the event of subsequent joinder by any party or expansion or contraction of the unit area, the unit operator shall file with the Commission within 30 days thereafter counterparts of the unit agreement reflecting the subscription of those interests having joined or ratified.

(6) That this order shall become effective upon the approval of said unit agreement by the Commissioner of Public Lands for the State of New Mexico and shall terminate ipso facto upon the termination of said unit agreement. The last unit operator shall notify the Commission immediately in writing of such termination.

-3-

CASE No. 2836
Order No. R-2509

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

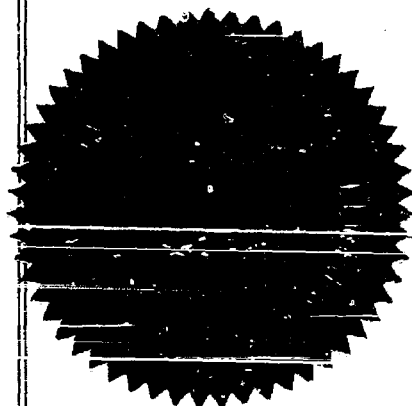
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

Jack M. Campbell
JACK M. CAMPBELL, Chairman

E. S. Walker
E. S. WALKER, Member

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



END