

Geological Exhibit II

HACKBERRY DEEP UNIT

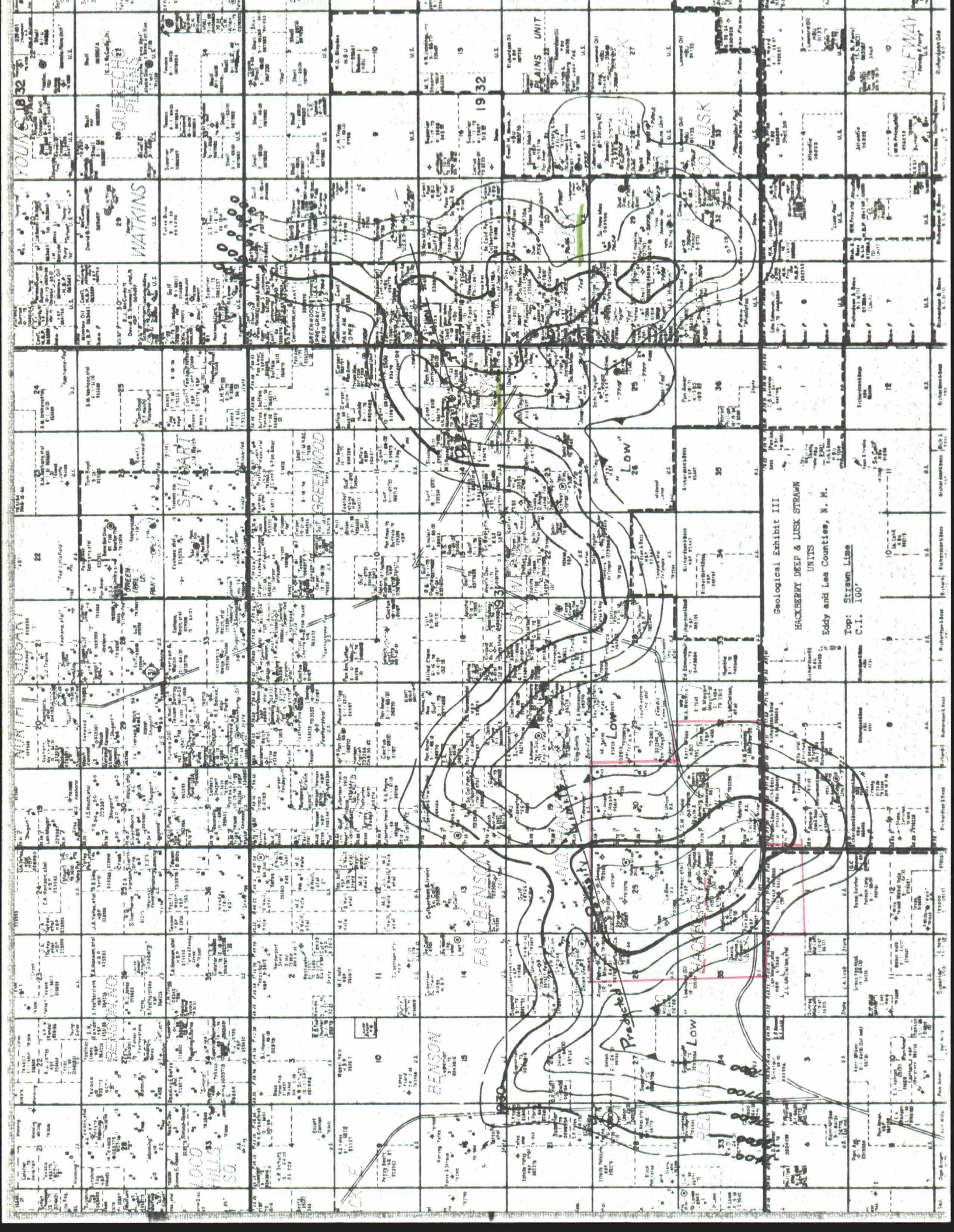
Eddy County, N. M.

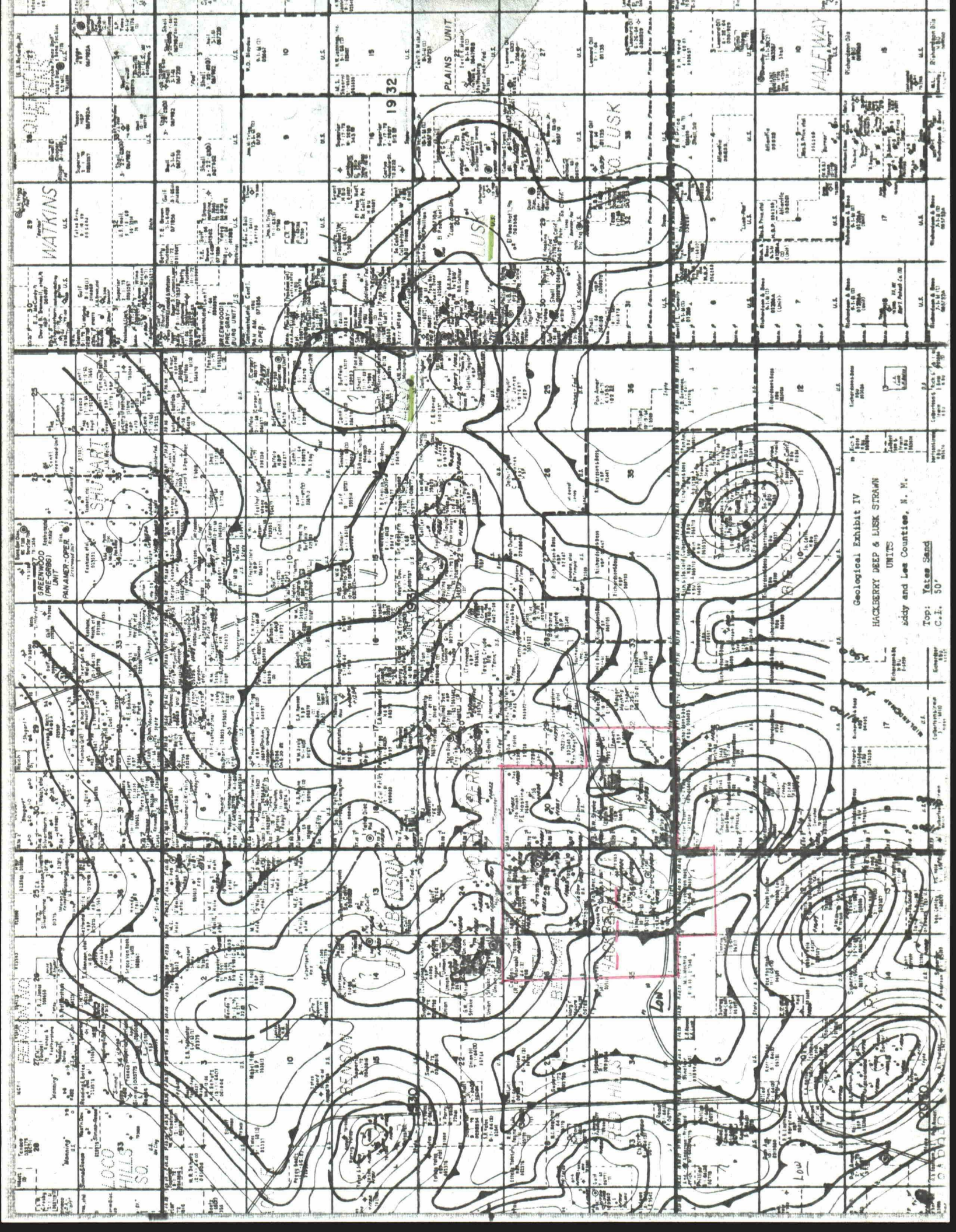
Top: Yates Sand
C.I. 50' Scale: 1"=4000'
Unit Outline in Red
○ - Proposed Location

T-19-S
R-31-E

Richardson & Bass
HBU
04062

Richardson & Bass
HBU
04062





GEOLOGICAL REPORT TO ACCOMPANY
APPLICATION FOR DESIGNATION OF HACKBERRY DEEP UNIT
EDDY COUNTY, NEW MEXICO

Location

This unit is located in the common corner of T19 & 20S, R30 & 31E. It will be approximately twenty-five miles northeast of Carlsbad, New Mexico and five miles west of the designated Lusk Strawn Field. This unit will adjoin the Big Eddy Unit on the Northwest.

Geology

This is an area of rolling topography, with a surface cover of recent sand and gravels. Most of the leases, in the unit outline, are held by shallow Yates Sand and Seven Rivers Dolomite production.

The Lusk Field area found the shallow Yates structure generally conforming with the deeper Strawn feature. As a result of this, plus the recent Strawn discovery by Pan American in their Big Eddy #3, SESE Sec. 6, T20S, R31E, a similar structure is believed to exist in this Hackberry Deep Unit area. This prediction is based principally on sub-surface studies; however, seismic interpretation indicates such conditions to be present.

Oil accumulation in the Lusk Strawn Field is the result of porosity development across a SSE plunging nose. There is structural closure on three sides with a porosity pinch-out on the updip or north end of the feature. The lime bank, on which this development is present, trends in a general east-west direction; therefore, the porosity and structural conditions are expected to be the same on the Hackberry Deep feature.

The unit outline is centered on the axis of a plunging nose, with acreage included on either side of the axis which reasonably could be productive. Production, to the north, is expected to be limited by a reduction of porosity in like manner to the Lusk area.

The first test well will be located in the SWSW of Sec. 31, T19S, R31E, and major tops are expected as follows:

Permian	Rustler Anhydrite	425'
	Salado Salt	575'
	Tansill	1950'
	Yates	2100'
	Capitan Reef	2400'
	Delaware Sand	4000'
	Bone Spring	6700'
Pennsylvanian	Wolfcamp	10,100'
	Strawn	11,000'

Case 3133

Eld 2

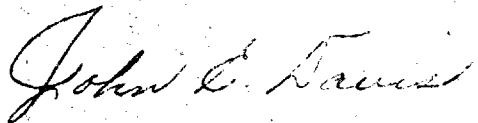
The attached Geological Exhibit I is a structural contour map on top of the Strawn and shows outline of the proposed unit area in red. A pinch-out of porosity is inferred as indicated by dashed line. Exhibit II shows Yates structure in the area, with unit outlined. Exhibit III and IV show the regional relationship between the proposed Hackberry area and the now producing Lusk area, on both the shallow Yates formation and the deeper Strawn formation. The trend of Yates highs to the northwest is expected to be duplicated in the Strawn, although Strawn structure will be considerably broader and influenced more by a deep-seated structural high northwest of the unit area.

Due to the lack of a consistent correlation point within the Upper Delaware section, it is recommended that the top of the unitization zone be set as the top of the Delaware Sand. This point is consistent, and would be the point that is correlative with that found at a depth of 4082' (by Gamma Ray Log) in the Pan American - Big Eddy Unit #3, SESE of Sec. 6, T20S, R31E.

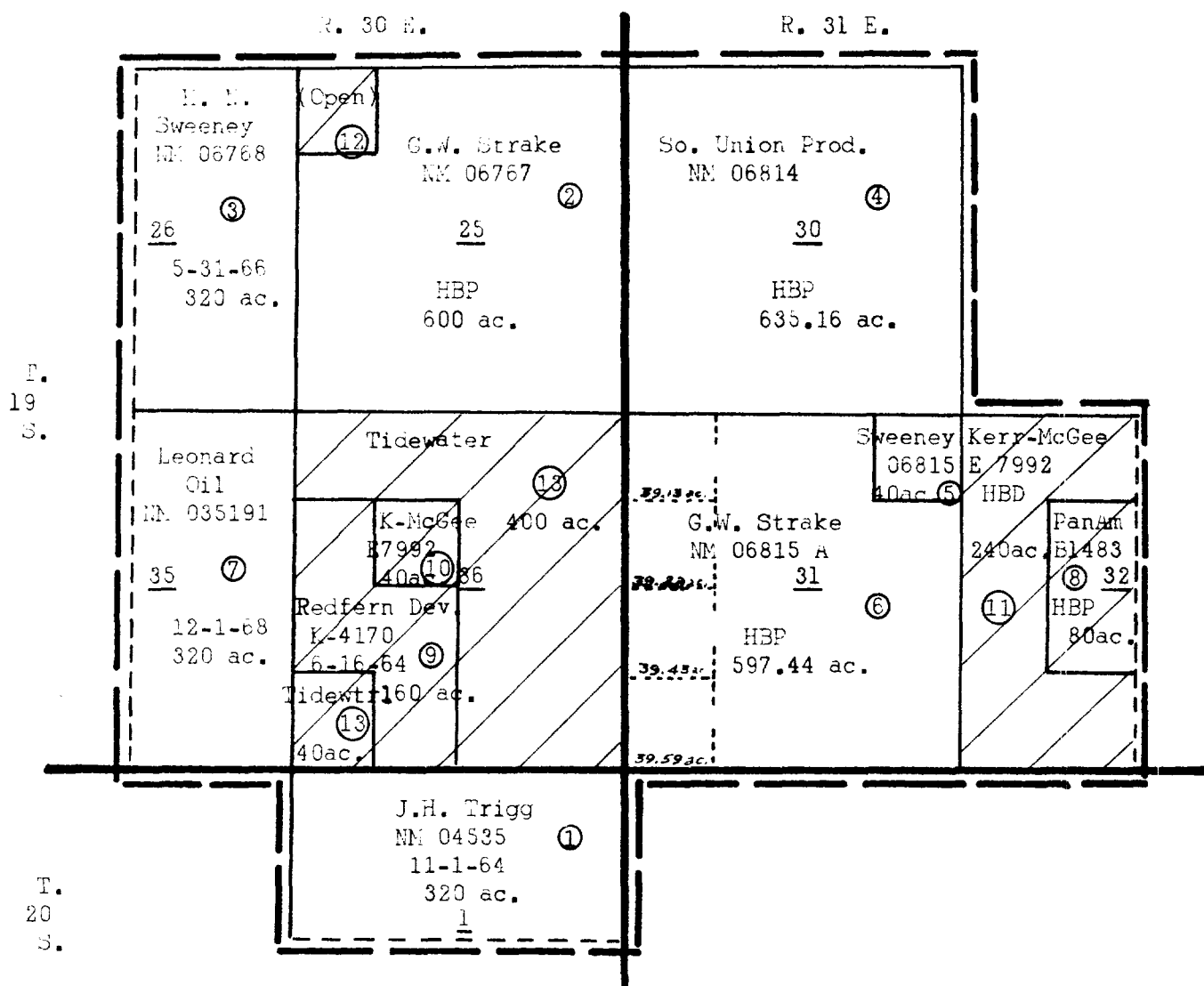
Respectfully submitted,

G. W. STRAKE

By:



John E. Davis
Division Geologist



LEGEND

 Federal Acreage 2832.6 Acres

 State Acreage 1000.0 Acres

Boundary of Unit Area

⑦ Tract Numbers Total 3832.6 Acres

G. W. Strake
Houston, Texas
OPERATOR

EXHIBIT "A"
HACKBERRY DEEP UNIT
Eddy County, N.M.

Revised Plat, Oct. 24, 1964

En 1

CLARENCE E. HINKLE
W. E. BONDURANT, JR.
S. B. CHRISTY IV
LEWIS C. COX, JR.
PAUL W. EATON, JR.
CONRAD E. COFFIELD
HAROLD L. HENSLEY, JR.
MICHAEL R. WALLER

LAW OFFICES
HINKLE, BONDURANT & CHRISTY
HINKLE BUILDING
ROSWELL, NEW MEXICO

October 23, 1964

OF COUNSEL: HIRSH M. DOW
TELEPHONE 662-6510
AREA CODE 505
POST OFFICE BOX 10

New Mexico Oil Conservation Commission
Box 2088
Santa Fe, New Mexico

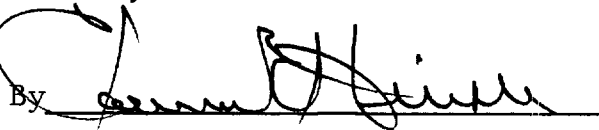
Re: OCC Case 3133
Examiner's docket October 28

Gentlemen:

We enclose herewith three copies of the proposed form of Unit Agreement ^{to be} filed in connection with the application in the captioned case, being the application of George W. Strake for approval of the Hackberry Deep Unit Agreement comprising 3,832.60 acres in Eddy County, New Mexico. The Unit Agreement does not have Exhibit "A" attached, which is the plat showing the unit area and the ownership of the acreage involved. This had to be revised due to the sale of some of the State acreage involved which was on the October 20 sale. Copies of Exhibit "A" will be supplied at the time of the hearing.

Yours sincerely,

HINKLE, BONDURANT & CHRISTY

By 

CEH:cs

Enc.

cc: Mr. C. R. Mote

UNIT AGREEMENT
HACKBERRY DEEP UNIT AREA
EDDY COUNTY, NEW MEXICO

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HACKBERRY DEEP UNIT AGREEMENT
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UNIT AGREEMENT
FOR THE DEVELOPMENT AND OPERATION OF THE
HACKBERRY DEEP UNIT AREA
EDDY COUNTY, NEW MEXICO

NO. _____

THIS AGREEMENT, entered into as of the _____ day of _____
1964, by and between the parties subscribing, ratifying, or consenting hereto,
and herein 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 interests in the unit area subject to this agreement; and

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

WHEREAS, the Commissioner of Public Lands of the State of New
Mexico is authorized by an Act of the Legislature (Sec. 7-11-39 N. M.
Statutes 1953 Annotated) to consent to or approve this agreement on behalf
of the State of New Mexico, insofar as it covers and includes lands and
mineral interests of the State of New Mexico; and

WHEREAS, the Oil Conservation Commission of the State of New
Mexico is authorized by an act of the Legislature (Article 3, Chapter 65,
Vol. 9, Part 2, 1953 Statutes), to approve this agreement and the conserva-
tion provisions hereof; and

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

WHEREAS, it is the purpose of the parties hereto to conserve natural resources, prevent waste, and secure other benefits obtainable through development and operation of the area subject to this agreement under the terms, conditions and limitations herein set forth;

NOW, THEREFORE, in consideration of the premises and the promises herein contained, the parties hereto commit to this agreement their respective interests in the below-defined unit area, and agree severally among themselves as follows:

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

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

Township 19 South, Range 30 East, N.M.P.M.

Township 19 South, Range 31 East, N.M.P.M.

Section 30 - All

Section 31 - Lots 1, 2, 3, 4, $E\frac{1}{2}W\frac{1}{2}$, $E\frac{1}{2}$ (All)

Section 32 - $W\frac{1}{2}$

Township 20 South, Range 30 East, N.M.P.M.

Section 1 - $N\frac{1}{2}$

containing 3,832.60 acres, more or less.

Exhibit A attached hereto is a map showing the unit area and the boundaries and identity of tracts and leases in said area to the extent known to the Unit Operator. Exhibit B attached hereto is a schedule showing to the extent known to the Unit Operator the acreage, percentage and kind of ownership of oil and gas interests in all land in the unit area. However, nothing herein or in said schedule or map shall be construed as a representation by any party hereto as to the ownership of any interest other than such interest or interests as are shown in said map or schedule as owned by such party. Exhibits A and B shall be revised by the Unit Operator whenever changes in the unit area render such revision necessary, or when requested by the Oil and Gas Supervisor, hereinafter referred to as "Supervisor", or when requested by the Commissioner of Public Lands of the State of New Mexico, hereinafter referred to as "Commissioner", and not less than seven copies of the revised exhibits shall be filed with the Supervisor, and two copies thereof shall be filed with the Commissioner, and one copy with the New Mexico Oil Conservation Commission, hereinafter referred to as "Commission".

The above-described unit area shall when practicable be expanded to include therein any additional tract or tracts regarded as reasonably necessary or advisable for the purposes of this agreement, or

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

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

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

(c) Upon expiration of the 30-day period provided in the preceding item (b) hereof, Unit Operator shall file with the Supervisor, the Commissioner and the Commission evidence of mailing of the notice of expansion or contraction and a copy of any objections thereto which have been filed with the Unit Operator, together with an application in sufficient number, for approval of such expansion or contraction and with appropriate joinders.

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

(e) All legal subdivisions of unitized lands (i.e., 40 acres by Government survey or its nearest lot or tract equivalent in instances of irregular surveys, however, unusually large lots or tracts shall be considered in multiples of 40 acres, or the nearest aliquot equivalent thereof, for the purpose of elimination under this subsection), no parts of which are entitled to be in a participating area within five years after the first day of the month following the effective date of the first initial participating area established under this unit agreement, shall be eliminated automatically from this agreement, effective as of the first day thereafter, and such lands shall no longer be a part of the unit area and shall no longer be subject to this agreement, unless at the expiration of said five-year period diligent drilling operations are in progress on unitized lands not entitled to participation, in which event all such lands shall remain subject hereto for so long as such drilling operations are continued diligently, with not more than 90 days' time elapsing between the completion of one such well and the commencement of the next such well, except that the time allowed between such wells shall not expire earlier than 30 days after the expiration of any period of time during which drilling operations are prevented by a matter beyond the reasonable control of unit operator as set forth in the section hereof entitled "Unavoidable Delay"; provided that all legal subdivisions of lands not in a participating area and not entitled to become participating under the applicable provisions of this agreement within 10 years after said first day of the month following the effective date of said first initial participating area shall be eliminated as above specified. Determination of creditable "Unavoidable Delay" time

shall be made by unit operator and subject to approval of the Director and the Commissioner. The unit operator shall, within 90 days after the effective date of any elimination hereunder, describe the area so eliminated to the satisfaction of the Director and the Commissioner and promptly notify all parties in interest.

If conditions warrant extension of the 5- and 10-year periods specified in this subsection 2(e), an extension of such periods may be accomplished by consent of the owners of 90 percent of the current unitized working interests and 60 percent of the current unitized basic royalty interests (exclusive of the basic royalty interest of the United States) on a total non-participating acreage basis, respectively, with approval of the Director and Commissioner, provided such extension application is submitted to the Director and Commissioner not later than 60 days prior to the expiration of said 5-year or 10-year periods.

Any expansion of the unit area pursuant to this section which embraces lands theretofore eliminated pursuant to this subsection 2(e) shall not be considered automatic commitment or recommitment of such lands.

3 UNITIZED LAND AND UNITIZED SUBSTANCES. All lands committed to this agreement as to all formations below the top of the Delaware Sand as found at a depth of 4,082 feet on the Schlumberger sonic-gamma ray log of Pan American's Big Eddy Unit Well No. 3 in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 6, Township 20 South, Range 31 East, Eddy County, New Mexico, shall constitute land referred to herein as "unitized land" or "lands subject to this agreement". All oil or gas in such formations of the unitized land are unitized

and designated as "unitized substances" under the terms of this agreement.

4. UNIT OPERATOR. George W. Strake of Houston, Texas is hereby designated as Unit Operator and by signature hereto as Unit Operator commits to this agreement all interests in unitized substances vested in him and agrees and consents to accept the duties and obligations of Unit Operator for the discovery, development and production of unitized substances as herein provided. Whenever reference is made herein to the Unit Operator, such reference means the Unit Operator acting in that capacity and not as owner of interest in unitized substances, and the term "working interest owner" when used herein shall include or refer to Unit Operator as the owner of a working interest when such an interest is owned by him.

5. RESIGNATION OR REMOVAL OF UNIT OPERATOR. Unit Operator shall have the right to resign at any time prior to the establishment of a participating area or areas hereunder, but such resignation shall not become effective so as to release Unit Operator from the duties and obligations of Unit Operator and terminate Unit Operator's rights as such for a period of six months after notice of intention to resign has been served by Unit Operator on all working interest owners and the Director, the Commissioner and Commission and until all wells then drilled hereunder are placed in a satisfactory condition for suspension or abandonment whichever is required by the Supervisor as to Federal lands and by the Commission as to State and privately owned lands unless a new unit operator shall have been selected and approved and shall have taken over and

assumed the duties and obligations of Unit Operator prior to the expiration of said period.

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

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

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

The resignation or removal of Unit Operator under this agreement shall not terminate its right, title, or interest as the owner of a working interest or other interest in unitized substances, but upon the resignation or removal of Unit Operator becoming effective, such Unit Operator shall deliver possession of all equipment, materials, and appurtenances used in conducting the unit operations and owned by the working interest owners to

the new duly qualified successor Unit Operator or to the owners thereof if no such new Unit Operator is elected, to be used for the purpose of conducting unit operations hereunder. Nothing herein shall be construed as authorizing removal of any material, equipment and appurtenances needed for the preservations of any wells.

6. SUCCESSOR UNIT OPERATOR. Whenever the Unit Operator shall tender his or its resignation as Unit Operator or shall be removed as hereinabove provided, or a change of Unit Operator is negotiated by working interest owners, the owners of the working interests in the participating area or areas according to their respective acreage interests in such participating area or areas, or, until a participating area shall have been established, the owners of the working interest according to their respective acreage interests in all unitized land, shall by majority vote select a successor Unit Operator: Provided, That, if a majority but less than 75 percent of the working interests qualified to vote are owned by one party to this agreement, a concurring vote of one or more additional working interest owners shall be required to select a new operator. Such selection shall not become effective until:

(a) a Unit Operator so selected shall accept in writing the duties and responsibilities of Unit Operator, and

(b) the selection shall have been filed with the Supervisor and approved by the Commissioner. If no successor Unit Operator is selected and qualified as herein provided, the Director and Commissioner at their election may declare this unit agreement terminated.

7. ACCOUNTING PROVISIONS AND UNIT OPERATING AGREEMENT. If the Unit Operator is not the sole owner of working interests, costs and expenses incurred by Unit Operator in conducting unit operations hereunder shall be paid and apportioned among and borne by the owners of working interests, all in accordance with the agreement or agreements entered into by and between the Unit Operator and the owners of working interests, whether one or more, separately or collectively. Any agreement or agreements entered into between the working interest owners and the Unit Operator as provided in this section, whether one or more, are herein referred to as the "unit operating agreement". Such unit operating agreement shall also provide the manner in which the working interest owners shall be entitled to receive their respective proportionate and allocated share of the benefits accruing hereto in conformity with their underlying operating agreements, leases, or other independent contracts, and such other rights and obligations as between Unit Operator and the working interest owners as may be agreed upon by Unit Operator and the working interest owners; however, no such unit operating agreement shall be deemed either to modify any of the terms and conditions of this unit agreement or to relieve the Unit Operator of any right or obligation established under this unit agreement, and in case of any inconsistency or conflict between the unit agreement and the unit operating agreement, this unit agreement shall prevail. Three (3) true copies of any unit operating agreement executed pursuant to this section should be filed with the Supervisor and one (1) true copy with the Commissioner, prior to approval of this unit agreement by the Director.

8. RIGHTS AND OBLIGATIONS OF UNIT OPERATOR. Except as otherwise specifically provided herein, the exclusive right, privilege, and duty of exercising any and all rights of the parties hereto which are necessary or convenient for prospecting for, producing, storing, allocating, and distributing the unitized substances are hereby delegated to and shall be exercised by the Unit Operator as herein provided. Acceptable evidence of title to said rights shall be deposited with said Unit Operator and, together with this agreement, shall constitute and define the rights, privileges, and obligations of Unit Operator. Nothing herein, however, shall be construed to transfer title to any land or to any lease or operating agreement, it being understood that under this agreement the Unit Operator, in his capacity as Unit Operator, shall exercise the rights of possession and use vested in the parties hereto only for the purposes herein specified.

9. DRILLING TO DISCOVERY. Within six months after the effective date hereof, the Unit Operator shall begin to drill an adequate test well at a location approved by the Supervisor if on Federal land or by the Commissioner if on State land, unless on such effective date a well is being drilled conformably with the terms hereof, and thereafter continue such drilling diligently until the Strawn formation of Pennsylvanian age has been tested; provided, however, Unit Operator shall not in any event be required to drill said well to a depth in excess of 11,500 feet. Until the 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), the Unit Operator shall continue drilling diligently, one well at a time, such wells as shall be approved by the Supervisor if located on Federal land or by the Commissioner if located on State land until a well capable of producing unitized substances in paying quantities is completed to the satisfaction of said Supervisor, if on Federal land, or the Commissioner, if on State land, or until it is reasonably proved that the unitized land is incapable of producing unitized substances in paying quantities in the formations drilled hereunder. Nothing in this section shall be deemed to limit the right of the Unit Operator to resign as provided in Section 5 hereof, or as requiring Unit Operator to commence or continue any drilling during the period pending such resignation becoming effective in order to comply with the requirements of this section. The Director and Commissioner may modify the drilling requirements of this section by granting reasonable extensions of time when, in their opinion, such action is warranted.

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

10. PLAN OF FURTHER DEVELOPMENT AND OPERATION. Within six months after completion of a well capable of producing unitized substances in paying quantities, the Unit Operator shall submit for the approval of the Supervisor and the Commissioner an acceptable plan of development and operation for the unitized land which, when approved by the Supervisor and the Commissioner, shall constitute

the further drilling and operating obligations of the Unit Operator under this agreement for the period specified therein. Thereafter, from time to time before the expiration of any existing plan, the Unit Operator shall submit for the approval of the Supervisor and the Commissioner a plan for an additional specified period for the development and operation of the unitized land.

Any plan submitted pursuant to this section shall provide for the exploration of the unitized area and for the diligent drilling necessary for determination of the area or areas thereof capable of producing unitized substances in paying quantities in each and every productive formation and shall be as complete and adequate as the Supervisor and the Commissioner may determine to be necessary for timely development and proper conservation of the oil and gas resources of the unitized area and shall:

(a) specify the number and location of wells to be drilled and the proposed order and time for such drilling; and

(b) to the extent practicable specify the operating practices regarded as necessary and advisable for proper conservation of natural resources.

Separate plans may be submitted for separate productive zones, subject to the approval of the Supervisor and the Commissioner.

Plans shall be modified or supplemented when necessary to meet changed conditions or to protect the interests of all parties to this agreement. Reasonable diligence shall be exercised in complying with the obligations of the approved plan of development. The Supervisor and Commissioner are authorized to grant a reasonable extension of the six month period herein

prescribed for submission of an initial plan of development where such action is justified because of unusual conditions or circumstances. After completion hereunder of a well capable of producing unitized substances in paying quantities, no further wells, except such as may be necessary to afford protection against operations not under this agreement or such as may be specifically approved by the Supervisor and the Commissioner shall be drilled except in accordance with a plan of development approved as herein provided.

11. PARTICIPATION AFTER DISCOVERY. Upon completion of a well capable of producing unitized substances in paying quantities, the Unit Operator shall, within the month of such completion, if practicable, or as soon thereafter as required by the Supervisor or the Commissioner submit for approval by the Director and the Commissioner a schedule, based on subdivisions of the public-land survey or aliquot parts thereof, of all unitized land then regarded as reasonably proved to be productive of unitized substances in paying quantities; all lands in said schedule on approval of the Director and the Commissioner to constitute a participating area, effective as of the date of completion of such well or the effective date of the unit agreement, whichever is later. The acreages of both Federal and non-Federal lands shall be based upon appropriate computations from the courses and distances shown on the last approved public-land survey as of the effective date of the initial participating area. Said schedule also shall set forth the percentage of unitized substances to be allocated as herein provided to each unitized tract in the participating area so established, and shall govern the allocation of production from

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

It is the intent of this section that a participating area shall represent the area known or reasonably estimated to be productive in paying quantities; but, regardless of any revision of the participating area, nothing herein contained shall be construed as requiring any retroactive adjustment for production obtained

prior to the effective date of the revision of the participating area.

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

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

production is obtained. Settlement for working interest benefits from such a well shall be made as provided in the unit operating agreement.

12. ALLOCATION OF PRODUCTION. All unitized substances produced from each participating area established under this agreement, except any part thereof used in conformity with good operating practices within the unitized area for drilling, operating, camp and other production or development purposes, for repressuring or recycling in accordance with a plan of development approved by the Supervisor, and Commissioner, or unavoidably lost, shall be deemed to be produced equally on an acreage basis from the several tracts of unitized land of the participating area established for such production and, for the purpose of determining any benefits accruing under this agreement, each such tract of unitized land shall have allocated to it such percentage of said production as the number of acres of such tract included in said participating area bears to the total acres of unitized land in said participating area, except that allocation of production hereunder for purposes other than for settlement of the royalty, overriding royalty, or payment out of production obligations of the respective working interest owners, shall be on the basis prescribed in the unit operating agreement whether in conformity with the basis of allocation herein set forth or otherwise. It is hereby agreed that production of unitized substances from a participating area shall be allocated as provided herein regardless of whether any wells are drilled on any particular part or tract of said participating area. If any gas produced from one participating area is used for repressuring

or recycling purposes in another participating area, the first gas withdrawn from such last-mentioned participating area for sale during the life of this agreement shall be considered to be the gas so transferred until an amount equal to that transferred shall be so produced for sale and such gas shall be allocated to the participating area from which initially produced as constituted at the time of such final production.

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

If any well drilled as aforesaid by a working interest owner results in production such that the land upon which it is situated may properly be included in a participating area, such participating area shall be established or enlarged as provided in this agreement and the well shall thereafter be operated by the Unit Operator in accordance with the terms of this agreement and the unit operating agreement.

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

14. ROYALTY SETTLEMENT. The United States and any State and all royalty owners who, under existing contract, are entitled to take in kind a share of the substances now unitized hereunder produced from any tract, shall hereafter be entitled to the right to take in kind their share of the unitized substances allocated to such tract, and Unit Operator, or in the case of the operation of a well by a working interest owner as herein in special cases provided for, such working interest owner, shall make deliveries of such royalty share taken in kind in conformity with the applicable contracts, laws and regulations. Settlement for royalty interest not taken in kind shall be made by working interest owners responsible therefor under existing contracts, laws and regulations on or before the last day of each month for unitized substances produced during the preceding calendar month; provided, however, that nothing herein contained shall operate to relieve the lessees of any land from their respective lease obligations for the payment of any royalties due under their leases.

If gas obtained from lands not subject to this agreement is introduced into any participating area hereunder, for use in

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

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

Royalty due on account of State lands shall be computed and paid on the basis of all unitized substances allocated to such lands.

15. RENTAL SETTLEMENT. Rental or minimum royalties due on leases committed hereto shall be paid by working interest owners responsible therefor under existing contracts, laws and regulations, provided that nothing herein contained shall operate to relieve the lessees of any land from their respective lease obligations for the payment of any rental or minimum royalty in lieu thereof due under their leases. Rental or minimum royalty for lands of the United States subject to this agreement shall be paid at the rate specified in the respective leases from the United States unless such rental or minimum royalty is waived, suspended or reduced by law or by approval of the Secretary or his duly authorized representative

Rentals on State of New Mexico lands subject to this agreement shall be paid at the rates specified in the respective leases.

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

16. CONSERVATION. Operations hereunder and production of unitized substances shall be conducted to provide for the most

economical and efficient recovery of said substances without waste, as defined by or pursuant to State or Federal law or regulation.

17. DRAINAGE. The Unit Operator shall take appropriate and adequate measures to prevent drainage of unitized substances from unitized land by wells on land not subject to this agreement, or, with prior consent of the Director and the Commissioner, pursuant to applicable regulations pay a fair and reasonable compensatory royalty, as determined by the Supervisor as to Federal lands and by the Commissioner as to State lands.

18. LEASES AND CONTRACTS CONFORMED AND EXTENDED. The terms, conditions and provisions of all leases, subleases, and other contracts relating to exploration, drilling, development, or operation for oil or gas of lands committed to this agreement are hereby expressly modified and amended to the extent necessary to make the same conform to the provisions hereof, but otherwise to remain in full force and effect; and the parties hereto hereby consent that the Secretary as to Federal leases and the Commissioner as to State leases shall and each by his approval hereof, or by the approval hereof by his duly authorized representative, does hereby establish, alter, change, or revoke the drilling, producing, rental, minimum royalty, and royalty requirements of Federal and State leases committed hereto and the regulations in respect thereto to conform said requirements to the provisions of this agreement, and, without limiting the generality of the foregoing, all leases, subleases and contracts are particularly modified in accordance with the following:

(a) The development and operation of lands subject to this agreement under the terms hereof shall be deemed full performance

of all obligations for development and operation with respect to each and every part or separately owned tract subject to this agreement, regardless of whether there is any development of any particular part or tract of the unit area, notwithstanding anything to the contrary in any lease, operating agreement or other contract by and between the parties hereto, or their respective predecessors in interest, or any of them.

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

(c) Suspension of drilling or producing operations on all unitized lands pursuant to direction or consent of the Secretary and the Commissioner, or their duly authorized representatives, shall be deemed to constitute such suspension pursuant to such direction or consent as to each and every tract of unitized land.

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

(e) Any Federal lease for a fixed term of twenty (20) years or any renewal thereof or any part of such lease which is made subject to this agreement shall continue in force beyond the term

provided therein until the termination hereof. Any other Federal lease committed hereto shall continue in force beyond the term so provided therein or by law as to the land committed so long as such lease remains subject hereto, provided that production is had in paying quantities under this unit agreement prior to the expiration date of the term of such lease, or in the event actual drilling operations are commenced on unitized land, in accordance with the provisions of this agreement, prior to the end of the primary term of such lease and are being diligently prosecuted at that time, such lease shall be extended for two years and so long thereafter as oil or gas is produced in paying quantities in accordance with the provisions of the Mineral Leasing Act Revision of 1960.

(f) Each sublease or contract relating to the operation and development of unitized substances from lands of the United States committed to this agreement, which by its terms would expire prior to the time at which the underlying lease, as extended by the immediately preceding paragraph, will expire, is hereby extended beyond any such term so provided therein so that it shall be continued in full force and effect for and during the term of the underlying lease as such term is herein extended.

(g) Any lease embracing lands of the State of New Mexico which is made subject to this agreement, shall continue in force beyond the term provided therein as to the lands committed hereto until the termination hereof.

(h) The segregation of any Federal lease committed to this agreement is governed by the following provisions in the fourth

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

(i) 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 the portion not committed, and the provisions of such lease shall apply separately to such segregated portions commencing as of the effective date hereof; provided, however, 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 or gas is discovered and is capable of being produced in paying quantities from some part of the lands embraced in such lease 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 in such lease, the same, as to all lands

embraced therein, 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 or gas in paying quantities is being produced from any portion of said lands.

19. COVENANTS RUN WITH LAND. The covenants herein shall be construed to be covenants running with the land with respect to the interest of the parties hereto and their successors in interest until this agreement terminates, and any grant, transfer, or conveyance of interest in land or leases subject hereto shall be and hereby is conditioned upon the assumption of all privileges and obligations hereunder by the grantee, transferee or other successor in interest. No assignment or transfer of any working interest, royalty, or other interest subject hereto shall be binding upon Unit Operator until the first day of the calendar month after Unit Operator is furnished with the original, photostatic or certified copy of the instrument of transfer.

20. EFFECTIVE DATE AND TERM. This agreement shall become effective upon approval by the Director and the Commissioner or their duly authorized representatives as of the date of approval by the Director and shall terminate five (5) years from said effective date unless:

(a) such date of expiration is extended by the Director and the Commissioner, or

(b) it is reasonably determined prior to the expiration of the fixed term or any extension thereof that the unitized land

is incapable of production of unitized substances in paying quantities in the formations tested hereunder and after notice of intention to terminate the agreement on such ground is given by the Unit Operator to all parties in interest at their last known addresses, the agreement is terminated with the approval of the Director and Commissioner, or

(c) a valuable discovery of unitized substances has been made or accepted on unitized land during said initial term or any extension thereof, in which event the agreement shall remain in effect for such term and so long as unitized substances can be produced in quantities sufficient to pay for the cost of producing same from wells on unitized land within any participating area established hereunder and, should production cease, so long thereafter as diligent operations are in progress for the restoration of production or discovery of new production and so long thereafter as the unitized substances so discovered can be produced as aforesaid, or

(d) it is terminated as heretofore provided in this agreement

This agreement may be terminated at any time by not less than 75 per centum, on an acreage basis, of the owners of working interests signatory hereto, with the approval of the Director and Commissioner; notice of any such approval to be given by the Unit Operator to all parties hereto.

21. RATE OF PROSPECTING, DEVELOPMENT AND PRODUCTION. The Director is hereby vested with authority to alter or modify from time to time in his discretion the quantity and rate of production

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

Powers in this section vested in the Director shall only be exercised after notice to Unit Operator and opportunity for hearing to be held not less than 15 days from notice.

22. PROTECTION OF POTASH DEPOSITS. No wells will be drilled for oil or gas at a location on Federal lands which in

the opinion of the Supervisor or at a location on State lands which in the opinion of the Commissioner would result in undue waste of potash deposits or constitute a hazard to or unduly interfere with mining operations being conducted for the extraction of potash deposits.

The drilling or abandonment of any well on unitized land shall be done in accordance with applicable oil and gas regulations, including such requirements as to Federal lands as may be prescribed by the Supervisor and as to State lands by the Commissioner, as necessary to prevent the infiltration of oil, gas or water into formations containing potash deposits or into mines or workings being utilized in the extraction of such deposits.

Well records and survey plats that an oil and gas lessee of Federal lands must file pursuant to applicable operating regulations (30 CFR Part 221) shall be available for inspection at the Office of the Supervisor to any party holding a potash permit or lease on the Federal land on which the well is situated insofar as such records are pertinent to the mining and protection of potash deposits.

23. CONFLICT OF SUPERVISION. Neither the Unit Operator nor the working interest owners nor any of them shall be subject to any forfeiture, termination or expiration of any rights hereunder or under any leases or contracts subject hereto, or to any penalty or liability on account of delay or failure in whole or in part to comply with any applicable provision thereof to the extent that the Unit Operator, working interest owners or

any of them are hindered, delayed or prevented from complying therewith by reason of failure of the Unit Operator to obtain in the exercise of due diligence, the concurrence of proper representatives of the United States and proper representatives of the State of New Mexico in and about any matters or thing concerning which it is required herein that such concurrence be obtained. The parties hereto, including the Commission, agree that all powers and authority vested in the Commission in and by any provisions of this agreement are vested in the Commission and shall be exercised by it pursuant to the provisions of the laws of the State of New Mexico and subject in any case to appeal or judicial review as may now or hereafter be provided by the laws of the State of New Mexico.

24. 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 Department of the Interior, the Commissioner of Public Lands of the State of New Mexico and the New Mexico Oil Conservation Commission and to appeal from orders issued under the regulations of said Department, the Commission or Commissioner or to apply for relief from any of said regulations or in any proceedings relative to operations before the Department of the Interior, the Commissioner, or Commission, or any other legally constituted authority; provided, however, that any other interested party shall also have the right at his own expense to be heard in any such proceeding.

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

26. NO WAIVER OF CERTAIN RIGHTS. Nothing in this agreement contained shall be construed as a waiver by any party hereto of the right to assert any legal or constitutional right or defense as to the validity or invalidity of any law of the State wherein said unitized lands are located, or of the United States, or regulations issued thereunder in any way affecting such party, or as a waiver by any such party of any right beyond his or its authority to waive.

27. UNAVOIDABLE DELAY. All obligations under this agreement requiring the Unit Operator to commence or continue drilling or to operate on or produce unitized substances from any of the lands covered by this agreement shall be suspended while, but only so long as, the Unit Operator despite the exercise of due care and diligence is prevented from complying with such obligations, in whole or in part, by strikes, acts of God, Federal, State, or municipal law or agencies, unavoidable accidents, uncontrollable delays in transportation, inability to obtain necessary materials in open market, or other matters beyond the

reasonable control of the Unit Operator whether similar to matters herein enumerated or not.

28. NONDISCRIMINATION. In connection with the performance of work under this agreement, the operator agrees to comply with all of the provisions of section 301 (1) to (7) inclusive, of Executive Order 10925 as amended (28 F.R. 6485), which are hereby incorporated by reference in this agreement.

29. LOSS OF TITLE. In the event title to any tract of unitized land shall fail and the true owner cannot be induced to join in this unit agreement, such tract shall be automatically regarded as not committed hereto and there shall be such readjustment of future costs and benefits as may be required on account of the loss of such title. In the event of a dispute as to title as to any royalty, working interest, or other interests subject thereto, payment or delivery on account thereof may be withheld without liability for interest until the dispute is finally settled; provided, that, as to Federal and State land or leases, no payments of funds due the United States or the State of New Mexico should be withheld, but such funds of the United States shall be deposited as directed by the Supervisor and such funds of the State of New Mexico shall be deposited as directed by the Commissioner to be held as unearned money pending final settlement of the title dispute, and then applied as earned or returned in accordance with such final settlement.

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

30 NON-JOINDER AND SUBSEQUENT JOINDER. If the owner

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

if more than one committed working interest owner is involved, in order for the interest to be regarded as committed to this unit agreement. Except as may otherwise herein be provided, subsequent joinders to this agreement shall be effective as of the first day of the month following the filing with the Supervisor and the Commissioner of duly executed counterparts of all or any papers necessary to establish effective commitment of any tract to this agreement unless objection to such joinder is duly made within 60 days by the Director, provided, however, that as to State lands such subsequent joinder must be approved by the Commissioner.

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

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

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

GEORGE W. STRAKE

Address: _____

UNIT OPERATOR AND WORKING INTEREST OWNER

WORKING INTEREST OWNERS

AMERICAN PETROFINA, INCORPORATED

ATTEST:

BY _____

Address _____

Secretary

Date: _____

KERR-McGEE OIL INDUSTRIES, INC.

ATTEST:

BY _____

Address _____

Secretary

Date: _____

LEONARD OIL COMPANY

ATTEST:

BY _____

Address _____

Secretary

Date: _____

PAN AMERICAN PETROLEUM CORPORATION

ATTEST:

BY _____

Address _____

Secretary

Date: _____

STATE OF _____)

 $\frac{1}{2} S S$

COUNTY OF _____)

The foregoing instrument was acknowledged before me this
day of _____ 1964, by _____

of Kerr-McGee Oil Industries, Inc., a

corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____

55

COUNTY OF _____

The foregoing instrument was acknowledged before me this day of _____ 1964, by _____

of Leonard Oil Company, a _____

corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

[illegible]

SS

COUNTY OF _____)

The foregoing instrument was acknowledged before me this day of _____ 1964, by _____

of Pan American Petroleum Corporation, a

corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF ...)

525

COUNTY OF

The foregoing instrument was acknowledged before me this day of _____ 1964, by _____

of Redfern Development Corporation, a

corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____)
: ss
COUNTY OF _____)

The foregoing instrument was acknowledged before me this
_____ day of _____ 1964, by _____,
_____ of Southern Union Production Company, a
_____ corporation, on behalf of said corporation.

My Commission Expires: _____
Notary Public

STATE OF _____)
: ss
COUNTY OF _____)

The foregoing instrument was acknowledged before me this
_____ day of _____ 1964, by Edith B Adams and _____
Adams, her husband.

My Commission Expires: _____
Notary Public

STATE OF _____)
: ss
COUNTY OF _____)

The foregoing instrument was acknowledged before me this
_____ day of _____ 1964, by John H. Trigg and Pauline V.
Trigg, his wife.

My Commission Expires: _____
Notary Public

EXHIBIT "B"
SCHEDULE SHOWING THE PERCENTAGE AND KIND
OF OWNERSHIP OF ALL LANDS IN THE
HACKBERRY DEEP UNIT, EDDY COUNTY, NEW MEXICO

Tract No.	Description of Land	No. of Acres	Lease No. & Expiration Date of Lease	Basic Royalty & Percentage	Lessee of Record	Overriding Royalty or Production Payments	Working Interest Owners and Percentage
1.	T-20-S, R-30-E: Sec. 1 - Lots 1, 2 3, 4, S $\frac{1}{2}$ N $\frac{1}{2}$ (N $\frac{1}{2}$)	320	NM 04535 11/1/64	U.S. 12 $\frac{1}{2}$ %	J. H. Trigg	None	J. H. Trigg - All
2.	T-19-S, R-30-E: Sec. 25 - S $\frac{1}{2}$, S $\frac{1}{2}$ N $\frac{1}{2}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ NE $\frac{1}{4}$	600	NM 06767 HBP	U.S. 12 $\frac{1}{2}$ %	George W. Strake	5% - Thomas E. LeBow and wife 1 $\frac{1}{2}$ % - Roy Haskins	George W. Strake - All
3.	T-19-S, R-30-E: Sec. 26 - E $\frac{1}{2}$	320	NM 06768 5/31/66	U.S. 12 $\frac{1}{2}$ %	H. N. Sweeney	$\frac{1}{2}$ % - Stuart F. Mellon 2% - Helen G. Langguth 2 $\frac{1}{2}$ % - R. E. Maresch 20% - American Petrofina Incorporated	H. N. Sweeney - All
4.	T-19-S, R-31-E: Sec. 30 - All	635.16	NM 06814 HBP	U.S. 12 $\frac{1}{2}$ %	Southern Union Production Company	3% - Edward P. Chase and Marion A. Chase	Southern Union Production Company - All
5.	T-19-S, R-31-E: Sec. 31 - NE $\frac{1}{4}$ NE $\frac{1}{4}$	40	NM 06815 HBP	U.S. 12 $\frac{1}{2}$ %	H. N. Sweeney	4/5 of 25% of 7/8 - Edith B. Adams 1/5 of 25% of 7/8 - Paul C. Brooke	H. N. Sweeney - All
6.	T-19-S, R-31-E: Sec. 31 - Lots 1, 2, 3, 4, E $\frac{1}{2}$ W $\frac{1}{2}$, SE $\frac{1}{4}$, W $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$	597.44	NM 06815-A HBP	U.S. 12 $\frac{1}{2}$ %	George W. Strake	4% - Edith B. Adams 1% - Paul C. Brooke	George W. Strake - All
7.	T-19-S, R-30-E: Sec. 35 - E $\frac{1}{2}$	320	NM 035191 12/1/68	U. S. 12 $\frac{1}{2}$ %	Leonard Oil Company	1.66% - Robert J. Leonard 1.67% = Patrick J. Leonard 1.67% - Timothy T. Leonard	Leonard Oil Company - All

TOTAL: 7 FEDERAL TRACTS COMPRISING 2,832.60 acres, or 73.91% of UNIT AREA

Tract No.	Description of Land	No. of Acres	Lease No. & Expiration Date of Lease	Basic Royalty & Percentage	Lessee of Record	Overriding Royalty or Production Payments	Working Interest Owners and Percentage
STATE LANDS:							
8.	T-19-S, R-31-E: Sec. 32 - SE $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$	80	B-1483 HBP	State 12 $\frac{1}{2}$ %	Pan American Petroleum Corporation	None	Pan American Petroleum Corporation - All
9.	T-19-S, R-30-E: Sec. 36 - SW $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$	160	K-4170 6/16/74	State 12 $\frac{1}{2}$ %	Redfern Development Corporation	None	Redfern Development Corporation - All
10.	T-19-S, R-30-E: Sec. 36 - SE $\frac{1}{4}$ NW $\frac{1}{4}$	40	E-7992 HBP	State 12 $\frac{1}{2}$ %	Kerr-McGee Oil Industries, Inc.	None	Kerr-McGee Oil Industries, Inc. - All
11.	T-19-S, R-31-E: Sec. 32 - N $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ SW $\frac{1}{4}$	240	E-7992 HBP	State 12 $\frac{1}{2}$ %	Kerr-McGee Oil Industries, Inc.	None	H. N. Sweeney, - All
12.	T-19-S, R-30-E: Sec. 25 - NW $\frac{1}{4}$ NW $\frac{1}{4}$	40	Unleased				
13.	T-19-S, R-30-E: Sec. 36 - N $\frac{1}{2}$ N $\frac{1}{2}$, S $\frac{1}{2}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$	440		State 12 $\frac{1}{2}$ %	Tidewater Oil Company	None	Tidewater Oil Company
TOTAL: 6 TRACTS, STATE OF NEW MEXICO LANDS, COMPRISING 1,000 ACRES OR 26.09% OF UNIT AREA.							
TOTAL: 13 TRACTS COMPRISING 3,832.60 ACRES IN ENTIRE UNIT AREA							

TOTAL: 6 TRACTS, STATE OF NEW MEXICO LANDS, COMPRISING 1,000 ACRES OR 26.09% OF UNIT AREA.

TOTAL: 13 TRACTS COMPRISING 3,832.60 ACRES IN ENTIRE UNIT AREA