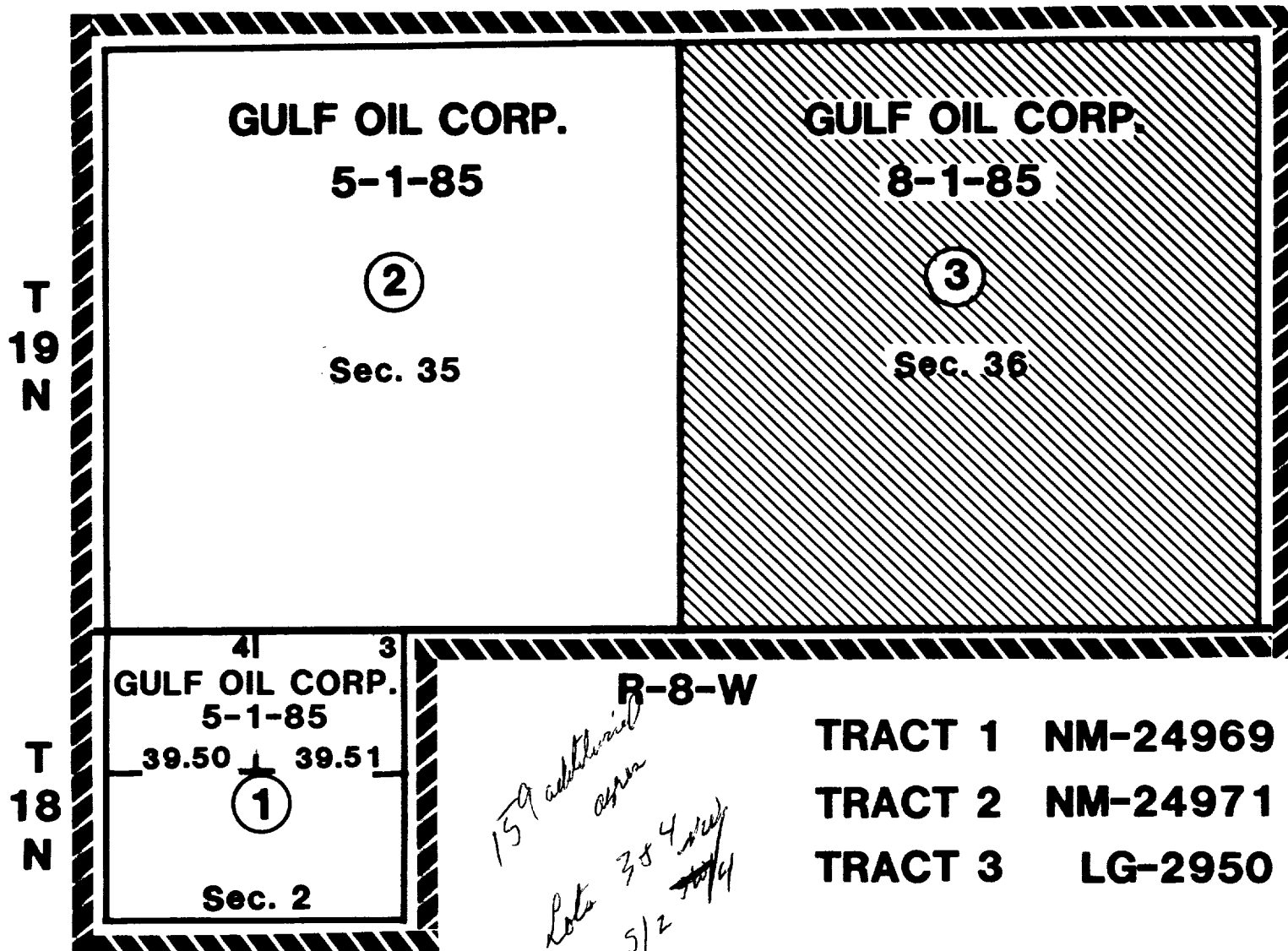




EXHIBIT "A"



	ACREAGE	PERCENTAGE
 FEDERAL LAND	799.01	55.52%
 STATE LAND	640.00	44.48%
TOTAL	1,439.01	100%

 **UNIT OUTLINE** **①** **TRACT NUMBER**

**NORTH HOSPAH
FEDERAL STATE UNIT
McKINLEY COUNTY, NEW MEXICO
T-19-N R-8-W
T-18-N R-8-W
GULF OIL CORPORATION**

BEFORE EXAMINER STOGNER
OIL CONSERVATION DIVISION

MIDLAND, TEXAS

Gulf EXHIBIT NO. 1
CASE NO. 4892

SCALE IN MILES



UNIT AGREEMENT
FOR THE DEVELOPMENT AND OPERATION
OF THE
NORTH HOSPAH FEDERAL-STATE UNIT AREA
COUNTY OF MCKINLEY
STATE OF NEW MEXICO

BEFORE EXAMINER STOGNER
OIL CONSERVATION DIVISION

NO. _____

EXHIBIT NO. 2

CASE NO. 4892

This agreement, entered into as of the _____ day of _____, by and between the parties subscribing, ratifying, or consenting hereto, and herein referred to as the "parties hereto,"

WITNESSETH:

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

WHEREAS, the Mineral Leasing Act of February 25, 1920, 41 Stat. 437, as amended, 30 U.S.C. Sec. 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 unit plan of development or operations of any oil and 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 (Secs. 19-10-45, 46, 47 N.M. Statutes 1978 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 interest of the State of New Mexico; and,

WHEREAS, the Oil Conservation Division of the State of New Mexico Energy and Minerals Department is authorized by an Act of the Legislature (Chapters 70 and 71, New Mexico Statutes 1978, Annotated) to approve this agreement and the conservation provisions hereof; and,

WHEREAS, the parties hereto hold sufficient interests in the North Hoshpah Federal-State 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 non-Federal lands, the oil and gas operating regulations in effect as of the effective date hereof governing drilling and producing operations, not inconsistent with the terms hereof or the laws of the State in which the non-Federal lands is located, are hereby accepted and made a part of this agreement.

2. **UNIT AREA.** The area specified on the map attached hereto marked Exhibit A is hereby designated and recognized as constituting the unit area, containing 1,439.01 acres more or less.

Exhibit A shows, in addition to the boundary of the unit area, 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 lands in the unit area. However, nothing

herein or in Exhibits A or B 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 the Exhibits as owned by such party. Exhibits A and B shall be revised by the Unit Operator whenever changes in the unit area or in the ownership interests in the individual tracts render such revision necessary, or when requested by the Authorized Officer, hereinafter referred to as AO, or when requested by the Commissioner of Public Lands of the State of New Mexico, hereinafter referred to as "Land Commissioner," and not less than four (4) copies of the revised Exhibits shall be filed with the proper BLM office and one (1) copy thereof shall be filed with the Land Commissioner, and one (1) copy with the Oil Conservation Division of the New Mexico Energy and Minerals Department, hereinafter referred to as "Division."

The above-described unit area shall when practicable be expanded to include therein any additional lands or shall be contracted to exclude lands whenever such expansion or contraction is deemed to be 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 (after preliminary concurrence by the AO), or on demand of the AO, or on demand of the Land Commissioner, after preliminary concurrence by the AO, shall prepare a notice of proposed expansion or contraction describing the contemplated changes in the boundaries of the unit area, the reasons therefore, any plans for additional drilling, and the proposed effective date of the expansion or contraction, preferably the first day of a month subsequent to the date of notice.

(b) Said notice shall be delivered to the proper BLM office, the Land Commissioner and the State Division, 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 AO, the Land Commissioner and the State Division, evidence of mailing of the notice of expansion or contraction and a copy of any objections thereto which have been filed with Unit Operator, together with an application in triplicate, 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 AO, the Land Commissioner and State Division, become effective as of the date prescribed in the notice thereof or such other appropriate date.

(e) All legal subdivisions of lands (i.e. 40 acres by Government survey or its nearest lot or tract equivalent; instances of irregular surveys, unusually large lots or tracts shall be considered in multiples of 40 acres or the nearest aliquot equivalent thereof), no parts of which are in or entitled to be in a participating area on or before the fifth anniversary of the effective date of the first initial participating area established under this unit agreement, shall be eliminated automatically from this agreement, effective as of said fifth anniversary, and such lands shall no longer be a part of the unit area and shall no longer be subject to this agreement, unless diligent drilling operations are in progress on unitized lands not entitled to participation on said fifth anniversary, 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. All legal subdivisions of lands not entitled to be in a participating area within 10 years after the effective date of the first initial participating area approved under this agreement shall be automatically eliminated from this agreement as of said tenth anniversary. 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 AO and the Land Commissioner and promptly notify all parties in interest. All lands reasonably proved productive of unitized substances in paying quantities by diligent drilling operations after the aforesaid 5-year period shall become participating in the same manner as during said first 5-year period. However, when such diligent drilling operations cease, all nonparticipating lands not then entitled to be in a participating area shall be automatically eliminated effective as the 91st day thereafter.

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. If conditions warrant extension of the 10-year period specified in this subsection, a single extension of not to exceed 2 years may be accomplished by consent of the owners of 90 percent of the working interest in the current nonparticipating unitized lands and the owners of 60 percent of the basic royalty interests (exclusive of the basic royalty interests of the United States) in nonparticipating unitized lands with approval of the AO and the Land Commissioner, provided such extension application is submitted not later than 60 days prior to the expiration of said 10-year period.

3. UNITIZED LAND AND UNITIZED SUBSTANCES. All land now or hereafter committed to this agreement shall constitute land referred to herein as "unitized land" or "land subject to this agreement." ~~All oil and gas in any and all formations of the unitized land are unitized under the terms of this agreement and herein are called "unitized substances."~~

4. UNIT OPERATOR. ~~Gulf Oil Corporation~~ is hereby designated as Unit Operator and by signature hereto as Unit Operator agrees and consents to accept the duties and obligations of Unit Operator for the discovery, development, and production of unitized substances as herein provided. Whenever reference is made herein to the Unit Operator, such reference means the Unit Operator acting in that capacity and not as an owner of interest in unitized substances, and the term "working interest owner" when used herein shall include or refer to Unit Operator as the owner of a working interest only when such an interest is owned by it.

5. RESIGNATION OR REMOVAL OF UNIT OPERATOR. Unit Operator shall have the right to resign at any time prior to the establishment of a participating area or areas hereunder, but such resignation shall not become effective so as to release Unit Operator from the duties and obligations of Unit Operator and terminate Unit Operator's rights as such for a period of 6 months after notice of intention to resign has been served by Unit Operator on all working interest owners and the AO and the Land Commissioner and until all wells then drilled hereunder are placed in a satisfactory condition for suspension or abandonment, whichever is required by the AO as to Federal lands and the State Division 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 after 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 as herein provided for the selection of a new Unit Operator. Such removal shall be effective upon notice thereof to the AO and the Land Commissioner.

The resignation or removal of Unit Operator under this agreement shall not terminate its right, title, or interest as the owner of working interest or other interest in unitized substances, but upon the resignation or removal of Unit Operator becoming effective, such Unit Operator shall deliver possession of all wells, equipment, materials, and appurtenances used in conducting the unit operations to the new duly qualified successor Unit Operator or to the common agent, if no such new Unit Operator is selected, to be used for the purpose of conducting unit operations hereunder. Nothing herein shall be construed as authorizing removal of any material, equipment, or appurtenances needed for the preservation of any wells.

6. SUCCESSION 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 the working interest owners, the owners of the working interests according to their respective acreage interest in all unitized land shall, pursuant to the Approval of the Parties' requirements of the unit operating agreement, select a successor Unit 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 AO and approved by the Land Commissioner.

If no successor Unit Operator is selected and qualified as herein provided, the AO and the Land 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 this agreement and the unit operating agreement, this agreement shall govern. Two copies of any unit operating agreement executed pursuant to this section shall be filed in the proper BLM office, and one true copy with the Land Commissioner, prior to approval of this unit agreement.

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 Unit Operator and, together with this agreement, shall constitute and define the rights, privileges, and obligations of Unit Operator. Nothing herein, however, shall be construed to transfer title to any land or to any lease or operating agreement, it being understood that under this agreement the Unit Operator, in its capacity as Unit Operator, shall exercise the rights of possession and use vested in the parties hereto only for the purposes herein specified.

9. DRILLING TO DISCOVERY. Within 6 months after the effective date hereof, the Unit Operator shall commence to drill an adequate test well at a location approved by the AO, if on Federal Land, or by the Land Commissioner, if on State Land, or by the Division if on Fee Land, unless on such effective date a well is being drilled in conformity with the terms hereof, and thereafter continue such drilling diligently until the Entrada formation has been tested or until at a lesser depth unitized substances shall be discovered which can be produced in paying quantities (to wit: quantities sufficient to repay the costs of drilling, completing, and producing operations, with a reasonable profit) or the Unit Operator shall at any time establish to the satisfaction of the AO if on Federal Land, or by the Land Commissioner, if on State Land, or by the Division if on Fee Lands, that further drilling of said well would be unwarranted or impracticable, provided, however, that Unit Operator shall not in any event be required to drill said well to a depth in excess of 4,700 feet. Until the discovery of unitized substances capable

of being produced in paying quantities, the Unit Operator shall continue drilling one well at a time, allowing not more than 6 months between the completion of one well and the commencement of drilling operations for the next well, until a well capable of producing unitized substances in paying quantities is completed to the satisfaction of the AO Supervisor if it be on Federal Land or of the Land Commissioner if on State Land, or the Division if on Fee 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 AO and Land Commissioner may modify any of the drilling requirements of this section by granting reasonable extensions of time when, in his opinion, such action is warranted.

Upon failure to commence any well as provided for in this section within the time allowed, prior to the establishment of a participating area, including any extension of time granted by the AO and the Land Commissioner, this agreement will automatically terminate. Upon failure to continue drilling diligently any well commenced hereunder, the AO and the Land Commissioner may, after 15-days notice to the Unit Operator, declare this unit agreement terminated. The parties to this agreement may not initiate a request to voluntarily terminate this agreement during the first 6 months of its term unless at least one obligation well has been drilled in accordance with the provisions of this section.

10. PLAN OF FURTHER DEVELOPMENT AND OPERATION. Within 6 months after completion of a well capable of producing unitized substances in paying quantities, the Unit Operator shall submit for the approval of the AO and the Land Commissioner and State Division an acceptable plan of development and operation for the unitized land which, when approved by the AO and the Land Commissioner and State Division, shall constitute the further drilling and development 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 AO, the Land Commissioner, and State Division, a plan for an additional specified period for the development and operation of the unitized land. Subsequent plans should normally be filed on a calendar year basis not later than March 1 each year. Any proposed modification or addition to the existing plan should be filed as a supplement to the plan.

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

- (a) Specify the number and locations of any wells to be drilled and the proposed order and time for such drilling; and
- (b) Provide a summary of operations and production for the previous year.

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 and operation. The AO and the Land Commissioner are authorized to grant a reasonable extension of the 6-month period herein prescribed for submission of an initial plan of development and operation where such action is justified because of unusual conditions or circumstances.

After completion 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 and such as may be specifically approved by the AO, the Land Commissioner, and State Division, shall be drilled except in accordance with an approved plan of development and operation.

11. PARTICIPATION AFTER DISCOVERY. Upon completion of a well capable of producing unitized substances in paying quantities, or as soon thereafter as required by the AO, the Land Commissioner, and State Division, the Unit Operator shall submit for approval by the AO, the Land Commissioner and State Division a schedule, based on subdivisions of the public-land survey or aliquot parts thereof, of all land then regarded as reasonably proved to be productive of unitized substances in paying quantities. These lands shall constitute a participating area on approval of the AO, the Land Commissioner and State Division effective as of the date of completion of such well or the effective date of this 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 each initial participating area. The schedule shall also set forth the percentage of unitized substances to be allocated, as provided in Section 12, to each committed tract in the participating area so established, and shall govern the allocation of production commencing with the effective date of the participating area. A different participating area shall be established for each separate pool or deposit of unitized substances or for any group thereof which is produced as a single pool or zone, and any two or more participating areas so established may be combined into one, on approval of the AO, the Land Commissioner and State Division. When production from two or more participating areas is subsequently found to be from a common pool or deposit, the participating areas shall be combined into one, effective as of such appropriate date as may be approved or prescribed by the AO, the Land Commissioner and State Division. The participating area or areas so established shall be revised from time to time, subject to the approval of the AO, the Land Commissioner, and State Division, to include additional lands then regarded as reasonably proved to be productive of unitized substances in paying quantities or which are necessary for unit operations, or to exclude lands then regarded as reasonably proved not to be productive of unitized substances in paying quantities, and the schedule of allocation percentages shall be revised accordingly. The effective date of any revision shall be the first of the month in which the knowledge or information is obtained on which such revision is predicated; provided, however, that a more appropriate effective date may be used if justified by Unit Operator and approved by the AO, the Land Commissioner, and State Division. No land shall be excluded from a participating area on account of depletion of its unitized substances, except that any participating area established under the provisions of this unit agreement shall terminate automatically whenever all completions in the formation on which the participating area is based are abandoned.

It is the intent of this section that a participating area shall represent the area productive of unitized substances known or reasonably proved to be productive in paying quantities or which are necessary for unit operations; 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 AO, the Land Commissioner and State Division as to the proper definition or redefinition of a participating area, or until a participating area has, or areas have, been established, the portion of all payments affected thereby shall, except royalty due the United States, be impounded in a manner mutually acceptable to the owners of committed working interests and the Land Commissioner. Royalties due the United States shall be determined by the AO for Federal Lands and the Land Commissioner for State Lands and the amount thereof shall be deposited, as directed by the AO and the Land Commissioner, until a participating area is finally approved and then adjusted 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 AO, the Land Commissioner, and State Division that a well drilled under this agreement is not capable of production of unitized substances in paying quantities and inclusion in a participating area 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, unless such land is already within the participating area established for the pool or deposit from which such production is obtained. Settlement for working interest benefits

from such a nonpaying unit 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, and other production or development purposes, for repressuring or recycling in accordance with a plan of development and operations which has been approved by the AO, Land Commissioner, and State Division, 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. 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 the 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 the latter 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 such area was defined at the time that such transferred gas was finally produced and sold.

13. DEVELOPMENT OR OPERATION OF NONPARTICIPATING LAND OR FORMATIONS. Any party hereto owning or controlling the working interest in any unitized land having hereon a regular well location may with the approval of the AO and the Land Commissioner, and Division, at such party's sole risk, costs, and expense, drill a well to test any formation provided the well is outside any participating area established for that formation, 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 the well in a like manner as other wells are drilled by the Unit Operator under this agreement.

If any well drilled under this section by a working interest owner results in production of unitized substances in paying quantities 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 under this section by a working interest owner that obtains production in quantities insufficient to justify the inclusion of the land upon which such well is situated in a participating area, 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 any royalty owner who is entitled to take in kind a share of the substances now unitized hereunder shall hereafter be entitled to the right to take in kind its share of the unitized substances, and Unit Operator, or the working interest owner in case of the operation of a well by a working interest owner as herein provided for in special cases, 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, or by the Unit Operator on or before the last day of each month for unitized substances produced during the preceding calendar month; provided, however, that nothing in this section 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, in conformity with a plan of development and operation approved by the AO and the Land Commissioner, a like amount of gas, after settlement as herein provided for any gas transferred from any other participating area and with appropriate deduction for loss from any cause, may be withdrawn from the formation into which the gas is introduced, royalty free as to dry gas, but not as to any products which may be extracted therefrom; provided that such withdrawal shall be at such time as may be provided in the approved plan of development and operation or as may otherwise be consented to by the AO and the Land Commissioner and Division, 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 30 CFR Part 221 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 in Section 12 at the rates specified in the respective Federal leases, or at such other rate or rates as may be authorized by law or regulation and approved by the AO; 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 appropriate working interest owners 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 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 are commenced upon the land covered thereby within the time therein specified or rentals are 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 until 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 measures as the AO and Land Commissioner deems appropriate and adequate to prevent drainage of unitized substances from unitized land by wells on land not subject to this agreement, which shall include the drilling of protective wells and which may include the payment of a fair and reasonable compensatory royalty, as determined by the AO.

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 on lands committed to this agreement are hereby expressly modified and amended to the extent necessary to make the same conform to the provisions hereof, but otherwise to remain in full force and effect; and the parties hereto hereby consent that the Secretary, as to Federal leases, and the Land 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 separately owned tract subject to this agreement, regardless of whether there is any development of any particular tract of this unit area.

(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 AO and the Land Commissioner, or his duly authorized representative, shall be deemed to constitute such suspension pursuant to such direction or consent as to each and every tract of unitized land. A suspension of drilling or producing operations limited to specified lands shall be applicable only to such lands.

(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 and the State of New Mexico 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 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 of unitized substances in paying quantities is established 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 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 2 years, and so long thereafter as oil or gas is produced in paying quantities in accordance with the provisions of the Mineral Leasing Act, as amended.

(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 herein 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, provided that drilling operations on the initial test well are commenced prior to the expiration date of any State lease within the unit area, subject to the provisions of subsection (e) of Section 2 and subsection (i) of this Section 18.

(h) The segregation of any Federal lease committed to this agreement is governed by the following provision in the fourth paragraph of Section 17(j) of the Mineral Leasing Act, as amended by the Act of September 2, 1960 (74 Stat. 781-784) (30 U.S.C. 226(j)):

"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 nonunitized 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 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.

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

19. COVENANTS RUN WITH LAND. The covenants herein shall be construed to be covenants running with the land with respect to the 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 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 AO and the Land Commissioner, or his duly authorized representative, and shall automatically terminate 5 years from said effective date unless:

(a) upon application by the Unit Operator such date of expiration is extended by the AO and the Land 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 this agreement on such ground is given by the Unit Operator to all parties in interest at their last known addresses, this agreement is terminated with the approval of the AO and the Land Commissioner, or

(c) a valuable discovery of unitized substances in paying quantities has been made or accepted on unitized land during said initial term or any extension thereof, in which event this agreement shall remain in effect for such term and so long thereafter as unitized substances can be produced as to Federal Lands and are being produced as to State Lands in quantities sufficient to pay for the cost of producing same from wells on unitized land within any participating area established hereunder. Should production cease and diligent drilling operations to restore production or new production are not in progress or reworking within 60 days and production is not restored or should new production not be obtained in paying quantities on committed lands within this unit area, this agreement will automatically terminate effective the last day of the month in which the last unitized production occurred, or

(d) it is voluntarily terminated as provided in this agreement. Except as noted herein, this agreement may be terminated at any time prior to the discovery of unitized substances which can be produced in paying quantities by not less than 75 per centum, on an acreage basis, of the working interest owners signatory hereto, with the approval of the AO and the Land Commissioner. The Unit Operator shall give notice of any such approval to all parties hereto. Voluntary termination may not occur during the first 6 months of this agreement unless at least one obligation well shall have been drilled in conformance accordance with Section 9.

21. RATE OF PROSPECTING, DEVELOPMENT, AND PRODUCTION. The AO 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 are not fixed pursuant to Federal or State law, or do not conform to any Statewide voluntary conservation or allocation program which is established, recognized, and generally adhered to by the majority of operators in such State. The above authority is hereby limited to alteration or modifications which are in the public interest. The public interest to be served and the purpose thereof, must be stated in the order of alteration or modification. Without regard to the foregoing, the AO 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 Division.

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

22. APPEARANCES. Unit Operators 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 and the Commissioner of Public Lands and to appeal from orders issued under the regulations of said Department or Land Commissioner, or to apply for relief from any of said regulations, or in any proceedings relative to operations before the Department of the Interior, or the Land Commissioner, or any other legally constituted authority; provided, however, that any other interested party shall also have the right at its own expense to be heard in any such proceeding.

23. NOTICES. All notices, demands, or statements required hereunder to be given or rendered to the parties hereto shall be in writing and shall be personally delivered to the party or parties, or sent by postpaid registered or certified mail, to the last-known address of the party or parties.

24. NO WAIVER OF CERTAIN RIGHTS. Nothing contained in this agreement 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 where the 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.

25. 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 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 or equipment in the open market, or other matters beyond the reasonable control of the Unit Operator, whether similar to matters herein enumerated or not.

26. NONDISCRIMINATION. In connection with the performance of work under this agreement, the Unit Operator agrees to comply with all the provisions of

Section 202 (1) to (7) inclusive, of Executive Order 11246 (30 FR 12319), as amended, which are hereby incorporated by reference in this agreement.

27. 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 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 lands or leases, no payments of funds due the United States or the State of New Mexico shall be withheld, but such funds shall be deposited as directed by the AO as to Federal lands, and such funds of the State of New Mexico shall be deposited as directed by the Land 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.

28. NONJOINDER 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 the tract from this agreement by written notice delivered to the proper BLM office, the Land Commissioner, the State Division and the Unit Operator prior to the approval of this agreement by the AO and Land Commissioner. Any oil or gas interests in lands within the unit area not committed hereto prior to 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 approval(s), if any, pertaining to such joinder, as may be provided for in the unit operating agreement. After a final approval hereof, joinder by a nonworking 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 nonworking interest. A nonworking interest may not be committed to this unit agreement unless the corresponding working interest is 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, in order for the interest to be regarded as committed to this agreement. Except as may otherwise herein be provided, subsequent joinders to this agreement shall be effective as of the date of the filing with the AO, the Land Commissioner, and the State Division of duly executed counterparts of all or any papers necessary to establish effective commitment of any interest and/or tract to this agreement.

29. COUNTERPARTS. This agreement may be executed in any number of counterparts, no one of which need 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 with the above-described unit area.

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

If as a result of any such surrender, the working interest rights as to such lands become vested in any party other than the fee owner of the unitized substances, said party may forfeit such rights and further benefits from operations hereunder as to said land to the party next in the chain of title who shall be and become the owner of such working interest.

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

- (a) accept those working interest rights subject to this agreement and the unit operating agreement; or
- (b) lease the portion of such land as is included in a participating area established hereunder subject to this agreement and the unit operating agreement; or
- (c) provide for the independent operation of any part of such land that is not then included within a participating area established hereunder.

If the fee owner of the unitized substances does not accept the working interest rights subject to this agreement and the unit operating agreement or lease such lands as above provided with 6 months after the surrendered or forfeited, working interest rights become vested in the fee owner; the benefits and obligations of operations accruing to such lands under this agreement and the unit operating agreement shall be shared by the remaining owners of unitized working interests in accordance with their respective working interest ownerships, and such owners of working interests shall compensate the fee owner of unitized substances in such lands by paying sums equal to the rentals, minimum royalties, and royalties applicable to such lands under the lease in effect when the lands were unitized.

An appropriate accounting and settlement shall be made for all benefits accruing to or payments and expenditures made or incurred on behalf of such surrendered or forfeited working interests subsequent to the date of surrender or forfeiture, and payment of any moneys found to be owing by such an accounting shall be made as between the parties within 30 days.

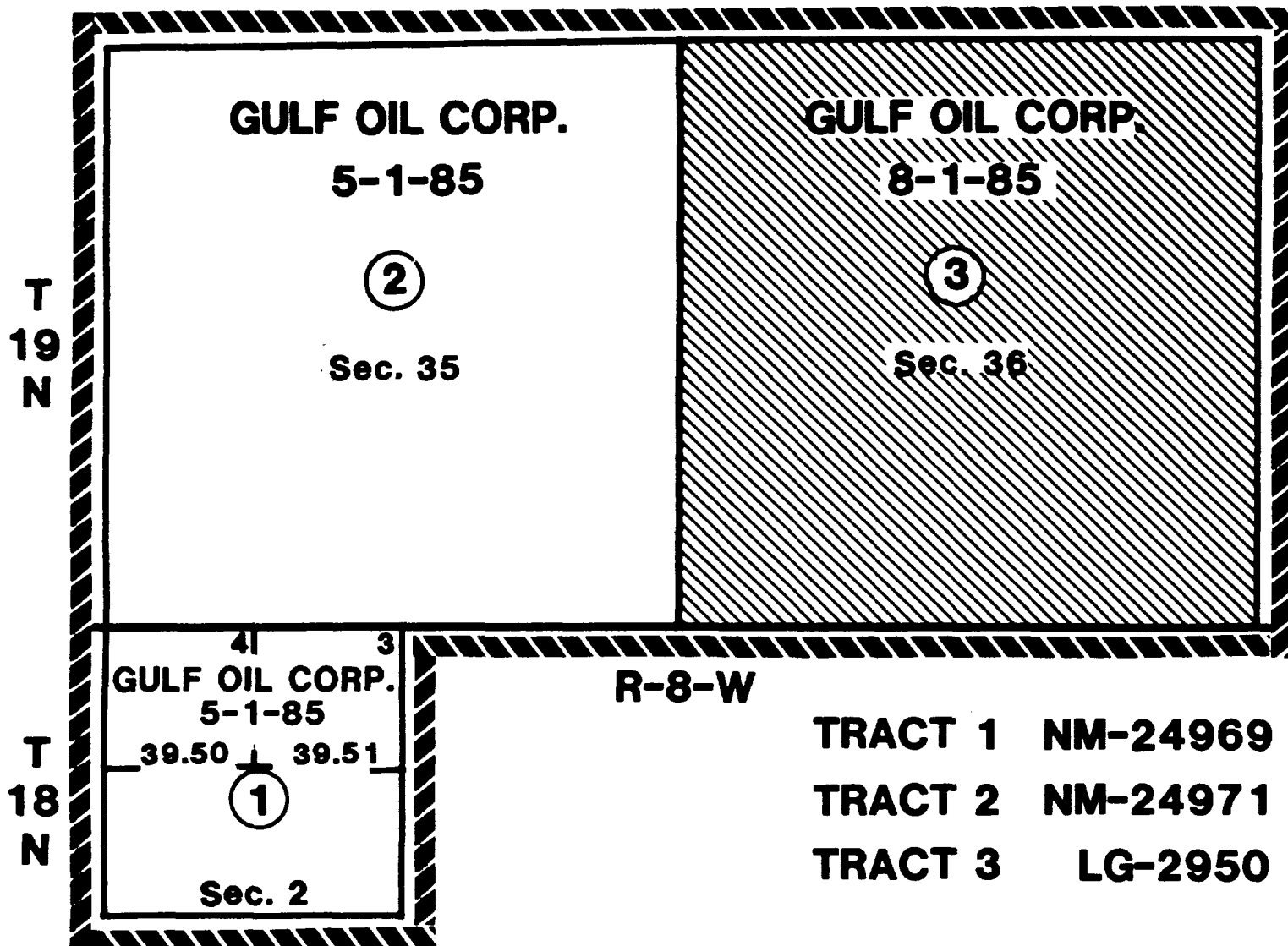
The exercise of any right vested in a working interest owner to reassign such working interest to the party from whom obtained shall be subject to the same conditions as set forth in this section in regard to the exercise of a right to surrender.



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

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

33. SURFACE AND ENVIRONMENTAL PROTECTION STIPULATIONS. Nothing in this agreement shall modify or change either the special Federal Lease stipulations relating to surface management or such special Federal Lease stipulations relating to surface and environmental protection, attached to and made a part of Oil and Gas leases covering lands within the Unit Area.

EXHIBIT "A"



	ACREAGE	PERCENTAGE
 FEDERAL LAND	799.01	55.52%
 STATE LAND	640.00	44.48%
TOTAL	1,439.01	100%

 **UNIT OUTLINE** **①** **TRACT NUMBER**

**NORTH HOSPAH
FEDERAL STATE UNIT
McKINLEY COUNTY, NEW MEXICO
T-19-N R-8-W
T-18-N R-8-W
GULF OIL CORPORATION
MIDLAND, TEXAS**

SCALE IN MILES

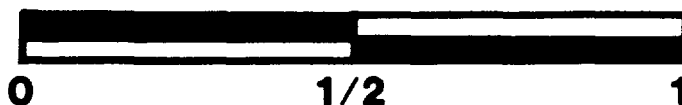


EXHIBIT "B"

SCHEDULE OF LANDS AND LEASES
NORTH HOSPAH FEDERAL-STATE UNIT
MCKINLEY COUNTY, NEW MEXICO

Tract No.	Description	Acres	Serial No. and Expiration Date	Basic Royalty & Percentage	Lessee of Record & Percentage	Overriding Royalty and Percentage	Working Interest and Percentage
1	T-18-N, R-8-W Section 2: Lots 3&4, S/2NW/4	159.01	NM-24969 5-1-85	12.5% U.S.A.	Gulf Oil Corporation 100%	Howard T. Keefe 3%	Gulf Oil Corporation 100%
2	T-19-N, R-8-W Section 35: All	640.00	NM-24971 5-1-85	12.5% U.S.A.	Gulf Oil Corporation 100%	Maurice W. Brown, et ux 1.5% Joan Chorney 1.5%	Gulf Oil Corporation 100%
3	T-19-N, R-8-W Section 36: All	640.00	LG-2950 8-1-85	12.5% State of New Mexico	Gulf Oil Corporation 100%	None	Gulf Oil Corporation 100%

TOTAL FEDERAL LANDS IN UNIT - 799.01 ACRES OR 55.52% OF UNIT AREA

TOTAL STATE LANDS IN UNIT - 640.00 ACRES OR 44.48% OF UNIT AREA

3 TRACTS TOTALING 1,439.01 ACRES IN UNIT AREA



United States Department of the Interior

BUREAU OF LAND MANAGEMENT ALBUQUERQUE DISTRICT OFFICE

505 Marquette, N.W.
P.O. Box 6770
Albuquerque, New Mexico 87197-6770

IN REPLY REFER TO:

North Hospah
Federal State
Unit (015)

FEB 20 1985

RECEIVED

FEB 25 1985

LAND DEPT.
Midland, TX

Gulf Oil Corporation
Attention: Charles D. Frisbie
P.O. Box 1150
Midland, Texas 79702

BEFORE EXAMINER STOOVER OIL POLLUTION DIVISION	
GULF	EXHIBIT NO. 3
CASE NO.	4892

Gentlemen:

Your application of February 7, 1985, filed with the District Manager, Albuquerque, requests the designation of the North Hospah Federal State unit area, embracing 1,439.01 acres, more or less, McKinley County, New Mexico, as logically subject to exploration and development under the unitization provisions of the Minerals Leasing Act as amended.

Pursuant to unit plan regulations 43 CFR 3180, the land requested as outlined on your plat marked "Exhibit "A" North Hospah Federal State Unit" is hereby designated as a logical unit area.

The unit agreement submitted for the area designated should provide for a well to test the Entrada, or to a depth of 4,700 feet. Your proposed use of the Form of Agreement for Unproved areas will be accepted with the modifications requested in your application.

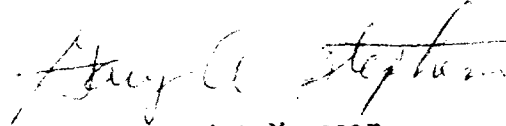
If conditions are such that further modification of said standard form is deemed necessary, three copies of the proposed modifications with appropriate justification must be submitted to this office through the District Manager for preliminary approval.

In the absence of any other type of land requiring special provisions or of any objections not now apparent, a duly executed agreement identical with said form modified as outlined above, will be approved if submitted in approvable status within a reasonable period of time. However, notice is hereby given that the right is reserved to deny approval of any executed agreement submitted which, in our opinion, does not have the full commitment of sufficient lands to afford effective control of operations in the unit area.

Please include the latest status of all acreage when the executed agreement is submitted for final approval. The format of the sample exhibits attached to the model unit agreement (43 CFR 3186.1) should be followed closely in the preparation of Exhibits A and B. A minimum of four copies of the executed agreement should be submitted with your request for final approval.

Inasmuch as this unit agreement involves State land, we are sending a copy of the letter to the Commissioner of Public Lands, Santa Fe, New Mexico. Please contact the State of New Mexico before soliciting joinders regardless of prior contacts or clearances from the State.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Stanley A. Stephens".

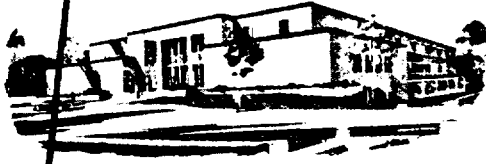
For District Manager



RECEIVED State of New Mexico

FEB 21 1985

TRADE NEGOTIATIONS
UNIT
MIDLAND, TX



JIM BACA
COMMISSIONER

Commissioner of Public Lands

February 18, 1985

Gulf Oil Exploration and Production Company
P. O. Box 1150
Midland, Texas 79702



P.O. BOX 1148
SANTA FE, NEW MEXICO 87504-1148
Express Mail Delivery Used
310 Old Santa Fe Trail
Santa Fe, New Mexico 87501

Re: Proposed North Hospah Federal
State Unit covering lands in
McKinley County, New Mexico

ATTENTION: Mr. Charles D. Frisbie

Gentlemen:

This office has reviewed the unexecuted copy of unit agreement for the proposed North Hospah Federal State Unit, McKinley County, New Mexico. This agreement meets the general requirements of the Commissioner of Public Lands and has this date granted you preliminary approval as to form and content.

Preliminary approval shall not be construed to mean final approval of this agreement in any way and will not extend any short-term leases, until final approval and an effective date have been given. Also, any well commenced prior to the effective date of this agreement which penetrates its objective horizon prior to said effective date shall not be construed as the initial test well.

When submitting your agreement for final approval please submit the following:

1. Application for formal approval by the Commissioner setting forth the tracts that have been committed and the tracts that have not been committed.
2. All ratifications from the Lessees of Record and Working Interest Owners. All signatures should be acknowledged before a notary and one set must contain original signatures.
3. Order of the New Mexico Oil Conservation Division and the Designation from the Bureau of Land Management. Our approval will be conditioned upon subsequent favorable approval by the New Mexico Oil Conservation Division and the Bureau of Land Management.

BEFORE EXAMINER STOOGER OIL CONSERVATION DIVISION	
Gulf	ESSEX NO. 4
CASE NO.	4892

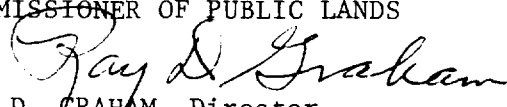
Gulf Oil Exploration and Prod. Co.
February 18, 1985
Page 2

Your filing fee in the amount of Ninety (\$90.00) Dollars has been received.

If we may be of further help please do not hesitate to call on us.

Very truly yours,

JIM BACA
COMMISSIONER OF PUBLIC LANDS

BY: 
RAY D. GRAHAM, Director
Oil and Gas Division
AC 505/827-5744

JB/RDG/pm

cc: OCD-Santa Fe, New Mexico
 BLM-Albuquerque, New Mexico
 BLM-Roswell, New Mexico

BEFORE EXAMINATION OF OIL AND GAS
OIL CONSERVATION AND DEVELOPMENT

Gulf EXAMINER NO. *HH*

CASE NO. 4892

GEOLOGIC COMMENTS AND PROGNOSIS

Re: N. Hospah Federal-State Unit
T19N, R8W, Sections 35 and 36
T18N, R8W, Lots 3 and 4 and
S/2 of NW/4 Section 2

Gulf Oil Corporation plans to drill a 4,700' Entrada Test (T19N, R8W, SW $\frac{1}{4}$ of Section 36) within the proposed 1439.01 acre N. Hospah Federal-State Unit. This unit is situated on the Chaco Slope of the southeastern margin of the San Juan Basin. Geographically, this unit is located approximately 50 miles SE of Cuba, New Mexico and 40 miles NE of Bluewater, New Mexico.

Based on subsurface and seismic mapping, Gulf has outlined two objectives for this prospect; The Jurassic Age Entrada formation and the Cretaceous Age Hospah Sandstone member of the Gallup Formation.

Seismic mapping has delineated a Jurassic Age Eolian Sand Dune which was formed in a topographic basin that subsequently became filled with lacustrine limestones and anhydrite. Hydrocarbon entrapment is stratigraphically provided by topographic relief on the dune, hydrodynamic drive, and the overlying anhydrite of the Todilto formation. Hydrocarbon generation occurred in the overlying lacustrine limestones with subsequent migration into the eolian sandstones. The expected productive limits are based on analagous production from Media, Snake Eyes, and Leggs fields where approximately the southern half of the Dune is productive.

The second objective, the Hospah sandstone, calls for stratigraphic entrapment of hydrocarbons in offshore marine bar sandstones situated on the northeast plunge of the Hospah anticline. Interbar sedimentation, shales and siltstones, provide a permeability barrier trapping mechanism. Hydrocarbon generation occurred in marine shales (Mancos formation) with subsequent migration along the anticlinal axis into bar sandstones. The expected productive limits were determined by both the structural configuration (limiting datum of +4475 feet) and areal distribution of the reservoir facies (limiting net sandstone value of 25 feet).

The outline of the proposed N. Hospah Federal-State Unit includes all quarter sections which fall 50% or more within the combined expected productive limits.

Our proposed well will test the most favorable location in the unit where both objectives can be evaluated. Expected formation tops are as follows: