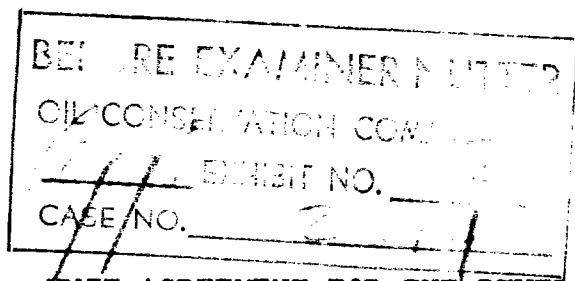


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UNIT AGREEMENT FOR THE DEVELOPMENT

AND OPERATION OF

THE KEEL DEEP UNIT AREA,

EDDY COUNTY, NEW MEXICO

INDEX

<u>Section</u>	<u>Title</u>	<u>Page</u>
1.	ENABLING ACT AND REGULATIONS	2
2.	UNIT AREA	2
3.	UNITIZED LAND AND SUBSTANCES	5
4.	UNIT OPERATOR	6
5.	RESIGNATION OR REMOVAL OF UNIT OPERATOR	6
6.	SUCCESSOR UNIT OPERATOR	7
7.	ACCOUNTING PROVISIONS AND UNIT OPERATING AGREEMENT	8
8.	RIGHTS AND OBLIGATIONS OF UNIT OPERATOR	9
9.	DRILLING TO DISCOVERY	9
10.	PLAN OF FURTHER DEVELOPMENT AND OPERATION	10
11.	PARTICIPATION AFTER DISCOVERY	11
12.	ALLOCATION OF PRODUCTION	13
13.	DEVELOPMENT OR OPERATION OF NONPARTICIPATING LAND OR FORMATIONS	14
14.	ROYALTY SETTLEMENT	15
15.	RENTAL SETTLEMENT	16
16.	CONSERVATION	17
17.	DRAINAGE	17
18.	LEASES AND CONTRACTS CONFORMED AND EXTENDED	17
19.	COVENANTS RUN WITH LAND	20
20.	EFFECTIVE DATE AND TERM	20
21.	RATE OF PROSPECTING, DEVELOPMENT, AND PRODUCTION	21
22.	CONFLICT OF SUPERVISION	22
23.	APPEARANCES	22
24.	NOTICES	23
25.	NO WAIVER OF CERTAIN RIGHTS	23
26.	UNAVOIDABLE DELAY	23
27.	FAIR EMPLOYMENT	24
28.	LOSS OF TITLE	24
29.	NON-JOINDER AND SUBSEQUENT JOINDER	25
30.	COUNTERPARTS	26
31.	SURRENDER	26

UNIT AGREEMENT  
FOR THE DEVELOPMENT AND OPERATION  
OF THE  
KEEL DEEP UNIT AREA  
COUNTY OF EDDY,  
STATE OF NEW MEXICO.  
NO. \_\_\_\_\_

THIS AGREEMENT, entered into as of the \_\_\_\_\_ day of \_\_\_\_\_, 1961, 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. Secs. 181 et seq., authorizes Federal lessees and their representatives to unite with each other, or jointly or separately with others, in collectively adopting and operating a cooperative or unit plan of development or operation of any oil or gas pool, field, or like area, or any part thereof for the purpose of more properly conserving the natural resources thereof whenever determined and certified by the Secretary of the Interior to be necessary or advisable in the public interest; and

WHEREAS, the Commissioner of Public Lands of the State of New Mexico is authorized by an Act of the Legislature (Chap. 88, Laws 1943) to consent to or approve this agreement on behalf of the State of New Mexico, 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 law (Chap. 72, Laws of 1935, as amended by Chap. 193, Laws of 1937, Chap. 166, Laws of 1941, and Chap. 168, Laws of 1949) to approve this agreement, and the conservation provisions hereof; and

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

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

New Mexico Principal Meridian, New Mexico

Township 17 South, Range 31 East

Section 3:	All
Section 4:	All
Section 5:	All
Section 6:	All
Section 7:	All
Section 8:	All
Section 9:	All
Section 10:	All
Section 16:	$N\frac{1}{2}$ & $SE\frac{1}{4}$
Section 17:	$N\frac{1}{2}$
Section 18:	$N\frac{1}{2}$

situated in Eddy County, New Mexico, and containing  
6,155.45 acres.

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 Commissioner of Public Lands, hereinafter referred to as "Commissioner", and not less than six copies of the revised exhibits shall be filed with the Supervisor, and at least one copy 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 5 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 5-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 10-year period specified in this subsection 2(e), a single extension of not to exceed 2 years may be accomplished by consent of the owners of 90% of the current unitized working interests and 60% of the current unitized basic royalty interests (exclusive of the basic royalty interests of the United States), on a total-nonparticipating-acreage basis, respectively, with approval of the Director and the Commissioner, provided such extension application is submitted to the Director and the Commissioner not later than 60 days prior to the expiration of said 10-year period.

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 oil and gas in the hereinabove specified lands committed to this agreement, as to all formations below the top of the Glorieta sand of upper Leonard age are unitized under the terms of this agreement and herein are designated "Unitized Substances" and said lands are referred to herein as "Unitized Land" or "Land Subject to this Agreement". For the purposes of this agreement, the Glorieta sandstone shall be construed to mean the sandstone, the top of which is found at a depth

of 4,857 feet in the Skelly No. 6 Lynch "A" well located 660 feet from the north and west lines of Section 22, T. 17 S., R. 31 E., N.M.P.M., as shown by the Schlumberger electric log of said well.

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

5. RESIGNATION OR REMOVAL OF UNIT OPERATOR. Unit Operator shall have the right to resign at any time prior to the establishment of a participating area or areas hereunder, but such resignation shall not become effective so as to release Unit Operator from the duties and obligations of Unit Operator and terminate Unit Operator's rights as such for a period of 6 months after notice of intention to resign has been served by Unit Operator on all working interest owners, the Director, the Commissioner and the 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 the Commission as to State 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 resig-



nation 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 preservation of any wells.

6. SUCCESSOR UNIT OPERATOR. Whenever the Unit Operator shall tender his or its resignation as Unit Operator or shall be removed as hereinabove provided, 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 interests according to their respective acreage interests in all unitized land, shall by majority vote select a successor Unit Operator: Provided, That, if a majority but less than 75 per cent of the working interests qualified to vote are owned by one party to this agreement, a concurring vote of one or more additional working

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

9. DRILLING TO DISCOVERY. Within 6 months after the effective date hereof, the Unit Operator shall begin to drill an adequate test well at a location approved by the Supervisor if 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 Devonian formation has been tested or until at a lesser depth unitized substances shall be discovered which can be produced in paying quantities (to-wit: quantities sufficient to repay the costs of drilling, and producing operations, with a reasonable profit) or the Unit Operator shall at any time establish to the satisfaction of the Supervisor if on Federal land or of the Commissioner if on State land, 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 13,700 feet. Until the discovery of a deposit of unitized substances capable of being produced in paying quantities, the Unit Operator shall continue drilling diligently one well at a time, allowing not more than 6 months between the completion of one well and the beginning of

the next well, until a well capable of producing unitized substances in paying quantities is completed to the satisfaction of said Supervisor if on Federal land or of 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 the 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 the Commissioner may, after reasonable notice to the Unit Operator, and each working interest owner, lessee, and lessor at their last known addresses, declare this unit agreement terminated.

10. PLAN OF FURTHER DEVELOPMENT AND OPERATION. Within 6 months after completion of a well capable of producing unitized substances in paying quantities, the Unit Operator shall submit for the approval of the Supervisor 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 locations of any wells to be drilled and the proposed order and time for such drilling; and

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

11. PARTICIPATION AFTER DISCOVERY. Upon completion of a well capable of producing unitized substances in paying quantities or as soon thereafter as required by the Supervisor or the Commissioner, the Unit Operator shall submit for approval by the Director and the Commissioner a schedule, based on subdivisions of the public-land survey or aliquot parts thereof as to Federal land, and, as to non-Federal lands, 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, 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 as to State lands, respectively, and the amount thereof deposited, as directed by the Supervisor and the Commissioner, respectively, to be held as unearned money until a participating area is finally approved and then applied as earned or returned in accordance with a determination of the sum due as Federal and State royalty on the basis of such approved participating area.

Whenever it is determined, subject to the approval of the Supervisor as to wells on Federal land and the Commissioner as to wells 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 the 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 if on Federal land or of the Commissioner if on State land, at such party's sole risk, costs, 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 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, the Commissioner and the Commission, a like amount of gas, after settlement as herein provided for any gas transferred from any other participating area and with due allowance for loss or depletion from any cause, may be withdrawn from the formation into which the gas was introduced, royalty free as to dry gas, but not as to the products extracted therefrom; provided that such withdrawal shall be at such time as may be provided in the plan of operations or as may otherwise be consented to by the Supervisor, the Commissioner and the Commission, as conforming to good petroleum engineering practice; and provided further, that such right of withdrawal shall terminate on the termination of this unit agreement.

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

16. CONSERVATION. Operations hereunder and production of unitized substances shall be conducted to provide for the most economical and efficient recovery of said substances without waste, as defined by or pursuant to State or Federal law or regulation.

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

(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) The segregation of any Federal lease committed to this agreement is governed by the following provision in the fourth paragraph of Sec. 17(j) of the Act, as amended by the Act of Sept. 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 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."

(h) Any lease, sublease or contract 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.

(i) 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. 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 and gas, or either of them, are 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 or applicable shut-in gas royalty is paid in accordance with the terms of 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 and gas, or either of them, said lease shall continue in full force and effect as to all of the lands embraced therein so long thereafter as oil and gas, or either of them, in paying quantities are being produced from any portion of said lands. *See Ex 1-A for details*

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 the Commissioner; or

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

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

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

21. RATE OF PROSPECTING, DEVELOPMENT, AND PRODUCTION. The Director is hereby vested with authority to alter or modify from time to time in his discretion the quantity and rate of production under this agreement when such quantity and rate is not fixed pursuant to Federal or State law or does not conform to any state-wide voluntary conservation or allocation program, which is established, recognized, and generally adhered to by the majority of operators in such State, such authority being hereby limited to alteration or

modification in the public interest, the purpose thereof and the public interest to be served thereby to be stated in the order of alteration or modification. Without regard to the foregoing, the Director is also hereby vested with authority to alter or modify from time to time in his discretion the rate of prospecting and development and the quantity and rate of production under this agreement when such alteration or modification is in the interest of attaining the conservation objectives stated in this agreement and is not in violation of any applicable Federal or State law. It is agreed further that no such alteration or modifications shall be effective as to any land of the State of New Mexico as to the rate of prospecting and development in the absence of the specific written approval thereof by the Commissioner and as to the quantity and rate of production in the absence of specific approval thereof by the Commission.

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

22. CONFLICT OF SUPERVISION. Neither the Unit Operator nor the working interest owners nor any of them shall be subject to any forfeiture, termination or expiration of any rights hereunder or under any leases or contracts subject hereto, or to any penalty or liability on account of delay or failure in whole or in part to comply with any applicable provision thereof to the extent that the said Unit Operator, working interest owners or any of them are hindered, delayed or prevented from complying therewith by reason of failure of the Unit Operator to obtain, in the exercise of due diligence, the concurrence of proper representatives of the United States and of the State of New Mexico in and about any matters or things concerning which it is required herein that such concurrence be obtained.

23. 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 and the New Mexico Oil

Conservation Commission, and to appeal from orders issued under the regulations of said Department, the said Commissioner or the said Commission, or to apply for relief from any of said regulations or in any proceedings relative to operations before the Department of the Interior, the said Commissioner or the said 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.

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

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

26. UNAVOIDABLE DELAY. All obligations under this agreement requiring the Unit Operator to commence or continue drilling or to operate on or produce unitized substances from any of the lands covered by this agreement shall be suspended while, but only so long as, the Unit Operator despite the exercise of due care and diligence is prevented from complying with such obligations, in whole or in part, by strikes, acts of God, Federal, State, or municipal law or agencies, unavoidable accidents, uncontrollable delays in transportation, inability to obtain necessary materials in open market, or other matters beyond the reasonable control of the Unit Operator whether similar to matters herein enumerated or not.



27. FAIR EMPLOYMENT. In connection with the performance of work under this agreement, the operator agrees not to discriminate against any employee or applicant for employment because of race, religion, color, or national origin. The aforesaid provision shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising, lay-off or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The operator agrees to post hereafter in conspicuous places, available for employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of the non-discrimination clause.

The operator agrees to insert the foregoing provisions in all subcontracts hereunder, except subcontracts for standard commercial supplies or raw materials.

28. LOSS OF TITLE. In the event title to any interest in any tract of unitized land shall fail and the true owner cannot be induced to join in this unit agreement, such interest in 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 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.

29. NON JOINDER AND SUBSEQUENT JOINDER. If the owner of any substantial interest in a tract within the unit area fails or refuses to subscribe or consent to this agreement, the owner of the working interest in that tract may withdraw said tract from this agreement by written notice to the Director, the Commissioner, and the Unit Operator prior to the approval of this agreement by the Director. 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 requirement 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 effectively 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 effectively 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, the Commissioner and the Commission, 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, the

Commissioner, or the Commission.

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

31. SURRENDER. Nothing in this agreement shall prohibit the exercise by any working interest owner of the right to surrender vested in such party in any lease, 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; provided, however, that no land included in this unit which is embraced in a State of New Mexico lease shall be surrendered to the State so long as this agreement is in effect.

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

If as the result of any such surrender or forfeiture the

working interest rights as to such lands become vested in the fee owner of the unitized substances, such owner may:

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

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

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

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

For any period the working interest in any lands are not expressly committed to the unit operating agreement as the result of any such surrender or forfeiture, the benefits and obligations of operations accruing to such lands under this agreement and the unit operating agreement shall be shared by the remaining owners of unitized working interests in accordance with their respective participating working interest ownerships in any such participating area or areas, and such owners of working interests shall compensate

the fee owner of unitized substances in such lands by paying sums equal to the rentals, minimum royalties, and royalties applicable to such lands under the lease in effect when the lands were unitized, as to such participating area or areas.

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

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

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

UNIT OPERATOR AND WORKING INTEREST OWNER

Date: \_\_\_\_\_

SINCLAIR OIL & GAS COMPANY

ATTEST:

By \_\_\_\_\_  
Vice President

\_\_\_\_\_  
Assistant Secretary

Address: P. O. Box 1470, Midland, Texas

OTHER WORKING INTEREST OWNERS

Date: \_\_\_\_\_ Bert Aston \_\_\_\_\_

Address: \_\_\_\_\_

Date: \_\_\_\_\_ R. W. Fair \_\_\_\_\_

Address: \_\_\_\_\_

Date: \_\_\_\_\_ FAIR OIL COMPANY

Address: By \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Date: \_\_\_\_\_ SUNRAY MID-CONTINENT OIL COMPANY

ATTEST: \_\_\_\_\_

\_\_\_\_\_ Secretary \_\_\_\_\_ President

Address: \_\_\_\_\_

Date: \_\_\_\_\_ HUMBLE OIL & REFINING COMPANY

ATTEST: \_\_\_\_\_

\_\_\_\_\_ Secretary \_\_\_\_\_ President

Address: \_\_\_\_\_

Date: \_\_\_\_\_ W. A. Yeager \_\_\_\_\_

Address: \_\_\_\_\_

Date: \_\_\_\_\_ J. M. Armstrong \_\_\_\_\_

Address: \_\_\_\_\_

Date: \_\_\_\_\_ C. T. McLaughlin \_\_\_\_\_

Address: \_\_\_\_\_

Date: \_\_\_\_\_ COSDEN PETROLEUM CORPORATION

ATTEST: \_\_\_\_\_

\_\_\_\_\_ Secretary \_\_\_\_\_ President

Address: \_\_\_\_\_

Date: \_\_\_\_\_

SOCONY MOBIL OIL COMPANY

ATTEST:

By \_\_\_\_\_  
President

\_\_\_\_\_  
Secretary

Address: \_\_\_\_\_

Date: \_\_\_\_\_

SHELL OIL COMPANY

ATTEST:

By \_\_\_\_\_  
President

\_\_\_\_\_  
Secretary

Address: \_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_

Address: \_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_

Address: \_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_

Address: \_\_\_\_\_

STATE OF TEXAS        }  
COUNTY OF MIDLAND    }

The foregoing instrument was acknowledged before me this  
\_\_\_\_\_ day of January, 1961, by R. L. ELSTON, Vice President of  
SINCLAIR OIL & GAS COMPANY, a Maine corporation.

My commission expires  
June 1, 1961.

\_\_\_\_\_  
Notary Public in and for  
Midland County, Texas

STATE OF \_\_\_\_\_ }  
COUNTY OF \_\_\_\_\_ }

The foregoing instrument was acknowledged before me this  
\_\_\_\_\_ day of \_\_\_\_\_, 1961, by \_\_\_\_\_  
and \_\_\_\_\_, his wife.

My commission expires:  
\_\_\_\_\_

\_\_\_\_\_  
Notary Public in and for  
County, \_\_\_\_\_



FEDERAL ACREAGE 5675.45  
 STATE ACREAGE 480.00  
 TOTAL ACREAGE 6155.45

UNIT BOUNDARY  
 TRACT NUMBER 2

STATE ACREAGE

ALL OTHER TRACTS IN THE UNIT  
 ARE FEDERAL ACREAGE

R-31-E

B-3014  
 HUMBLE 9

B-3105  
 HUMBLE 10

B-2613  
 HUMBLE 8

B-8095  
 SHELL 12

E-6015  
 MOBIL 11

C.T. McLAUGHLIN 1/4  
 COSDEN 1/4  
 W.A. YEAGER 1/4  
 J.M. ARMSTRONG 1/4

EXHIBIT "A"

KEEL DEEP UNIT

EDDY COUNTY, NEW MEXICO  
 SCALE 1" = 2000'

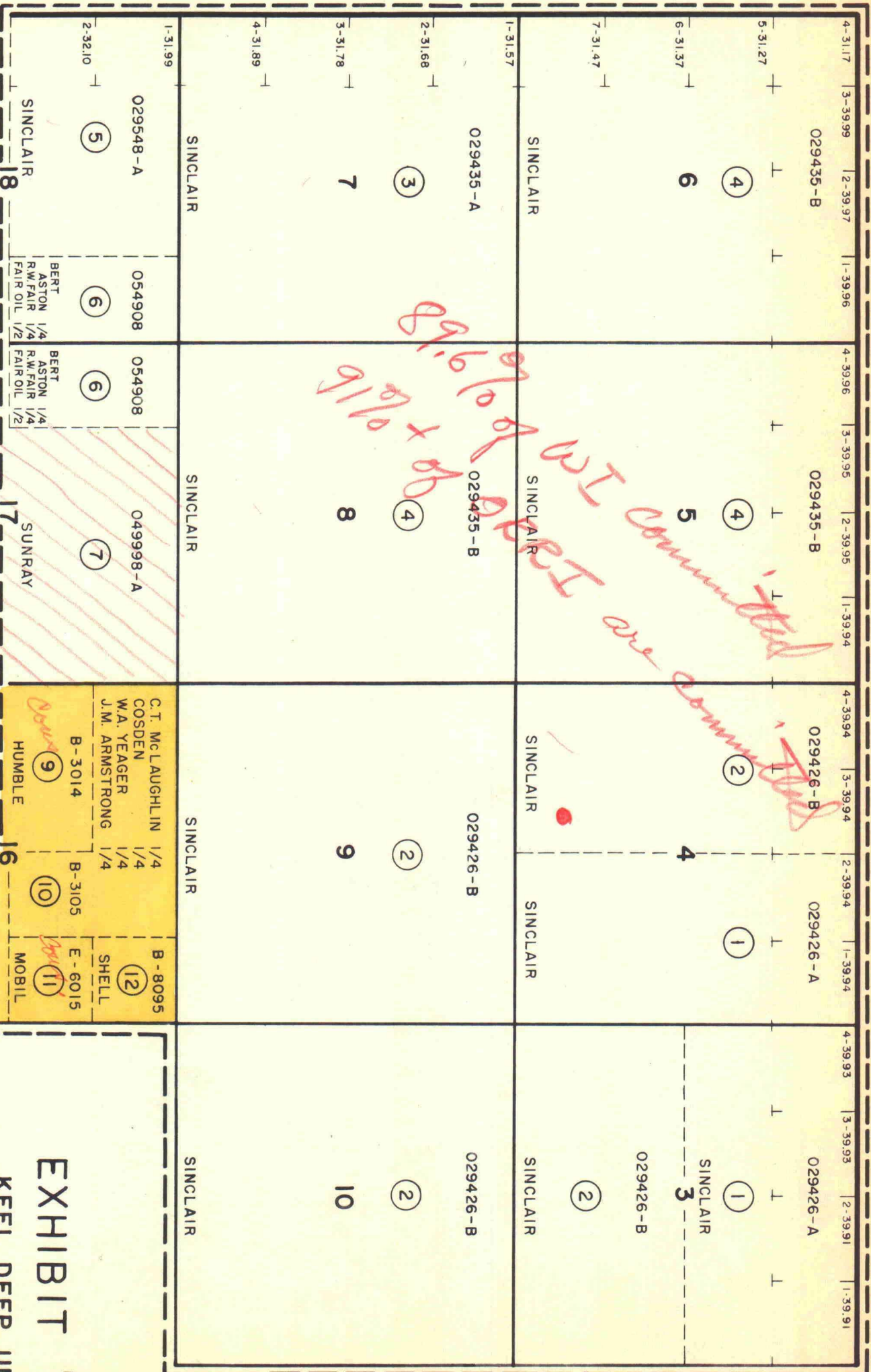
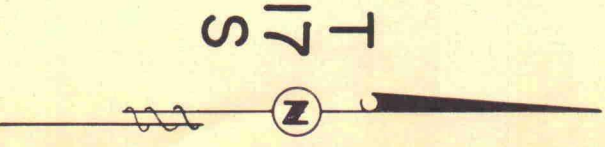




EXHIBIT B -- KEEL DEEP UNIT AREA, EDDY COUNTY, NEW MEXICO, T. 17 S., R. 31 E., N.M.P.M.

Tract No.	Description of Land	Number of Acres	Serial Number and Expiration Date of lease	Basic Royalty and Percentage	Lessee of Record	Overriding royalty and percentage	Working Interest and percentage
<b>FEDERAL LAND</b>							
1	Sec. 3: Lots 1, 2, 3, 4, S/2 N/2 Sec. 4: Lots 1, 2, S/2 NE/4, SE/4	639.56	Las Cruces Serials 029426-A 2-1-69	U. S. All	Sinclair Oil & Gas Company	R. A. Shugart 2%; Higgins Trust, Inc., 1.5%; Selma E. Andrews 53.705% of 1.5%, Albuquerque National Bank, Testamentary Trustee of Frank A. Andrews, deceased, 46.295% of 1.5%; Lillie M. Adams .5%; Eulalie May Stinebaugh .5%; Willie Ople Ham .5%; J. Louis Keel, Jr., .16-2/3%; Marian Keel Norton .16-2/3%; Ruth Keel Joyce .16-2/3%; Sabine Royalty Corporation .5%; Della West Decker 3/8 of 1%; William H. Eysen, Jr., 3/8 of 1%; Caroline Kuehna, 1/8 of 1%; Catherine Kuehna, 1/8 of 1%.	Sinclair Oil & Gas Company - 100%
2	Sec. 3: S/2 Sec. 4: Lots 3, 4, S/2 NW/4, SW/4 Sec. 9: All Sec. 10: All	1919.88	029426-B 3-16-61	U. S. All	Repollo Oil Company	Della West Decker, 3/8 of 1%; William H. Eysen, Jr. 3/8 of 1%; Caroline Kuehna, 1/8 of 1%; Catherine Kuehna, 1/8 of 1%	Sinclair Oil & Gas Company - 100%
3	Sec. 7: Lots 1, 2, 3, 4, E/2 W/2, E/2	606.92	029435-A 10-1-54 HRP	U. S. All	Sinclair Oil & Gas Company	Ruby Mellard .5%; J. Louis Keel, Jr. 1.5%; Marian Keel Norton 1.5%; Ruth Keel Joyce 1.5%; Higgins Trust, Inc., .5%; Pearl Carr 1%; Benedict Corporation .3%; P. Kenneth Wiseman, Trustee, .075%; Robert B. Moran .075%; Dwight Whiting .075%; Cornelius G. Willis .25%; L. W. Wickes Agent Corp., .15%; Janet D. O'Neil and Phillip O'Neil, Trustees, .075%.	Sinclair Oil & Gas Company - 100%

Tract No.	Description of Land	Number of Acres	Serial Number and Expiration Date of Lease	Basic Royalty and Percentage	Lessee of Record	Overriding royalty and percentage	Working Interest and percentage
4	Sec. 5: Lots 1, 2, 3, 4, S/2 N/2, S/2 Sec. 6: Lots 1, 2, 3, 4, 5, 6, 7, SE/4 NW/4, S/2 NE/4, E/2 SW/4, SE/4 <i>Ac. 8: 222</i>	1885.0	029435-B 11-22-61	U. S. All	Sinclair Oil & Gas Company	None	Sinclair Oil & Gas Company - 100%
5	Sec. 18: Lots 1, 2, E/2 NW/4, W/2 NE/4	224.09	029548-A 9-1-69	U. S. All	Sinclair Oil & Gas Company	Marshall & Winston, Inc., 3%; Donald Winston, Trustee under the Will of Francisca S. Winston 1%; Lucile Hancox, Exec. Estate of T. Harold Hancox, Deceased, .75%; Mrs. C. A. Russell, .5%; Higgins Trust, Inc., .5%; H. R. Moldenhauer .25%; Selma E. Andrews 53.705% of 1.5%; Albuquerque National Bank, Testamentary Trustee of Frank A. Andrews, Deceased, 46.295% of 1.5%	Sinclair Oil & Gas Company - 100%
6	Sec. 18: E/2 NE/4 Sec. 17: W/2 NW/4	160.0	<u>Date of Lease</u> 054908 6-23-38	U. S. All	Bert Aston 1/4 R. W. Fair 1/4 Fair Oil 1/2	20% to Fair Foundation, R. W. Fair, Trustee, and Wilton Harold Fair, Successor Trustee.	Bert Aston 1/4 R. W. Fair 1/4 Fair Oil 1/2
7	Sec. 17: NE/4, E/2 NW/4	240.0	049998-A 6-9-38	U. S. All	Sunray Mid-Continent Oil Company	7-1/2% to V. L. Foster	Sunray Mid-Continent Oil Company - 100%
7 Federal tracts - 5675.45 acres - 92.2% of unit area.							
8	STATE LAND Sec. 16: SE/4	160.0	B-2613 3-10-34	State of New Mexico All	Humble Oil & Refining Company	None	Humble Oil & Refining Company - 100%
9	Sec. 16: S/2 NW/4	80.0	B-3014 6-11-34	State of New Mexico All	Humble Oil & Refining Company	None	Humble Oil & Refining Company - 100%

Tract No.	Description of Land	Number of Acres	Serial Number and Effective Date of Lease	Basic Royalty and percentage	Lessee of Record	Overriding royalty and percentage	Working Interest and percentage
10	Sec. 16: N/2 NW/4, W/2 NE/4	160.0	B-3105 7-10-34	State of New Mexico - All	W. A. Yeager J. M. Armstrong C. T. McLaughlin Cosden Petroleum Corporation	None	W. A. Yeager 1/4 J. M. Armstrong 1/4 C. T. McLaughlin 1/4 Cosden Petroleum Corporation 1/4
11	Sec. 16: SE/4 NE/4	40.0	E-6015 2-11-52	State of New Mexico - All	Socony Mobil Oil Company	None	Socony Mobil Oil Company 100%
12	Sec. 16: NE/4 NE/4	40.0	B-8095 4-10-39	State of New Mexico - All	Shell Oil Company	Alma Walsh Mallison 1.875% Dora M. Johnson .625%	Shell Oil Company 100%
5 State of New Mexico tracts - 480 acres - 7.8% of unit area							

TOTAL: 12 tracts - 6155.45 acres in entire unit area.

Dec 16 - U.S.G.S.

13

BEFORE EXAMINER NUTTER	
OIL CONSERVATION COMMISSION	
EXHIBIT NO.	2
CASE NO.	2214

PROPOSED KEEL DEEP UNIT

EDDY COUNTY, NEW MEXICO

SUBMITTED BY

SINCLAIR OIL & GAS COMPANY

ROSWELL, NEW MEXICO

C O N T E N T S

EXHIBIT #1, LOCATION PLAT

INTRODUCTION

EXISTING PRODUCTION

VERTICAL LIMITS OF PROPOSED UNIT

STRATIGRAPHIC COLUMN

STRUCTURE

PROSPECTIVE ZONES OF PRODUCTION

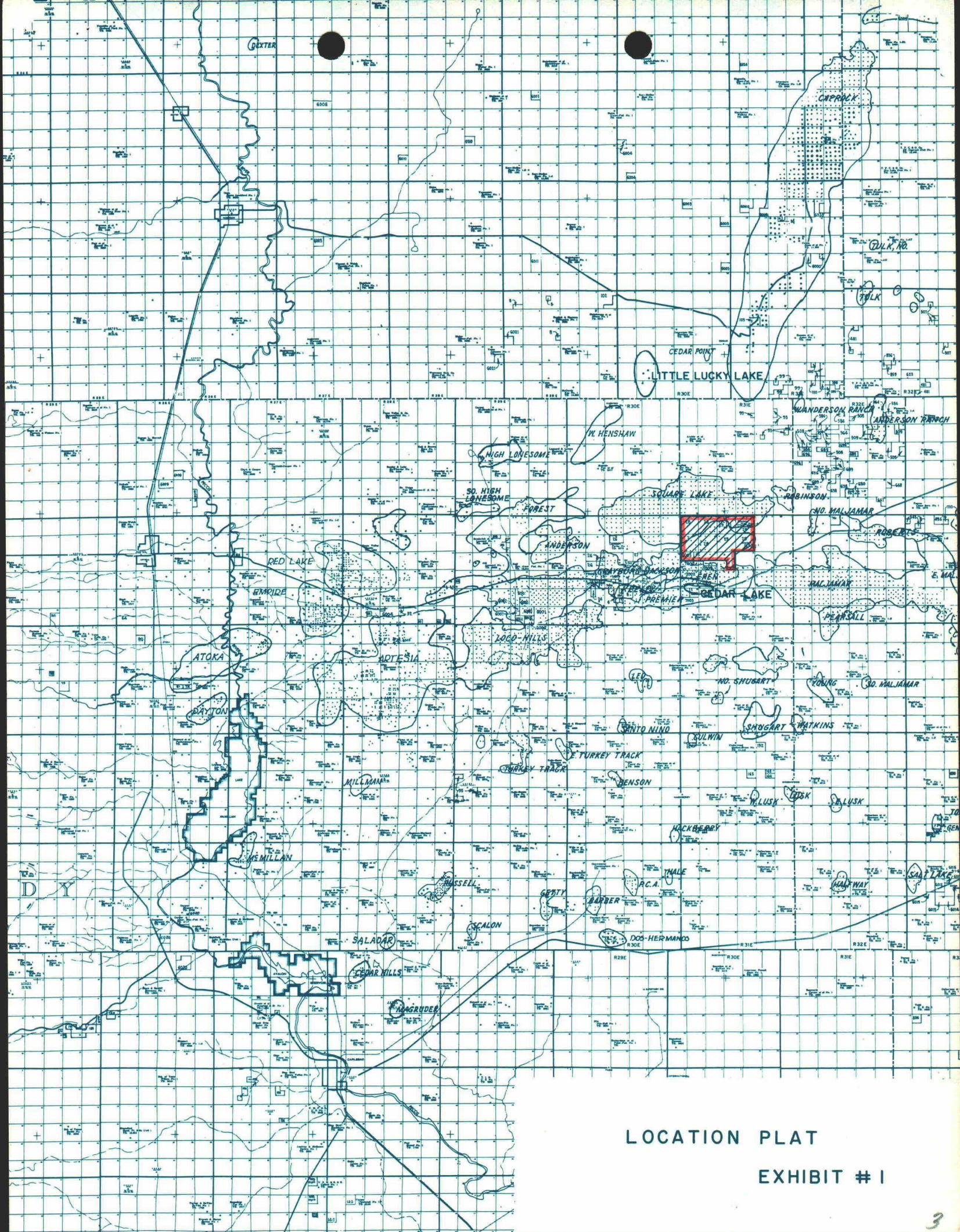
CONCLUSION

EXHIBITS

PROVIDED FURTHER, that any lease embracing lands of the State of New Mexico having only a portion of its land committed hereto which is in its extended term by reason of production of oil and gas, or either of them, on any portion of the lands embraced therein, shall continue in full force and effect as to all of the lands embraced therein both within and without the unit area so long as oil and gas, or either of them, is being produced in paying quantities, according to the terms and provisions of such lease.

EXHIBIT NO. 1-4  
CASE NO. 2217







### INTRODUCTION

The proposed Keel Deep Unit is located in northeast Eddy County, New Mexico, approximately 28 miles east of the town of Artesia. The proposed unit is situated in an area of shallow Permian production on the extensive east-west Artesia-Vacuum trend with deep structural seismic interpretation bearing no similarity to the densely controlled shallow Permian horizons. The proposed unit area, as shown on Exhibit 2, embraces all of Sections 3, 4, 5, 6, 7, 8, 9, 10, N/2 and SE/4 16, N/2 17, and N/2 18, all in Township 17 South, Range 31 East, Eddy County, New Mexico.

The primary objective of the initial test in the unit will be the Devonian dolomite, the anticipated producing limits of which should occupy a smaller area as defined by seismic interpretation at Devonian level than the Pennsylvanian. Seismic interpretation of structure at Cisco (Pennsylvanian) depth indicates an area as outlined on Exhibit 2 is necessary to encompass the prospective producing zones of this formation.

### EXISTING PRODUCTION

Current production in the proposed unit area is confined to the shallow Permian formations including the Seven Rivers dolomite, Grayburg sand and dolomite, and the San Andres dolomite and sand. The deepest of this production occurs in a zone of porosity approximately 200' below the top of the San Andres which is locally termed the Jackson "Pay". Some of the older wells in the unit area have completed



from as much as approximately 700' of Grayburg-San Andres open hole with one well having a maximum of 430' of San Andres open for production.

The nearest deep production is located immediately southeast of the proposed unit in the three-well Fren Pennsylvanian Field. The discovery well of this field is the Skelly Oil Company's #6 Lynch "A", located 660' FN & WL's of Section 22, Township 17 South, Range 31 East, Eddy County, which completed January 15, 1954, from Morrow (Lower Pennsylvanian) sand perforations 11,962-11,982' after 1500 gallons acid treatment. On potential test the well flowed 196 PD plus 4000 MCFGPD. GOR 21,080/1. Gravity 51°. FFP 700#-2000#. This completion was accomplished after the well drilled to a total depth of 13,196' in water-bearing Devonian dolomite. Drill stem tests conducted on this well are as follows:

DST #1 8465-8485'

(Wolfeamp) Tool open 3 hours. Reverse circulated 300' C & GCM, estimated to be 5% oil, and 6000' salty sulphur water. FP 1355#. 21" SIP 2980#.

DST #2 9758-9812'

(Cisco) Tool open 3 hours. Reverse circulated 1 bbl mud, and 3 bbl salty sulphur water. FP 1825#. 20" SIP 3625#.

DST #3 10,290-10,386'

(Cisco) Tool open 4 hours. Reverse circulated 100' slightly gas cut mud and recovered below sub 30' gas cut mud. FP 545#. 20" SIP 1415#.

DST #4 11.973'-12.035' (Morrow) Tool open 3 hours, 26 min. GTS 19", mud in 20", distillate in 21". After flowing to pits 5" the well flowed 48.5 BD in 3 hours. Gas volume 5,000 MCFPD. Reverse circulated 6 BD, and recovered below sub 5' distillate. FP 1920#-2690#. 21" SIP 4970#.

DST #5 12.393-12.442' (Chester-Upper Mississippian) Tool open 3 hours. Light blow of air 21" and died. Closed tool and reopened with light blow for 7" and died. Recovered 400' slightly gas cut mud. FP 1625#-1715#.

DST #6 13.107-13.196' (Devonian) Tool open 3 hours. Recovered 1620' water blanket, 120' drilling mud, and 8610' very slightly gas cut salt water. FP 755#-4435#. 20" SIP 5395#.

The #6 Lynch "A" produced 20 BD plus 4,778 MCFG during August, 1960, to bring its total cumulative production to 30,322 BD plus 902,589 MCFG.

Two other wells are listed in the Penn Pennsylvanian Field, the Skelly #3 H. M. Dow "A", 660' FSL & 1980' FHL of Section 15, Township 17 South, Range 31 East, and the Skelly #21 Dow "B", 1980' FSL & 660' FEL of Section 21, Township 17 South, Range 31 East. The last production reported for the #21 Dow "B", however, is January, 1958.

The nearest Devonian production to the proposed unit is found in the Shell #1 Henshaw Deep Unit approximately 3 miles northwest in Section 24, Township 16 South, Range 30 East, which completed July 28, 1960, flowing 77 BOPD plus 3,000 MCFGPD.

*Cont #12 Beak  
approx 6 miles  
cont sandstone  
Dev field*

#### VERTICAL LIMITS OF PROPOSED UNIT

Because shallow production exists on the proposed unit to a

suggested that the unit begin at a depth of 450' below the top of this formation. For correlation purposes in defining the upper limit of the unit, reference is made to Exhibit #4 showing the top of the San Andres in the Skelly #6 Lynch "A" on electrical log at a depth of 3382'. As an example only, if a well drilled in the unit found the top of the San Andres at 3382' unit participation would begin at a depth of 3832'. The top of the San Andres from samples is distinguished from the overlying gray-tan to gray-white fine crystalline dolomite and red to brown fine grain sand of lower Grayburg by the white fine crystalline to dense dolomite.

#### STRATIGRAPHIC COLUMN

The stratigraphic column is expected to be normal in the unit area down through and including the Ellenburger dolomite. Following is a list of the formations expected and the approximate depth.

Rustler anhydrite	450'
Salado salt	600'
Tansill anhydrite and dolomite	1600'
Yates sand	1700'
Seven Rivers dolomite	1900'
Queen sand	2700'
Grayburg dolomite	3125'
San Andres dolomite	3450'
<hr/>	
Glorieta sand	5000'
Paddock dolomite	5100'
Tubb sand	6250'
Fullerton dolomite	6400'
Abo shale	6900'
Wolfcamp limestone	8400'
Pennsylvanian limestone	9500'
Mississippian limestone	12,400'
Woodford shale	13,020'
Siluro-Devonian dolomite	13,100'

*Unit  
Subsided  
Glorieta  
see down*

Montoya Schistite	15,800'
Simpson Shale	14,050'
Willamette Schistite	11,175'

#### CONCLUSIONS

As shown on Figure 1, a proposed well 111' of N. 101° E. dip is shown to be present in the area. The proposed well is of good quality in the area of the proposed well and is to be drilled. All logs and existing well control are tied, and the logs are considered reliable. This anomaly compares very favorably with the subsurface interpretation of the Anderson Ranch Field to the northeast.

The down-to-the-north fault that is shown just north of the area in question is due largely to the effect of additional velocity control. The throw on this fault averages approximately 700', and it is felt that this tends to enhance the prospect. A approximately 600' of closure can be shown against the downthrown side of this fault. Assuming that migration in the Devonian formation is affected to some extent at least by post-Mississippian tectonics, it appears that this fault might serve as a trap for Devonian oil in addition to the structural trapping that is independent of the faulting.

In summary, a proposed well would be drilled on approximately 275' of structural closure and on approximately 600' of closure against the downthrown side of a fault at Devonian depth. There is definite structural separation between the proposed well tract and the Sinclair #58 W. 1/2 and the possibility of additional separation by faulting. The area is high to the Skelly #6 W. 1/2 and #7.

The Cisco horizon, Exhibit 5, shows a somewhat broader feature than the Devonian, however production from the Pennsylvanian is of a stratigraphic nature, and often found on the flanks of such features as the one in question; therefore, it is recommended that the proposed unit outline be based on the broader Cisco map.

As indicated earlier the shallow Permian horizons are not believed to reflect deep structure in this area of the Artesia-Vacuum trend and deep subsurface control is too sparse to define local closure.

#### PROSPECTIVE ZONES OF PRODUCTION

The proposed unit embraces an area having multi-pay prospects extending from the lower San Andres thru the Ellenburger. The primary objective of the initial test and zone of expected porosity development are as follows:

Devonian dolomite	13,100'-13,500'
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Objectives of secondary importance which are regarded as having favorable prospects for production are as follows:

Paddock dolomite	5,100'-5,300'
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The nearest Paddock production occurs approximately 4 miles southeast in the three-well Maljamar Paddock Field.

Wolfcamp limestone	8,400'-9,400'
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The nearest Wolfcamp production of consequence is in the Anderson Ranch Field approximately 12 miles northeast.

Pennsylvanian limestone 9,500'-10,500'

The nearest Pennsylvanian limestone production occurs in a one well undesignated Strawn Pool approximately 7 miles east in Section 22, Township 17 South, Range 32 East.

Pennsylvanian (Morrow) sand 11,500'-11,800'

The nearest Morrow Sand production is located immediately east and south of the proposed unit in the three-well Fren Pennsylvanian Field.

Ellenburger Dolomite 14,175'- T. D.

The nearest Ellenburger production is located approximately 7 miles north-northeast in the Little Lucky Lake Field.

The nature of the reservoirs expected in each of the secondary objective formations is primarily stratigraphic. As indicated in the areas of production listed above porosity development is limited and generally confined to localized areas. The Morrow sands are known to be erratically developed but appear to have maximum development on the flanks of deep structures. Only the Devonian is expected to be developed entirely as a structural trap.

#### CONCLUSION

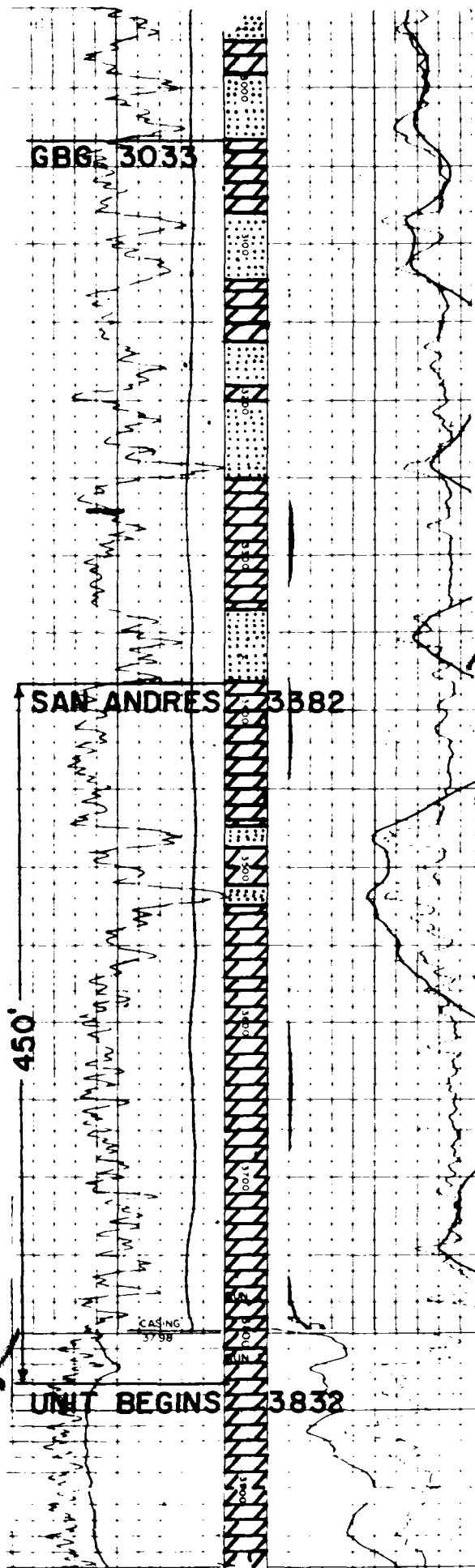
The proposed unit is situated in an area having deep multi-pay prospects. The development of these prospects is expected to be both structural and stratigraphic, and the proposed unit area as controlled by the Cisco structure map should offer favorable prospects for production. If the unit proposal is granted, a well will be drilled in the SE/4 SW/4 Section 4, Township 17 South Range 31 East, Eddy County, New Mexico for a 13,700' test of the Devonian dolomite.

It is our opinion that the formation of the Unit as outlined will promote exploration, will cause an orderly development of the acreage involved and therefore would better serve the interests of all concerned.





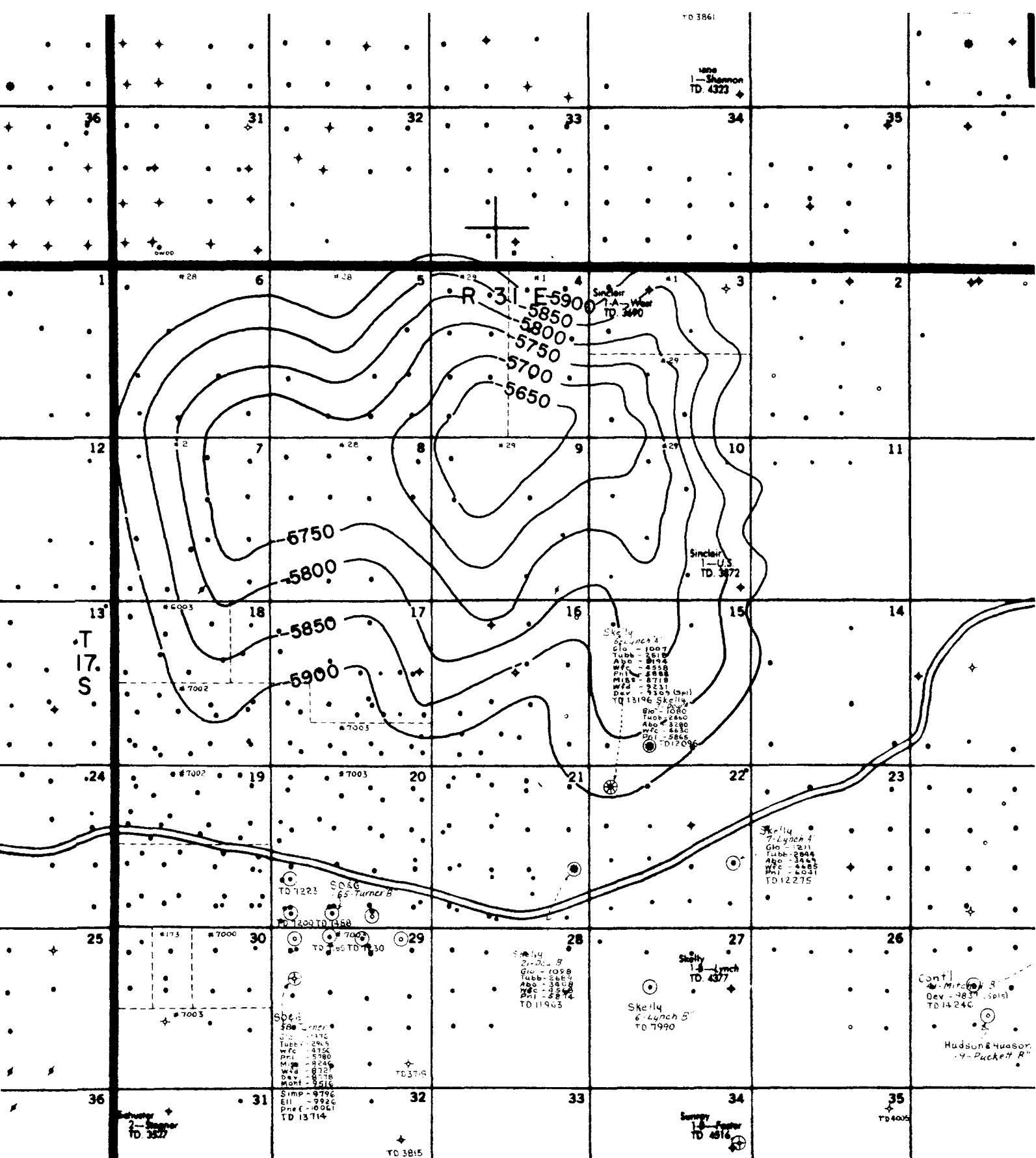




To be  
not used  
Ex 4.

VERTICAL LIMIT OF UNIT

EXHIBIT # 4



DATUM: TOP OF CISCO  
 CONTOUR INTERVAL: 50'  
 SCALE: 1"=4000'

EXHIBIT # 5

EXHIBIT # 6