

YATES DRILLING COMPANY

UNIT AGREEMENT

Dated: November 1, 1989

CACTUS (QUEEN) UNIT

Township 12 South, Range 31 East, N.M.P.M.

Section 27: W $\frac{1}{4}$ SE $\frac{1}{4}$, E $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$
Section 34: N $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NW $\frac{1}{4}$

Chaves County, New Mexico

BEFORE EXAMINER STOGNER	
OIL CONSERVATION DIVISION	
<u>YATES</u>	<u>EXHIBIT NO. 3 B</u>
<u>CASE NO. 9809, 9810, 9823</u>	

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 CACTUS (QUEEN) UNIT
 CHAVES COUNTY, NEW MEXICO
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UNIT AGREEMENT
FOR THE DEVELOPMENT AND OPERATION OF THE
CACTUS (QUEEN) UNIT
CHAVES COUNTY, NEW MEXICO

THIS AGREEMENT, entered into as of the 1st day of November 1989 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 (Section 1, Chapter 88, Laws 1943, as amended by Section 1 of Chapter 176, Laws of 1961) Chapter 19, Article 10, Section 45, New Mexico Statutes 1978 Annotated), to consent to and approve the development or operation of State lands under agreements made by lessees of State land jointly or severally with other lessees where such agreements provide for the unit operation or development of part of or all of any oil or gas pool, field or area; and

WHEREAS, the Commissioner of Public Lands of the State of New Mexico is authorized by an Act of the Legislature (Section 1, Chapter 88, Laws 1943, as amended by Section 1, Chapter 162, Laws of 1951) (Chapter 19, Article 10, Section 47, New Mexico Statutes 1978 Annotated) to amend with the approval of lessee, evidenced by the lessee's execution of such agreement or otherwise, any oil and gas lease embracing State lands so that the length of the term of said lease may coincide with the term of such agreements for the unit operation and development of part or all of any oil or gas pool, field or area; and

WHEREAS, the Oil Conservation Division of the State of New Mexico (hereinafter referred to as the "Division") is authorized by an Act of the Legislature (Chapter 72, Laws of 1935 as amended) (Chapter 70, Article 2, Section 2 et seq., New Mexico Statutes 1978 Annotated) to approve this Agreement and the conservation provisions hereof; and

WHEREAS, the Oil Conservation Division of the Energy and Minerals Department of the State of New Mexico is authorized by law (Chapter 65, Article 3 and Article 14, N.M.S. 1953 Annotated) to approve this Agreement and the conservation provisions hereof; and

WHEREAS, the parties hereto hold sufficient interest in the 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 interest in the below-defined Unit Area, and agree severally among themselves as follows:

SECTION 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.

SECTION 2. UNIT AREA AND DEFINITIONS. The area described by Tracts in Exhibit "B" and depicted on Exhibit "A" attached hereto is 320.00 acres, more or less, in Chaves County, New Mexico. Said land is described as follows:

Township 12 South, Range 31 East, N.M.P.M.
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Section 34: N $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NW $\frac{1}{4}$

For the purpose of the Agreement, the following terms and expressions as used herein shall mean:

(a) "Land Commissioner" is defined as the Commissioner of Public Lands of the State of New Mexico.

(b) "Division" is defined as the Oil Conservation Division of the Department of Energy and Minerals of the State of New Mexico.

(c) "Authorized Officer" or "A.O." is any employee of the Bureau of Land Management who has been delegated the required authority to act on behalf of the BLM.

(d) "Secretary" is defined as the Secretary of the Interior of the United States of America, or his duly authorized delegate.

(e) "Department" is defined as the Department of the Interior of the United States of America.

(f) "Proper BLM Office" is defined as the Bureau of Land Management office having jurisdiction over the federal lands included in the Unit Area.

(g) "Unitized Formation" shall mean that interval underlying the Unit Area, the vertical limits of which extend from an upper limit described as 50' above the top of the Queen formation to a lower limit as the base of the Queen formation; said limits having been previously found to occur at 2930 feet and 3100 feet, respectively in Yates Drilling Company's Doyal #1, located 660' FNL and 990' FEL of Section 34, Township 12 South, Range 31 East.

(h) "Unitized Substances" are all oil, gas, gaseous substances, sulphur contained in gas, condensate, distillate and all associated and constituent liquid or liquefiable hydrocarbons, other than outside substances, within and produced from the Unitized Formation.

(i) "Tract" is each parcel of land described as such and given a Tract number in Exhibit "B"

(j) "Tract Participation" is defined as the percentage of participation shown on Exhibit "B" for allocating Unitized Substances to a Tract under this Agreement.

(k) "Unit Participation" is the sum of the percentages obtained by multiplying the Working Interest of a Working Interest Owner in each Tract by the Tract Participation of such Tract.

(l) "Working Interest" is the right to search for, produce and acquire Unitized Substances whether held as an incident of ownership of mineral fee simple title, under an oil and gas lease, operating agreement, or otherwise held, which interest is chargeable with and obligated to pay or bear, either in cash or out of production, or otherwise, all or a portion of the cost of drilling, developing and producing the Unitized Substances from the Unitized Formation and operations thereof hereunder. Provided that any royalty interest created out of a working interest subsequent to the execution of this Agreement by the owner of the working interest shall continue to be subject to such working interest burdens and obligations.

(m) "Working Interest Owner" is any party hereto owning a Working Interest, including a carried working interest owner, holding an interest in Unitized Substances by virtue of a lease, operating agreement, fee title or otherwise. The owner of oil and gas rights that are free of lease or other instrument creating a Working Interest in another shall be regarded as a Working Interest Owner to the extent of seven-eighths (7/8) of his interest in Unitized Substances, and as a Royalty Owner with respect to his remaining one-eighth (1/8) interest therein.

(n) "Royalty Interest" or "Royalty" is an interest other than a Working Interest in or right to receive a portion of the Unitized Substances or the proceeds thereof and includes the royalty interest reserved by the lessor or by an oil and gas lease and any overriding royalty interest, oil payment interest, net profit contracts, or any other payment or burden which does not carry with it the right to search for and produce unitized substances.

(o) "Royalty Owner" is the owner of a Royalty Interest.

(p) "Unit Operating Agreement" is the agreement entered into by and between the Unit Operator and the Working Interest Owners as provided in Section 9, *infra*, and shall be styled "Unit Operating Agreement, Chaves County, New Mexico".

(q) "Oil and Gas Rights" is the right to explore, develop and operate lands within the Unit Area for the production of Unitized Substances, or to share in the production so obtained or the proceeds thereof.

(r) "Outside Substances" is any substance obtained from any source other than the Unitized Formation and injected into the Unitized Formation.

(s) "Unit Manager" is any person or corporation appointed by Working Interest Owners to perform the duties of the Unit Operator until the selection and qualification of a successor Unit Operator as provided for in Section 7 hereof.

(t) "Unit Operator" is the party designated by Working Interest Owners under the Unit Operating Agreement to conduct Unit Operations.

(u) "Unit Operations" is any operation conducted pursuant to this Agreement and the Unit Operating Agreement.

(v) "Unit Equipment" is all personal property, lease and well equipment, plants and other facilities and equipment taken over or otherwise acquired for the joint account for use in Unit Operations.

(w) "Unit Expense" is all cost, expense, or indebtedness incurred by Working Interest Owners or Unit Operator pursuant to this Agreement and the Unit Operating Agreement for or on account of Unit Operations.

(x) "Effective Date" is the date determined in accordance with Section 24, or as redetermined in accordance with Section 39.

(y) "Unit Cumulative Production" is defined as the total number of barrels produced through July 31, 1989, from all tracts within the unit area which are qualified under the terms of this agreement, as officially reported to the Commission.

SECTION 3. EXHIBITS. Exhibit "A" attached hereto is a map showing the Unit Area and the boundaries and identity of tracts and leases in said Unit 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 comprising each Tract, percentages and kind of ownership of oil and gas interest in all land in the Unit Area. Exhibit "C" attached hereto shows the Tract Participation of each Tract 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. There is no Exhibit "D". Exhibits "A", "B" and "C" shall be revised by the Unit Operator whenever changes in the Unit Area render such revision necessary or when requested by the Deputy, or the Land Commissioner, and not less than five copies shall be filed with the Deputy, and three copies with the Land Commissioner.

SECTION 4. EXPANSION. The above described Unit Area may, with the approval of the A.O. and Land Commissioner, when practicable be expanded to include therein any additional Tract or Tracts regarded as reasonably necessary or advisable for the purposes of this Agreement provided however, in such expansion there shall be no retroactive allocation or adjustment of Unit Expense or of interests in the Unitized Substances produced, or proceeds thereof. Pursuant to Subsection (b), the Working Interest Owners may agree upon an adjustment of investment by reason of the expansion. Such expansion shall be effected in the following manner:

(a) The Working Interest Owner or Owners of a Tract or Tracts desiring to bring such Tract or Tracts into this unit, shall file an application therefor with Unit Operator requesting such admission.

(b) Unit Operator shall circulate a notice of the proposed expansion to each Working Interest Owner in the Unit Area and in the Tract proposed to be included in the unit, setting out the basis for admission, the Tract Participation to be assigned to each Tract in the enlarged Unit Area and other pertinent data. After negotiation (at Working Interest Owners' meeting or otherwise) if at least three Working Interest Owners having in the aggregate seventy-five percent (75%) of the Unit Participation then in effect have agreed to inclusion of such Tract or Tracts in the Unit Area, then Unit Operator shall:

(1) After obtaining preliminary concurrence by the A.O. and Land Commissioner, prepare a notice of proposed expansion describing the contemplated changes in the boundaries of the Unit Area, the reason therefor, the basis for admission of the additional Tract or Tracts, the Tract Participation to be assigned thereto and the proposed effective date thereof; and

(2) Deliver copies of said notice to Land Commissioner, the A.O. at the Proper BLM Office, each Working Interest Owner and to the last known address of each lessee and lessor whose interests are affected, advising such parties that thirty (30) days will be allowed for submission to the Unit Operator of any objection to such proposed expansion; and

(3) File, upon the expiration of said thirty (30) day period as set out in (2) immediately above, with the Land Commissioner and A.O., the following:

- (i) Evidence of mailing said notice of expansion
- (ii) An application for such expansion in sufficient number, appropriate approval and distribution; and
- (iii) An instrument containing the appropriate joinders in compliance with the participation requirements of Section 14 (TRACTS QUALIFIED FOR PARTICIPATION) and Section 32 (NON-JOINDER AND SUBSEQUENT JOINDER), *infra*; and
- (iv) a copy of any objections received.

The expansion shall, after due consideration of all pertinent information and approval by the Land Commissioner and the A.O., become effective as of the date prescribed in the notice thereof, preferably the first day of the month subsequent to the date of notice. The revised Tract Participation of the respective Tracts included within the Unit Area prior to such enlargement shall remain the same ratio one to another.

SECTION 5. UNITIZED LAND AND UNITIZED SUBSTANCES. All land committed to this agreement as to the Unitized Formation shall constitute land referred to herein as "Unitized Land" or "Land Subject to this Agreement". All oil, gas, gaseous substances, sulphur contained in gas, condensate, distillate, and all associated and constituent liquid or liquefiable hydrocarbons produced from the Unitized Formation underlying Unitized Land are unitized under the term of this Agreement and herein are called "Unitized Substances."

SECTION 6. UNIT OPERATOR. Yates Drilling Company, a New Mexico corporation, is hereby designated as Unit Operator, and, by signing this instrument as Unit Operator, it agrees and consents to accept the duties and obligations of Unit Operator for the operation, 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.

Unit Operator shall have a lien upon the interest of the owners of Working Interests in the Unitized Land to the extent provided in the Unit Operating Agreement.

SECTION 7. RESIGNATION OR REMOVAL OF UNIT OPERATOR. Unit Operator shall have the right to resign at any time, but such resignation shall not become effective so as to release Unit Operator from the duties and obligations of Unit Operator and terminate Unit Operator's rights as such for a period of six (6) months after written notice of intention to resign has been given by Unit Operator to all Working Interest Owners and the Deputy, and until all wells are placed in a condition satisfactory for suspension or abandonment, or operations, whichever is required by the Deputy, unless a new Unit Operator shall have taken over and assumed the duties and obligations of Unit Operator prior to the expiration of said period.

Unit Operator shall, upon default or failure to the performance of its duties or obligations hereunder, be subject to removal of not less than eighty percent (80%) of the committed Working Interest (on the basis of Unit Participation) exclusive of any Working Interest owned by the Unit Operator. Such removal shall be effective upon notice thereof to the Land Commissioner and the A.O.

In all instances of resignation or removal, until a successor to Unit Operator is selected and approved as hereinafter provided, the Working Interest Owners shall be jointly responsible for the performance of the duties of Unit Operator and shall, not later than thirty (30) days before such resignation or removal becomes effective, appoint a Unit Manager to represent them in any action to be taken hereunder.

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 wells, equipment, books and records, materials, appurtenances and any other assets used in conducting the Unit Operations and owned by the Working Interest Owners (including any and all data and information which it might have gained or assembled by reason of its operation of the Unitized Land) to the new duly qualified successor Unit Operator or to the Unit Manager 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. Nothing herein contained shall be construed to relieve or discharge any Unit Operator who resigns or is removed hereunder for any liability or duties accruing or performable by it prior to the effective date of such resignation or removal.

SECTION 8. SUCCESSOR UNIT OPERATOR. Whenever the Unit Operator shall tender its resignation as Unit Operator or shall be removed as hereinabove provided, the Working Interest Owners shall select a successor Unit Operator as herein provided. 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 Land Commissioner and the A.O. If no successor Unit Operator or Unit Manager is selected and qualified as herein provided, the Land Commissioner and/or the A.O., at their election, may declare this Agreement terminated.

In selecting a successor Unit Operator, the affirmative vote of three or more Working Interest Owners having a total of sixty-five percent (65%) or more of the total Unit Participation shall prevail; provided that if any one Working Interest Owner has a Unit Participation of more than thirty-five percent (35%), its negative vote or failure to vote shall not be regarded as sufficient unless supported by the vote of one or more other Working Interest Owners having a total Unit Participation of at least five percent (5%). If the Unit Operator who is removed votes only to succeed itself or fails to vote, the successor Unit Operator may be selected by the affirmative vote of the owners of at least seventy-five percent (75%) of the Unit Participation remaining after excluding the Unit Participation of Unit Operator so removed.

SECTION 9. ACCOUNTING PROVISIONS AND UNIT OPERATING AGREEMENT. Costs and expenses incurred by Unit Operator in conducting Unit Operations hereunder shall be paid, apportioned among, and borne by the Working Interest Owners in accordance with the Unit Operating Agreement; 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 Agreement, and in case of any inconsistency or conflict between this Agreement and the Unit Operating Agreement, this Agreement shall prevail. Copies of any Unit Operating Agreement executed pursuant to this Section shall be filed with the Land Commissioner and with the A.O. at the Proper BLM Office as required prior to approval of this Agreement.

SECTION 10. 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. The parties hereto, to the extent they have the right to do so, grant to Unit Operator the use of brine or water or both from any formation in and under the Unitized Land for injection into the Unitized Formation. Upon request, 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.

SECTION 11. EASEMENTS OR USE OF SURFACE.

(a) The parties hereto, to the extent of their rights and interests, hereby grant to Working Interest Owners the right to use as much of the surface of the Unitized Land as may reasonably be necessary for Unit Operations and removal of Unitized Substances therefrom; provided that nothing herein shall be construed as leasing or otherwise conveying to Working Interest Owners a site for a water, gas injection, processing or other plant, or campsite.

(b) Working Interest Owners shall have and are hereby granted free use of water from the Unitized Land for Unit Operations, except water from any well, lake, pond, or irrigation ditch of a Royalty Owner.

(c) Working Interest Owners shall pay the owner for damages to growing crops, timber, fences, improvements, and structures on the Unit Area that result from Unit Operations.

SECTION 12. PLAN OF OPERATIONS. It is recognized and agreed by the parties hereto that all of the land subject to this Agreement is reasonably proved to be productive of Unitized Substances and that the object and purpose of this Agreement is to formulate and to put into effect an improved recovery project in order to effect additional recovery of Unitized Substances, prevent waste and conserve natural resources. Unit Operator shall have the right to inject into the Unitized Formation any substances for secondary recovery or enhanced recovery purposes in accordance with a plan of operation approved by the Working Interest Owners, the A.O., the Land Commissioner and the Division, including the right to drill and maintain injection wells on the Unitized Land and completed in the Unitized Formation, and to use abandoned well or wells producing from the Unitized Formation for said purpose. Subject to like approval, the Plan of Operation may be revised as conditions may warrant.

The initial Plan of Operation shall be filed with the A.O., the Land Commissioner and the Division concurrently with the filing of this Unit Agreement for final approval. Said initial plan of operations and all revisions thereof shall be as complete and adequate as the A.O., the Land Commissioner and the Division may determine to be necessary for timely operation consistent herewith. Upon approval of this Agreement and the initial plan by the A.O. and Commissioner, said plan, and all subsequently approved plans, shall constitute the 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 like approval a plan for an additional specified period of operations. After such operations are commenced, reasonable diligence shall be exercised by the Unit Operator in complying with the obligations of the approved Plan of Operation.

Notwithstanding anything to the contrary herein contained, should the Unit Operator fail to commence Unit Operations for the secondary recovery of Unitized Substances from the Unit Area within eighteen (18) months after the effective date of this Agreement, or any extension thereof approved by the A.O., this Agreement shall terminate automatically as of the date of default.

SECTION 13. TRACT PARTICIPATION. In Exhibit "B" attached hereto there are listed and numbered the various Tracts within the Unit Area, and set forth opposite each Tract are figures which represent the Tract Participation, during Unit Operations if all Tracts in the Unit Area qualify as provided herein. The Tract Participation of each Tract as shown in Exhibit "B" was determined in accordance with the following formula:

Tract Participation =	Cumulative Primary Production	- 73%
	Original Oil in Place	- 25%
	Past Three Months Production	- 2%
		<u>100%</u>

In the event less than all Tracts are qualified on the Effective Date hereof, the Tract Participation shall be calculated on the basis of all such qualified Tracts rather than all Tracts in the Unit Area.

SECTION 14. TRACTS QUALIFIED FOR PARTICIPATION. On and after the Effective Date hereof, the Tracts within the Unit Area which shall be entitled to participation in the production of Unitized Substances shall be those Tracts more particularly described in Exhibit "B" that corner or have a common boundary (Tracts separated only by a public road or a railroad right-of-way shall be considered to have a common boundary), and that otherwise qualify as follows:

(a) Each Tract as to which Working Interest Owners owning one hundred percent (100%) of the Working Interest have become parties to this Agreement and as to which Royalty Owners owning seventy-five percent (75%) or more of the Royalty Interest have become parties to this Agreement.

(b) Each Tract as to which Working Interest Owners owning one hundred percent (100%) of the Working Interest have become parties to this Agreement, and as to which Royalty Owners owning less than seventy-five percent (75%) of the Royalty Interest have become parties to this Agreement, and as to which (1) the Working Interest Owner who operates the Tract and Working Interest Owners owning at least seventy-five percent (75%) of the remaining Working Interest in such Tract have joined in a request for the inclusion of such Tract, and as to which (2) Working Interest Owners owning at least seventy-five percent (75%) of the combined Unit Participation in all Tracts that meet the requirements of Section 14(a) above have voted in favor of the inclusion of such tract.

(c) Each Tract as to which Working Interest Owners owning less than one hundred percent (100%) of the Working Interest have become parties to this Agreement, regardless of the percentage of Royalty Interest therein that is committed hereto; and as to which (1) the Working Interest Owner who operates the Tract and Working Interest Owner owning at least seventy-five percent (75%) of the remaining Working Interest in such Tract who have become parties to this Agreement have joined in a request for inclusion of such Tract, and have executed and delivered, or obligated themselves to execute and deliver an indemnity agreement indemnifying and agreeing to hold harmless the other owners of committed Working Interests, their successors and assigns, against all claims and demands that may be made by the owners of Working Interest in such Tract who are not parties to this Agreement, and which arise out of the inclusion of the Tract; and as to which (2) Working Interest Owners owning at least seventy-five percent (75%) of the Unit Participation in all Tracts that meet the requirements of Section 14(a) and 14(b) have voted in favor of the inclusion of such Tract and to accept the indemnity agreement. Upon the inclusion of such a Tract, the Tract Participations which would have been attributed to the nonsubscribing owners of Working Interest in such Tract, had they become parties to this Agreement and the Unit Operating Agreement, shall be attributed to the Working Interest Owners in such Tract who have become parties to such agreement, and joined in the indemnity agreement, in proportion to their respective Working Interests in the Tract.

If on the Effective Date of this Agreement there is any Tract or Tracts which have not been effectively committed to or made subject to this Agreement by qualifying as above provided, then such Tract or Tracts shall not be entitled to participate hereunder. Unit Operator shall, when submitting this Agreement for final approval by the Land Commissioner and the A.O., file therewith a schedule of those tracts which have been committed and made subject to this Agreement and are entitled to participate in Unitized Substances. Said schedule shall set forth opposite each such committed Tract the lease number or assignment number, the owner of record of the lease, and the percentage participation of such tract which shall be computed according to the participation formula set forth in Section 13 (Tract Participation) above. This schedule of participation shall be revised Exhibit "B" and upon approval thereof by the Land Commissioner and the A.O., shall become a part of this Agreement and shall govern the allocation of production of Unitized Substances until a new schedule is approved by the Land Commissioner and A.O.

SECTION 15.A. ALLOCATION OF UNITIZED SUBSTANCES. All Unitized Substances produced and saved (less, save and except any part of such Unitized Substances used in conformity with good operating practices on unitized land for drilling, operating, camp and other production or development purposes and for injection or unavoidable loss in accordance with a Plan of Operation approved by the A.O. and Land Commissioner) shall be apportioned among and allocated to the qualified Tracts in accordance with the respective Tract Participations effective hereunder during the respective periods such Unitized Substances were produced, as set forth in the schedule of participation in Exhibit "B". The amount of Unitized Substances so allocated to each Tract, and only that amount (regardless of whether it be more or less than the amount of the actual production of Unitized Substances from the well or wells, if any, on such Tract) shall, for all intents, uses and purposes, be deemed to have been produced from such Tract.

The Unitized Substances allocated to each Tract shall be distributed among, or accounted for, to the parties entitled to share in the production from such Tract in the same manner, in the same proportions, and upon the same conditions, as they would have participated and shared in the production from such Tracts, or in the proceeds thereof, had this Agreement not been entered into; and with the same legal force and effect.

No Tract committed to this Agreement and qualified for participation as above provided shall be subsequently excluded from participation hereunder on account of depletion of Unitized Substances.

If the Working Interest and/or the Royalty Interest in any Tract are divided with respect to separate parcels or portions of such Tract and owned now or hereafter in severalty by different persons, the Tract Participation shall in the absence of a recordable instrument executed by all owners in such Tract and furnish to Unit Operator fixing the divisions of ownership, be divided among such parcels or portions in proportion to the number of surface acres in each.

SECTION 15.B. TAKING UNITIZED SUBSTANCES IN KIND. The Unitized Substances allocated to each Tract shall be delivered in kind to the respective parties entitled thereto by virtue of the ownership of oil and gas rights therein. Each such party shall have the right to construct, maintain and operate all necessary facilities for that purpose within the Unitized Area, provided the same are so constructed, maintained and operated as not to interfere with Unit Operations. Subject to Section 17 hereof, any extra expenditure incurred by Unit Operator by reason of the delivery in kind of any portion of the Unitized Substances shall be borne by the party taking delivery. In the event any Working Interest Owner shall fail to take or otherwise adequately dispose of its proportionate share of the production from the Unitized Formation, then so long as such condition continues, Unit Operator, for the Tract or Tracts concerned, and in order to avoid curtailing the operation of the Unit Area, may, but shall not be required to, sell or otherwise dispose of such production to itself or to others, provided that all contracts of sale by Unit Operator of any other party's share of Unitized Substances shall be only for such reasonable periods of time as are consistent with the minimum needs of the industry under the circumstances, but in no

event shall any such contract be for a period in excess of one year, and at not less than the prevailing market price in the area for like production, and the account of such Working Interest Owner shall be charged therewith as having received such production. The net proceeds, if any, of the Unitized Substances so disposed of by Unit Operator shall be paid to the Working Interest Owner of the Tract or Tracts concerned. Notwithstanding the foregoing, Unit Operator shall not make a sale into interstate commerce of any Working Interest Owner's share of gas production without first giving such Working Interest Owner sixty (60) days' notice of such intended sale.

Any Working Interest Owner receiving in kind or separately disposing of all or any part of the Unitized Substances allocated to any Tract, or receiving the proceeds therefrom if the same is sold or purchased by Unit Operator, shall be responsible for the payment of all royalty, overriding royalty and production payments due thereon, and each such party shall hold each other Working Interest Owner harmless against all claims, demands and causes of action by owners of such royalty, overriding royalty and production payments.

If, after the Effective Date of this Agreement, there is any Tract or Tracts that are subsequently committed hereto, as provided in Section 4 (Expansion) hereof, or any Tract or Tracts within the Unit Area not committed hereto as of the Effective Date hereof but which are subsequently committed hereto under the provisions of Section 14 (Tracts Qualified for Participation) and Section 32 (Nonjoinder and Subsequent Joinder); or if any Tract is excluded from this Agreement as provided for in Section 21 (Loss of Title), the schedule of participation as shown in Exhibit "B" shall be revised by the Unit Operator; and the revised Exhibit "B", upon approval by the Land Commissioner and the A.O., shall govern the allocation of production on and after the effective date thereof until a revised schedule is approved as hereinabove provided.

SECTION 16. OUTSIDE SUBSTANCES. If gas obtained from formations not subject to this Agreement is introduced into the Unitized Formation for use in repressuring, stimulating of production or increasing ultimate recovery which shall be in conformity with a Plan of Operation first approved by the Land Commissioner and the A.O., a like amount of gas with appropriate deduction for loss or depletion from any cause may be withdrawn from unit wells completed in the Unitized Formation royalty free as to dry gas, but not royalty free as to the products extracted therefrom; provided that such withdrawal shall be at such time as may be provided in the approved Plan of Operator or as otherwise may be consented to or prescribed by the Land Commissioner and the A.O. as conforming to good petroleum engineering practices and provided further that such right of withdrawal shall terminate on the termination date of this Agreement.

SECTION 17. ROYALTY SETTLEMENT. The State of New Mexico and United States of America and all Royalty Owners who, under an existing contract, are entitled to take in kind a share of the substances produced from any Tract unitized hereunder, shall continue to be entitled to such right to take in kind their share of the Unitized Substances allocated to such Tract, and Unit Operator shall make deliveries of such Royalty share taken in kind in conformity with the applicable contracts, laws and regulations. Settlement

for Royalty 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 Royalty due under the leases, except that such Royalty shall be computed on Unitized Substances as allocated to each Tract in accordance with the terms of this Agreement. With respect to Federal leases committed hereto on which the royalty rate depends upon the daily average production per well, such average production shall be determined in accordance with the operating regulations pertaining to Federal leases as though the committed Tracts were included in a single consolidated lease.

If the amount of production or the proceeds thereof accruing to any Royalty Owner (except the United States of America) in a Tract depends upon the average production per well or the average pipeline runs per well from such Tract during any period of time, then such production shall be determined from and after the effective date hereof by dividing the quantity of Unitized Substances allocated hereunder to such Tract during such period of time by the number of wells located thereon capable of producing Unitized Substances as of the Effective Date hereof, provided that any Tract not having any well so capable of producing Unitized Substances on the Effective Date hereof shall be considered as having one such well for the purpose of this provision.

All Royalty due the State of New Mexico and the United States of America and the other Royalty Owners hereunder shall be computed and paid on the basis of all Unitized Substances allocated to the respective Tract or Tracts committed hereto, in lieu of actual production from such Tract or Tracts.

With the exception of Federal and State requirement to the contrary, Working Interest Owners may use or consume Unitized Substances for Unit Operations and no Royalty, overriding royalty, production or other payments shall be payable on account of Unitized Substances used, lost, or consumed in Unit Operations.

Each Royalty Owner (other than the State of New Mexico and the United States of America) that executes this Agreement represents and warrants that it is the owner of a Royalty Interest in a Tract of Tracts within the Unit Area as its interest appears in Exhibit "B" attached hereto. If any Royalty Interest in a Tract or Tracts should be lost by title failure or otherwise in whole or in part, during the term of this Agreement, then the Royalty Interest of the party representing himself to be the owner thereof shall be reduced proportionately and the interests of all parties shall be adjusted accordingly.

SECTION 18. RENTAL SETTLEMENT. Rentals or minimum Royalties due on the 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 for lands of the State of New Mexico subject to this Agreement shall be paid at the rate specified in the respective leases from the State of New Mexico. Rental or minimum Royalty for lands of the United States of America subject to this Agreement shall be paid at the rate specified in the respective leases from the United States of America, unless such rental or minimum Royalty is waived, suspended or reduced by law or by approval of the Secretary or his duly authorized representative.

SECTION 19. 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 Federal and State laws and regulations.

SECTION 20. DRAINAGE. The Unit Operator shall take all reasonable and prudent measures to prevent drainage of Unitized Substances from unitized land by wells on land not subject to this Agreement.

The Unit Operator, upon approval by the Working Interest Owners, the A.O. and the Land Commissioner, is hereby empowered to enter into a borderline agreement or agreements with working interest owners of adjoining lands not subject to this Agreement with respect to operation in the border area for the maximum economic recovery, conservation purposes and proper protection of the parties and interest affected.

SECTION 21. 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 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 State or Federal 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 A.O. or Land Commissioner (as the case may be) 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.

If the title or right of any party claiming the right to receive in kind all or any portion of the Unitized Substances allocated to a Tract is in dispute, Unit Operator at the direction of Working Interest Owners shall either:

(a) require that the party to whom such Unitized Substances are delivered to or whom the proceeds thereof are paid furnish security for the proper accounting therefor to the rightful owner if the title or right of such party fails in whole or in part, or

(b) withhold and market the portion of Unitized Substances with respect to which title or right is in dispute, and impound the proceeds thereof until such time as the title or right thereto is established by a final judgment of a court of competent jurisdiction or otherwise to the satisfaction of Working Interest Owners, whereupon the proceeds as impounded shall be paid to the party rightfully entitled thereto.

Each Working Interest Owner shall indemnify, hold harmless, and defend all other Working Interest Owners against any and all claims by any party against the interest attributed to such Working Interest Owner on Exhibit "B".

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

SECTION 22: 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 heret hereby consent that the Secretary and the Land Commissioner, respectively, shall and by their approval hereof, or by the approval hereof by their duly authorized representatives, do 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

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 Tract subject to this Agreement, regardless of whether there is any development of any 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, producing or improved recovery operations performed hereunder shall be deemed to be performed upon and for the benefit of each Tract, 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 within the Unit Area pursuant to direction or consent of the Land Commissioner and the A.O., or their duly authorized representatives, shall be deemed to constitute such suspension pursuant to such direction or consent as to each Tract within the Unitized Area.

(d) Each lease, sublease, or contract relating to the exploration, drilling, development, or operation for oil and gas 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 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.

(f) Any lease embracing lands of the State of New Mexico having only a portion of its land committed hereto shall be segregated as to that portion committed and that not committed, and the terms of such lease shall apply separately to such segregated portions commencing as of the Effective Date hereof. Provided, however, that notwithstanding any of the provisions of this Agreement to the contrary, such lease (including both segregated portions) 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, or has heretofore been discovered in paying quantities on some part of the lands embraced in such

lease committed to this Agreement or, so long as a portion of the Unitized Substances produced from the Unit Area is, under the terms of this Agreement, allocated to the portion of the lands covered by such lease committed to this Agreement, or, at any time during the term hereof, as to any lease that is then valid and subsisting and upon which the leases or the Unit Operator is then engaged in bona fide drilling, reworking, or improved recovery operations on any part of the lands embraced in such lease, then the same as to all lands embraced therein shall remain in full force and effect so long as such operations are diligently prosecuted, and if they result in the production of oil or gas, said lease shall continue in full force and effect as to gas in paying quantities is being produced from any portion of said lands.

(g) 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): "Any (Federal) lease heretofore or hereafter committed to any such (unit) plan embracing lands that are in part within and in part outside of the area covered by any such plan shall be segregated into separate leases as to the lands committed and the lands not committed as of the Effective Date of unitization; Provided, however, that any such lease as to the non-unitized portion shall continue in force and effect for the term thereof but for not less than two years from the date of such segregation and so long thereafter as oil or gas is produced in paying quantities."

SECTION 23. 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 subject hereto shall be binding upon Unit Operator until the first day of the calendar month after Unit Operator is furnished with the original, or acceptable photostatic or certified copy, of the recorded instrument or transfer; and no assignment or transfer of any Royalty Interest subject hereto shall be binding upon the Working Interest Owner responsible therefor until the first day of the calendar month after said Working Interest Owner is furnished with the original, or acceptable photostatic or certified copy, of the recorded instrument or transfer.

SECTION 24. EFFECTIVE DATE AND TERM. This Agreement shall become binding upon each party who executes or ratifies it as of the date of execution or ratification by such party and shall become effective on the first day of the calendar month next following the approval of this Agreement by the A.O., the Land Commissioner and the Commission.

If this Agreement does not become effective on or before January 1, 1989 it shall ipso facto expire on said date (hereinafter called "Expiration Date") and thereafter be of no further force or effect, unless prior thereto this Agreement has been executed or ratified by Working Interest Owners owning a combined Participation of at least seventy-five percent (75%); and at least seventy-five percent (75%) of such Working Interest Owners committed to this Agreement have decided to extend Expiration Date for a period not to exceed one(1) year (hereinafter called "Extended Expiration Date"). If Expiration Date is so extended and this Agreement does not become effective on or before Extended Expiration Date, it shall ipso facto expire on Extended Expiration Date and thereafter be of no further force and effect.

Unit Operator shall file for record within thirty (30) days after the Effective Date of this Agreement, in the office of the County Clerk of Chaves County, New Mexico, where a counterpart of this Agreement has become effective according to its terms and stating further the effective date.

The terms of this Agreement shall be for and during the time that Unitized Substances are produced from the unitized land and so long thereafter as drilling, reworking or other operations (including improved recovery operations) are prosecuted thereon without cessation of more than ninety (90) consecutive days unless sooner terminated as herein provided.

This Agreement may be terminated with the approval of the Land Commission and the A.O. by Working Interest Owners owning eighty percent (80%) of the Unit Participation then in effect whenever such Working Interest Owners determine that Unit Operations are no longer profitable, or in the interest of conservation. Upon approval, such termination shall be effective as of the first day of the month after said Working Interest Owners' determination. Notice of any such termination shall be filed by Unit Operator in the office of the County Clerk of Chaves County, New Mexico, within thirty (30) days of the effective date of termination.

Upon termination of this Agreement, the parties hereto shall be governed by the terms and provisions of the leases and contracts affecting the separate Tracts just as if this Agreement had never been entered into.

Notwithstanding any other provision in the leases unitized under this Agreement, Royalty Owners hereby grant Working Interest Owners a period of six months after termination of this Agreement in which to salvage, sell, distribute or otherwise dispose of the personal property and facilities used in connection with Unit Operations.

SECTION 25. RATE OF PROSPECTING, DEVELOPMENT AND PRODUCTION. All production and the disposal thereof shall be in conformity with allocations and quotas made or fixed by any duly authorized person or regulatory body under any Federal or State status. The A.O. is hereby vested with authority to alter or modify from time to time, in his discretion, the rate of prospecting and development and within the limits made or fixed by the Division to alter or modify the quantity and rate of production under this Agreement, 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; provided further, that no such alteration or modification shall be effective as to any lands of the State of New Mexico as to the rate of prospecting and development in absence of the specific written approval thereof by the Land Commissioner 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 A.O. shall only be exercised after notice to Unit Operator and opportunity for hearing to be held not less than fifteen (15) days from notice, and thereafter subject to administrative appeal before becoming final.

SECTION 26. NONDISCRIMINATION. Unit Operator in connection with the performance of work under this Agreement relating to leases of the United States, agrees to comply with all of the provisions of Section 202(1) to (7) inclusive of Executive Order 11246, (30 F.R. 12319), which are hereby incorporated by reference in this Agreement.

SECTION 27. APPEARANCES. Unit Operator shall have the right to appear for or on behalf of any interests affected hereby before the Land Commissioner, the Department, and the Division, and to appeal from any order issued under the rules and regulations of the Land Commissioner, the Department or the Division, or to apply for relief from any of said rules and regulations or in any proceedings relative to operations before the Land Commissioner, the Department or the Division or any other legally constituted authority; provided, however, that any other interested party shall also have the right at his or its own expense to be heard in any such proceeding.

SECTION 28. NOTICES. All notices, demands, objections or statements required hereunder to be given or rendered to the parties hereto shall be deemed fully given if made in writing and personally delivered to the party or parties or sent by postpaid certified or registered mail, addressed to such party or parties at their last known address set forth in connection with the signatures hereto or to the ratification or consent hereof or to such other address as any such party or parties may have furnished in writing to the party sending the notice, demand or statement.

SECTION 29. 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 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; provided, however, each party hereto covenants that it will not resort to any action to partition the unitized land or the Unit Equipment.

SECTION 30. EQUIPMENT AND FACILITIES NOT FIXTURES ATTACHED TO REALTY. Each Working Interest Owner has heretofore placed and used on its Tract or Tracts committed to this Agreement various well and lease equipment and other property, equipment and facilities. It is also recognized that additional equipment and facilities may hereafter be placed and used upon the Unitized Land as now or hereafter constituted. Therefore, for all purposes to this Agreement, any such equipment shall be considered to be personal property and not fixtures attached to realty. Accordingly, said well and lease equipment and personal property is hereby severed from the mineral estates affected by this Agreement, and it is agreed that any such equipment and personal property shall be and remain personal property of the Working Interest Owners for all purposes.

SECTION 31. UNAVOIDABLE DELAY. All obligations under this Agreement requiring the Unit Operator to commence or continue improved recovery operations 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 agency, unavoidable accident, uncontrollable delays in transportation, inability to obtain necessary materials or equipment in open market, or other matters beyond the reasonable control of the Unit Operator whether similar to matters herein enumerated or not.

SECTION 32. NONJOINER AND SUBSEQUENT JOINER. Joinder by any Royalty Owner, at any time, must be accompanied by appropriate joinder of the corresponding Working Interest Owner in order for the interest of such Royalty Owner to be regarded as effectively committed. Joinder to this Agreement by a Working Interest Owner, at any time, must be accompanied by appropriate joinder to the Unit Operating Agreement in order for such interest to be regarded as effectively committed to this Agreement.

Any oil or gas interest in the Unitized Formations not committed hereto prior to submission of this Agreement to the Land Commissioner and the A.O. for final approval may thereafter be committed hereto upon compliance with the applicable provisions of this Section and of Section 14 (Tracts Qualified for Participation) hereo, at any time up to the Effective Date hereof on the same basis of Tract Participation as provided in Section 13, by the owner or owners thereof subscribing, ratifying, or consenting in writing to this Agreement, and if the interest is a Working Interest, by the owner of such interest subscribing also to the Unit Operating Agreement.

It is understood and agreed, however, that from and after the Effective Date hereof the right of subsequent joinder as provided in this Section shall be subject to such requirements or approvals and on such basis as may be agreed upon by Working Interest Owners owning not less than sixty-five percent (65%) of the Unit Participation then in effect, and approved by the Land Commissioner and A.O. Such subsequent joinder by a proposed Working Interest Owner must be evidenced by his execution or ratification of this Agreement and the Unit Operating Agreement and, where State or Federal land is involved, such joinder must be approved by the Land Commissioner or A.O. Such joinder by a proposed Royalty Owner must be evidenced by his execution, ratification or consent of this Agreement and must be consented to in writing by the Working Interest Owner responsible for the payment of any benefits that may accrue hereunder in behalf of such proposed Royalty Owner. Except as may be otherwise herein provided, subsequent joinder to this Agreement shall be effective as of the first day of the month following the filing with the Land Commissioner and A.O. of duly executed counterparts of any and all documents necessary to establish effective commitment of any Tract or interest to this Agreement, unless objection to such joinder by the Land Commissioner or the A.O., is duly made sixty (60) days after such filing.

SECTION 33. COUNTERPARTS. This Agreement may be executed in any number of counterparts, no one of which needs to be executed by all parties and 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 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 land within the described Unit Area. Furthermore, this Agreement shall extend to and be binding on the parties hereto, their successors, heirs and assigns.

SECTION 34. JOINER IN DUAL CAPACITY. Execution as herein provided by any party as either a Working Interest Owner or a Royalty Owner shall commit all interests owned or controlled by such party; provided, that if the party is the owner of a Working Interest, he must also execute the Unit Operating Agreement.

SECTION 35. TAXES. Each party hereto shall, for its own account, render and pay its share of any taxes levied against or measured by the amount or value of the Unitized Substances produced from the unitized land; provided, however, that if it is required or if it be determined that the Unit Operator or the several Working Interest Owners must pay or advance said taxes for the account of the parties hereto, it is hereby expressly agreed that the parties so paying or advancing said taxes shall be reimbursed therefor by the parties hereto, including Royalty Owners, who may be responsible for the taxes on their respective allocated share of said Unitized Substances. No taxes shall be charged to the United States or to the State of New Mexico, nor to any lessor who has a contract with a lessee which requires his lessee to pay such taxes.

SECTION 36. NO PARTNERSHIP. The duties, obligations and liabilities of the parties hereto are intended to be several and not joint or collective. This Agreement is not intended to create, and shall not be construed to create, an association or trust, or to impose a partnership duty, obligation or liability with regard to any one or more of the parties hereto. Each party hereto shall be individually responsible for its own obligation as herein provided.

SECTION 37. PRODUCTION AS OF THE EFFECTIVE DATE. Unit Operator shall make a proper and timely gauge of all leases and other tanks within the Unit Area in order to ascertain the amount of merchantable oil above the pipeline connection, in such tanks as of 7.00 a.m. on the Effective Date hereof. All such oil which has then been produced in accordance with established allowables shall be and remain the property of the Working Interest Owner entitled thereto, the same as if the unit had not been formed; and the responsible Working Interest Owner shall promptly remove said oil from the unitized land. Any such oil not so removed shall be sold by Unit Operator for the account of such Working Interest Owners, subject to the payment of all Royalty to Royalty Owners under the terms hereof. The oil that is in excess of the prior allowable of the wells from which it was produced shall be regarded as Unitized Substances produced after Effective Date hereof.

If, as of the Effective Date hereof, any Tract is over-produced with respect to the allowable of the wells on that Tract and the amount of over-production has been sold or otherwise disposed of, such over-production shall be regarded as a part of the Unitized Substances produced after the Effective Date hereof and shall be charged to such Tract as having been delivered to the parties entitled to Unitized Substances allocated to such Tract.

SECTION 38. NO SHARING OF MARKET. This Agreement is not intended to provide and shall not be construed to provide, directly or indirectly, for any cooperative refining, joint sale or marketing of Unitized Substances.

SECTION 39. STATUTORY UNITIZATION. If and when Working Interest Owners owning at least seventy-five percent (75%) Unit Participation and Royalty Owners owning at least seventy-five percent (75%) Royalty Interest have become parties to this Agreement or have approved this Agreement in writing and such Working Interest Owners have also become parties to the Unit Operating Agreement, Unit Operator may make application to the Division for statutory unitization of the uncommitted interests pursuant to the Statutory Unitization

Act (Chapter 65, Article 14, N.M.S. 1953 Annotated). If such application is made and statutory unitization is approved by the Division, then effective as of the date of the Division's order approving statutory unitization, this Agreement and/or the Unit Operating Agreement shall automatically be revised and/or amended in accordance with the following:

(1) Section 14 of this Agreement shall be revised by substituting for the entire said section the following:

"SECTION 14. TRACTS QUALIFIED FOR PARTICIPATION. On and after the Effective Date hereof, all Tracts within the Unit Area shall be entitled to participation in the production of Unitized Substances."

(2) Section 24 of this Agreement shall be revised by substituting for the first three paragraphs of said section the following:

"SECTION 24. EFFECTIVE DATE AND TERM. This Agreement shall become effective on the first day of the calendar month next following the effective date of the Division's order approving statutory unitization upon the terms and conditions of this Agreement, as amended (if any amendment is necessary) to conform to the Division's order; approval of this Agreement, as so amended, by the Land Commissioner; and the A.O. and the filing by Unit Operator of this Agreement or notice thereof for record in the office of the County Clerk of Chaves County, New Mexico. Unit Operator shall not file this Agreement or notice thereof for record, and hence this Agreement shall not become effective, unless within ninety (90) days after the date all other prerequisites for effectiveness of this Agreement have been satisfied, such filing is approved by Working Interest Owners owning a combined Unit Participation of at least seventy-five (75%) as to all Tracts within the Unit Area.

"Unit Operator shall, within thirty (30) days after the Effective Date of this Agreement, file for record in the office of the County Clerk of Chaves County, New Mexico, a certificate to the effect that this Agreement has become effective in accordance with its terms, therein identifying the Division's order approving statutory unitization and stating the Effective Date."

3. This Agreement and/or the Unit Operating Agreement shall be amended in any and all respects necessary to conform to the Division's order approving statutory unitization.

Any and all amendments of this Agreement an/or the Unit Operating Agreement that are necessary to conform said agreements to the Division's order approving statutory unitiation shall be deemed to be hereby approved in writing by the parties hereto without any necessity for further approval by said parties, except as follows:

(a) If any amendment of this Agreement has the effect of reducing any Royalty Owner's participation in the production of Unitized Substances, such Royalty Owner shall not be deemed to have hereby approved the amended agreement without the necessity of further approval in writing by said Royalty Owner; and

(b) If any amendment of this Agreement and/or the Unit Operating Agreement has the effect of reducing any Working Interest Owner's participation in the production of Unitized Substances or increasing such Working Interest Owners share of Unit Expense, such Working Interest Owner shall not be deemed to have hereby approved the amended agreements without the necessity of further approval in writing by said Working Interest Owner.

Executed as of the day and year first above written.

YATES DRILLING COMPANY

By *Peyton Yates*
Attorney-in-Fact

(KC)

Date of Execution:

November 6, 1989

STATE OF NEW MEXICO)

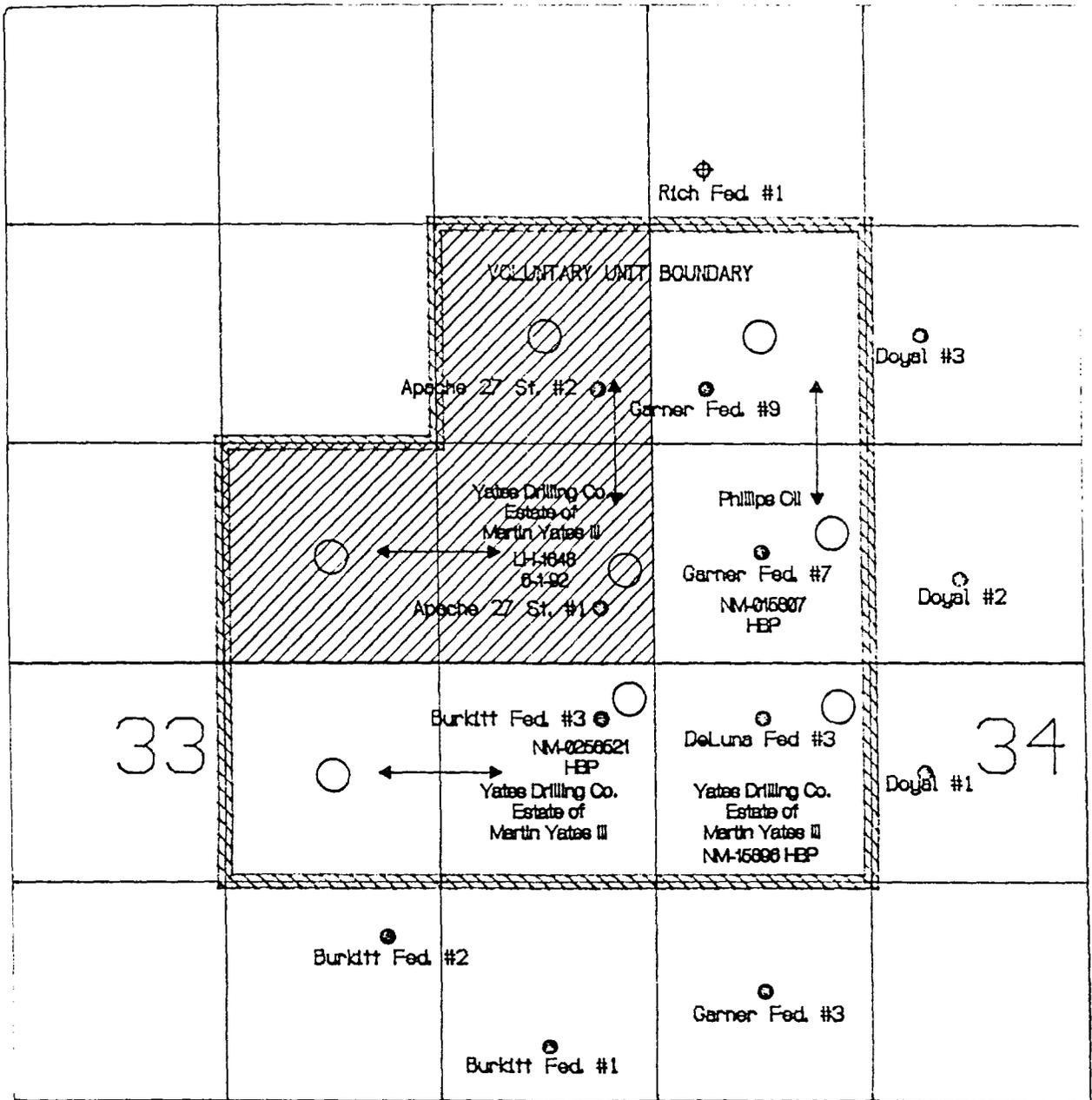
: ss

COUNTY OF EDDY)

The foregoing instrument was acknowledged before me this 6th day of November 1989, by Peyton Yates, Attorney-in-Fact for YATES DRILLING COMPANY, a New Mexico corporation, on behalf of said corporation.

My commission expires:
August 28, 1991

Lonnie L. Parish
Notary Public



YATES DRILLING COMPANY
PROPOSED VOLUNTARY UNIT
CHAVES COUNTY, NEW MEXICO
T12S-R31E

	ACREAGE	PERCENTAGE
<input type="checkbox"/> FEDERAL LAND	200	62.50%
<input checked="" type="checkbox"/> STATE LAND	120	37.50%

TRACT NUMBER

SCALE: 1"=1000'

EXHIBIT "A"

EXHIBIT "H"
 To Unit Agreement
 CACTUS QUEEN UNIT
 Chaves County, New Mexico

Tract No.	Description	No. of Acres	Serial No. & Date of Lease	Basic		Lessee of Record	Overriding		Working Interest Owner & Percentage
				Owner & Percentage	Royalty		Owner	Percentage	
1.	112S-R31E Sec. 27: SW1/4SW1/4	40	NM-015807 HWP	USA 12.5%	USA	Phillips Petroleum Company Successor in Interest to Amincol USA, Inc. 100%	F. G. Breckenridge .05% (PPI) Etoile M. Bennett .45 (PPI) W. G. Ross 1.3125	G & P Exploration, Inc. 1.3125 Phillips Petroleum Company 3.1250	Yates Drilling Company - 50% Est. of Martin Yates III - 25 Lillie H. Yates Surface through Queen Formation
	Phillips Petroleum Company Successor in Interest to Amincol USA, Inc. 100%								
1a.	112S-R31E Sec. 27: NW1/4SW1/4	40	NM-015807 HWP	USA 12.5	USA	Phillips Petroleum Company Successor in Interest to Amincol USA, Inc. 100%	F. G. Breckenridge .05 (PPI) Etoile M. Bennett .45 (PPI) W. G. Ross 1.3125	G & P Exploration, Inc. 1.3125 Phillips Petroleum Company 3.1250	Yates Drilling Company - 50% Est. of Martin Yates III - 25 Lillie H. Yates Surface through Queen Formation

EXHIBIT "B"
 TO UNIT AGREEMENT
 CACTUS QUEEN UNIT
 Chavez County, New Mexico

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Tract No.	Description	No. of Acres	Serial No. & Expiration Date of Lease	Basic Royalty		Lessee of Record	Overriding Royalty Owner		Working Interest Owner & Percentage
				Owner & Percentage	Percentage		Percentage	Percentage	
2.	T12S-R31E	40	HM-0256521	USA		Yates Drilg. Co. 50	Erion E. Nowell	1.5	Yates Drilling Company - 50
	Sec. 34: NE1/4			12.5	Est. of Martin Yates III	R.F. Partnership,	1.5	Est. of Martin Yates III - 25	Yates Drilling Company - 25
3.	T12S-R31E	40	HM-15896	USA		Yates Drilg. Co. 50	Erion E. Nowell	1.5	Yates Drilling Company - 25
	Sec. 34: NW1/4			12.5	Est. of Martin Yates III	R.F. Partnership,	1.5	Est. of Martin Yates III - 25	Yates Drilling Company - 25
4.	T12S-R31E	40	LH-1648	USA		Yates Drilg. Co. 50	C.F. Strange -	2.0	Yates Drilling Company - 50
	Sec. 27: SW1/4			12.5	Yates III	George Globe	2.0	Est. of Martin Yates III - 25	Lillie M. Yates - 25
TOTAL				200.00 ACRES OF FEDERAL LANDS					
4a.	T12S-R31E	40	LH-1648	USA		Yates Drilling Company	None		Yates Drilling Company - 100
	Sec. 27: NW1/4			12.5	Yates Drilling Company	None		Yates Drilling Company - 100	

EXHIBIT "C"

PROPOSED				
WORKING INTEREST UNIT				
CHAVES CO., NM	0.730000	0.020000	0.250000	1.000000

WELLS	CUMULATIVE OIL PRODD. THRU JULY 1989 (BBLS)		MAY, JUNE & JULY 1989 PRODUCTION (BBLS)		ORIGINAL OIL IN PLACE (BBLS)		UNIT PARTICIPATION
	AMOUNT	FRACTION	AMOUNT	FRACTION	AMOUNT	FRACTION	
1 Garner Fed. #7	23,829	0.264323	198	0.308892	333,180	0.377058	0.294735
1 a Garner Fed. #9	21,039	0.233375	116	0.180967	27,416	0.031027	0.180168
2 Burkitt Fed. #3	6,105	0.067720	75	0.117005	158,740	0.179645	0.098165
2 a NW/NW 34-12S-31E	0	0.000000	0	0.000000	39,371	0.044556	0.011139
3 DeLuna Fed. #3	12,805	0.142039	102	0.159126	156,188	0.176757	0.151573
5 Apache "27" St. #1	19,618	0.217613	94	0.146646	120,037	0.135845	0.193622
5 a Apache "27" St. #2	6,755	0.074930	56	0.087363	24,152	0.027333	0.063652
5 b SW/SW 27-12S-31E	0	0.000000	0	0.000000	24,547	0.027780	0.006945
	90,151	1.000000	641	1.000000	883,631	1.000000	1.000000

YATES DRILLING COMPANY

UNIT AGREEMENT

Dated: November 1, 1989

CACTUS (QUEEN) UNIT

Township 12 South, Range 31 East, N.M.P.M.

Section 26: SW $\frac{1}{4}$ SW $\frac{1}{4}$
Section 27: SE $\frac{1}{4}$, E $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$
Section 34: N $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$, N $\frac{1}{4}$ NW $\frac{1}{4}$
Section 35: NW $\frac{1}{4}$ NW $\frac{1}{4}$

Chaves County, New Mexico

BEFORE EXAMINER STOGNER	
OIL CONSERVATION DIVISION	
YATES	EXHIBIT NO. 3A
CASE NO. 9809, 9810, 9823	

UNIT AGREEMENT
 CACTUS (QUEEN) UNIT
 CHAVES COUNTY, NEW MEXICO
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 EXHIBIT "C" (SCHEDULE OF TRACT PARTICIPATION)
 EXHIBIT "D" (THERE IS NO EXHIBIT "D")

UNIT AGREEMENT
FOR THE DEVELOPMENT AND OPERATION OF THE
CACTUS (QUEEN) UNIT
CHAVES COUNTY, NEW MEXICO

THIS AGREEMENT, entered into as of the 1st day of November 1989 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 (Section 1, Chapter 88, Laws 1943, as amended by Section 1 of Chapter 176, Laws of 1961) Chapter 19, Article 10, Section 45, New Mexico Statutes 1978 Annotated), to consent to and approve the development or operation of State lands under agreements made by lessees of State land jointly or severally with other lessees where such agreements provide for the unit operation or development of part of or all of any oil or gas pool, field or area; and

WHEREAS, the Commissioner of Public Lands of the State of New Mexico is authorized by an Act of the Legislature (Section 1, Chapter 88, Laws 1943, as amended by Section 1, Chapter 162, Laws of 1951) (Chapter 19, Article 10, Section 47, New Mexico Statutes 1978 Annotated) to amend with the approval of lessee, evidenced by the lessee's execution of such agreement or otherwise, any oil and gas lease embracing State lands so that the length of the term of said lease may coincide with the term of such agreements for the unit operation and development of part or all of any oil or gas pool, field or area; and

WHEREAS, the Oil Conservation Division of the State of New Mexico (hereinafter referred to as the "Division") is authorized by an Act of the Legislature (Chapter 72, Laws of 1935 as amended) (Chapter 70, Article 2, Section 2 et seq., New Mexico Statutes 1978 Annotated) to approve this Agreement and the conservation provisions hereof; and

WHEREAS, the Oil Conservation Division of the Energy and Minerals Department of the State of New Mexico is authorized by law (Chapter 65, Article 3 and Article 14, N.M.S. 1953 Annotated) to approve this Agreement and the conservation provisions hereof; and

WHEREAS, the parties hereto hold sufficient interest in the 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 interest in the below-defined Unit Area, and agree severally among themselves as follows:

SECTION 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.

SECTION 2. UNIT AREA AND DEFINITIONS. The area described by Tracts in Exhibit "B" and depicted on Exhibit "A" attached hereto is 560.00 acres, more or less, in Chaves County, New Mexico. Said land is described as follows:

Township 12 South, Range 31 East, N.M.P.M.
Section 26: SW $\frac{1}{4}$ SW $\frac{1}{4}$
Section 27: SE $\frac{1}{4}$, E $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$
Section 34: N $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ NW $\frac{1}{4}$
Section 35: NW $\frac{1}{4}$ NW $\frac{1}{4}$

For the purpose of the Agreement, the following terms and expressions as used herein shall mean:

(a) "Land Commissioner" is defined as the Commissioner of Public Lands of the State of New Mexico.

(b) "Division" is defined as the Oil Conservation Division of the Department of Energy and Minerals of the State of New Mexico.

(c) "Authorized Officer" or "A.O." is any employee of the Bureau of Land Management who has been delegated the required authority to act on behalf of the BLM.

(d) "Secretary" is defined as the Secretary of the Interior of the United States of America, or his duly authorized delegate.

(e) "Department" is defined as the Department of the Interior of the United States of America.

(f) "Proper BLM Office" is defined as the Bureau of Land Management office having jurisdiction over the federal lands included in the Unit Area.

(g) "Unitized Formation" shall mean that interval underlying the Unit Area, the vertical limits of which extend from an upper limit described as 50' above the top of the Queen formation to a lower limit as the base of the Queen formation; said limits having been previously found to occur at 2930 feet and 3100 feet, respectively in Yates Drilling Company's Doyal #1, located 660' FNL and 990' FEL of Section 34, Township 12 South, Range 31 East.

(h) "Unitized Substances" are all oil, gas, gaseous substances, sulphur contained in gas, condensate, distillate and all associated and constituent liquid or liquefiable hydrocarbons, other than outside substances, within and produced from the Unitized Formation.

(i) "Tract" is each parcel of land described as such and given a Tract number in Exhibit "B"

(j) "Tract Participation" is defined as the percentage of participation shown on Exhibit "B" for allocating Unitized Substances to a Tract under this Agreement.

(k) "Unit Participation" is the sum of the percentages obtained by multiplying the Working Interest of a Working Interest Owner in each Tract by the Tract Participation of such Tract.

(l) "Working Interest" is the right to search for, produce and acquire Unitized Substances whether held as an incident of ownership of mineral fee simple title, under an oil and gas lease, operating agreement, or otherwise held, which interest is chargeable with and obligated to pay or bear, either in cash or out of production, or otherwise, all or a portion of the cost of drilling, developing and producing the Unitized Substances from the Unitized Formation and operations thereof hereunder. Provided that any royalty interest created out of a working interest subsequent to the execution of this Agreement by the owner of the working interest shall continue to be subject to such working interest burdens and obligations.

(m) "Working Interest Owner" is any party hereto owning a Working Interest, including a carried working interest owner, holding an interest in Unitized Substances by virtue of a lease, operating agreement, fee title or otherwise. The owner of oil and gas rights that are free of lease or other instrument creating a Working Interest in another shall be regarded as a Working Interest Owner to the extent of seven-eighths (7/8) of his interest in Unitized Substances, and as a Royalty Owner with respect to his remaining one-eighth (1/8) interest therein.

(n) "Royalty Interest" or "Royalty" is an interest other than a Working Interest in or right to receive a portion of the Unitized Substances or the proceeds thereof and includes the royalty interest reserved by the lessor or by an oil and gas lease and any overriding royalty interest, oil payment interest, net profit contracts, or any other payment or burden which does not carry with it the right to search for and produce unitized substances.

(o) "Royalty Owner" is the owner of a Royalty Interest.

(p) "Unit Operating Agreement" is the agreement entered into by and between the Unit Operator and the Working Interest Owners as provided in Section 9, *infra*, and shall be styled "Unit Operating Agreement, Chaves County, New Mexico".

(q) "Oil and Gas Rights" is the right to explore, develop and operate lands within the Unit Area for the production of Unitized Substances, or to share in the production so obtained or the proceeds thereof.

(r) "Outside Substances" is any substance obtained from any source other than the Unitized Formation and injected into the Unitized Formation.

(s) "Unit Manager" is any person or corporation appointed by Working Interest Owners to perform the duties of the Unit Operator until the selection and qualification of a successor Unit Operator as provided for in Section 7 hereof.

(t) "Unit Operator" is the party designated by Working Interest Owners under the Unit Operating Agreement to conduct Unit Operations.

(u) "Unit Operations" is any operation conducted pursuant to this Agreement and the Unit Operating Agreement.

(v) "Unit Equipment" is all personal property, lease and well equipment, plants and other facilities and equipment taken over or otherwise acquired for the joint account for use in Unit Operations.

(w) "Unit Expense" is all cost, expense, or indebtedness incurred by Working Interest Owners or Unit Operator pursuant to this Agreement and the Unit Operating Agreement for or on account of Unit Operations.

(x) "Effective Date" is the date determined in accordance with Section 24, or as redetermined in accordance with Section 39.

(y) "Unit Cumulative Production" is defined as the total number of barrels produced through July 31, 1989, from all tracts within the unit area which are qualified under the terms of this agreement, as officially reported to the Commission.

SECTION 3. EXHIBITS. Exhibit "A" attached hereto is a map showing the Unit Area and the boundaries and identity of tracts and leases in said Unit 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 comprising each Tract, percentages and kind of ownership of oil and gas interest in all land in the Unit Area. Exhibit "C" attached hereto shows the Tract Participation of each Tract 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. There is no Exhibit "D". Exhibits "A", "B" and "C" shall be revised by the Unit Operator whenever changes in the Unit Area render such revision necessary or when requested by the Deputy, or the Land Commissioner, and not less than five copies shall be filed with the Deputy, and three copies with the Land Commissioner.

SECTION 4. EXPANSION. The above described Unit Area may, with the approval of the A.O. and Land Commissioner, when practicable be expanded to include therein any additional Tract or Tracts regarded as reasonably necessary or advisable for the purposes of this Agreement provided however, in such expansion there shall be no retroactive allocation or adjustment of Unit Expense or of interests in the Unitized Substances produced, or proceeds thereof. Pursuant to Subsection (b), the Working Interest Owners may agree upon an adjustment of investment by reason of the expansion. Such expansion shall be effected in the following manner:

(a) The Working Interest Owner or Owners of a Tract or Tracts desiring to bring such Tract or Tracts into this unit, shall file an application therefor with Unit Operator requesting such admission.

(b) Unit Operator shall circulate a notice of the proposed expansion to each Working Interest Owner in the Unit Area and in the Tract proposed to be included in the unit, setting out the basis for admission, the Tract Participation to be assigned to each Tract in the enlarged Unit Area and other pertinent data. After negotiation (at Working Interest Owners' meeting or otherwise) if at least three Working Interest Owners having in the aggregate seventy-five percent (75%) of the Unit Participation then in effect have agreed to inclusion of such Tract or Tracts in the Unit Area, then Unit Operator shall:

(1) After obtaining preliminary concurrence by the A.O. and Land Commissioner, prepare a notice of proposed expansion describing the contemplated changes in the boundaries of the Unit Area, the reason therefor, the basis for admission of the additional Tract or Tracts, the Tract Participation to be assigned thereto and the proposed effective date thereof; and

(2) Deliver copies of said notice to Land Commissioner, the A.O. at the Proper BLM Office, each Working Interest Owner and to the last known address of each lessee and lessor whose interests are affected, advising such parties that thirty (30) days will be allowed for submission to the Unit Operator of any objection to such proposed expansion; and

(3) File, upon the expiration of said thirty (30) day period as set out in (2) immediately above, with the Land Commissioner and A.O., the following:

- (i) Evidence of mailing said notice of expansion
- (ii) An application for such expansion in sufficient number, appropriate approval and distribution; and
- (iii) An instrument containing the appropriate joinders in compliance with the participation requirements of Section 14 (TRACTS QUALIFIED FOR PARTICIPATION) and Section 32 (NON-JOINDER AND SUBSEQUENT JOINDER), infra; and
- (iv) a copy of any objections received.

The expansion shall, after due consideration of all pertinent information and approval by the Land Commissioner and the A.O., become effective as of the date prescribed in the notice thereof, preferably the first day of the month subsequent to the date of notice. The revised Tract Participation of the respective Tracts included within the Unit Area prior to such enlargement shall remain the same ratio one to another.

SECTION 5. UNITIZED LAND AND UNITIZED SUBSTANCES. All land committed to this agreement as to the Unitized Formation shall constitute land referred to herein as "Unitized Land" or "Land Subject to this Agreement". All oil, gas, gaseous substances, sulphur contained in gas, condensate, distillate, and all associated and constituent liquid or liquefiable hydrocarbons produced from the Unitized Formation underlying Unitized Land are unitized under the term of this Agreement and herein are called "Unitized Substances."

SECTION 6. UNIT OPERATOR. Yates Drilling Company, a New Mexico corporation, is hereby designated as Unit Operator, and, by signing this instrument as Unit Operator, it agrees and consents to accept the duties and obligations of Unit Operator for the operation, 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.

Unit Operator shall have a lien upon the interest of the owners of Working Interests in the Unitized Land to the extent provided in the Unit Operating Agreement.

SECTION 7. RESIGNATION OR REMOVAL OF UNIT OPERATOR. Unit Operator shall have the right to resign at any time, but such resignation shall not become effective so as to release Unit Operator from the duties and obligations of Unit Operator and terminate Unit Operator's rights as such for a period of six (6) months after written notice of intention to resign has been given by Unit Operator to all Working Interest Owners and the Deputy, and until all wells are placed in a condition satisfactory for suspension or abandonment, or operations, whichever is required by the Deputy, unless a new Unit Operator shall have taken over and assumed the duties and obligations of Unit Operator prior to the expiration of said period.

Unit Operator shall, upon default or failure to the performance of its duties or obligations hereunder, be subject to removal of not less than eighty percent (80%) of the committed Working Interest (on the basis of Unit Participation) exclusive of any Working Interest owned by the Unit Operator. Such removal shall be effective upon notice thereof to the Land Commissioner and the A.O.

In all instances of resignation or removal, until a successor to Unit Operator is selected and approved as hereinafter provided, the Working Interest Owners shall be jointly responsible for the performance of the duties of Unit Operator and shall, not later than thirty (30) days before such resignation or removal becomes effective, appoint a Unit Manager to represent them in any action to be taken hereunder.

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 wells, equipment, books and records, materials, appurtenances and any other assets used in conducting the Unit Operations and owned by the Working Interest Owners (including any and all data and information which it might have gained or assembled by reason of its operation of the Unitized Land) to the new duly qualified successor Unit Operator or to the Unit Manager 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. Nothing herein contained shall be construed to relieve or discharge any Unit Operator who resigns or is removed hereunder for any liability or duties accruing or performable by it prior to the effective date of such resignation or removal.

SECTION 8. SUCCESSOR UNIT OPERATOR. Whenever the Unit Operator shall tender its resignation as Unit Operator or shall be removed as hereinabove provided, the Working Interest Owners shall select a successor Unit Operator as herein provided. 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 Land Commissioner and the A.O. If no successor Unit Operator or Unit Manager is selected and qualified as herein provided, the Land Commissioner and/or the A.O., at their election, may declare this Agreement terminated.

In selecting a successor Unit Operator, the affirmative vote of three or more Working Interest Owners having a total of sixty-five percent (65%) or more of the total Unit Participation shall prevail; provided that if any one Working Interest Owner has a Unit Participation of more than thirty-five percent (35%), its negative vote or failure to vote shall not be regarded as sufficient unless supported by the vote of one or more other Working Interest Owners having a total Unit Participation of at least five percent (5%). If the Unit Operator who is removed votes only to succeed itself or fails to vote, the successor Unit Operator may be selected by the affirmative vote of the owners of at least seventy-five percent (75%) of the Unit Participation remaining after excluding the Unit Participation of Unit Operator so removed.

SECTION 9. ACCOUNTING PROVISIONS AND UNIT OPERATING AGREEMENT. Costs and expenses incurred by Unit Operator in conducting Unit Operations hereunder shall be paid, apportioned among, and borne by the Working Interest Owners in accordance with the Unit Operating Agreement; 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 Agreement, and in case of any inconsistency or conflict between this Agreement and the Unit Operating Agreement, this Agreement shall prevail. Copies of any Unit Operating Agreement executed pursuant to this Section shall be filed with the Land Commissioner and with the A.O. at the Proper BLM Office as required prior to approval of this Agreement.

SECTION 10. 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. The parties hereto, to the extent they have the right to do so, grant to Unit Operator the use of brine or water or both from any formation in and under the Unitized Land for injection into the Unitized Formation. Upon request, 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.

SECTION 11. EASEMENTS OR USE OF SURFACE.

(a) The parties hereto, to the extent of their rights and interests, hereby grant to Working Interest Owners the right to use as much of the surface of the Unitized Land as may reasonably be necessary for Unit Operations and removal of Unitized Substances therefrom; provided that nothing herein shall be construed as leasing or otherwise conveying to Working Interest Owners a site for a water, gas injection, processing or other plant, or campsite.

(b) Working Interest Owners shall have and are hereby granted free use of water from the Unitized Land for Unit Operations, except water from any well, lake, pond, or irrigation ditch of a Royalty Owner.

(c) Working Interest Owners shall pay the owner for damages to growing crops, timber, fences, improvements, and structures on the Unit Area that result from Unit Operations.

SECTION 12. PLAN OF OPERATIONS. It is recognized and agreed by the parties hereto that all of the land subject to this Agreement is reasonably proved to be productive of Unitized Substances and that the object and purpose of this Agreement is to formulate and to put into effect an improved recovery project in order to effect additional recovery of Unitized Substances, prevent waste and conserve natural resources. Unit Operator shall have the right to inject into the Unitized Formation any substances for secondary recovery or enhanced recovery purposes in accordance with a plan of operation approved by the Working Interest Owners, the A.O., the Land Commissioner and the Division, including the right to drill and maintain injection wells on the Unitized Land and completed in the Unitized Formation, and to use abandoned well or wells producing from the Unitized Formation for said purpose. Subject to like approval, the Plan of Operation may be revised as conditions may warrant.

The initial Plan of Operation shall be filed with the A.O., the Land Commissioner and the Division concurrently with the filing of this Unit Agreement for final approval. Said initial plan of operations and all revisions thereof shall be as complete and adequate as the A.O., the Land Commissioner and the Division may determine to be necessary for timely operation consistent herewith. Upon approval of this Agreement and the initial plan by the A.O. and Commissioner, said plan, and all subsequently approved plans, shall constitute the 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 like approval a plan for an additional specified period of operations. After such operations are commenced, reasonable diligence shall be exercised by the Unit Operator in complying with the obligations of the approved Plan of Operation.

Notwithstanding anything to the contrary herein contained, should the Unit Operator fail to commence Unit Operations for the secondary recovery of Unitized Substances from the Unit Area within eighteen (18) months after the effective date of this Agreement, or any extension thereof approved by the A.O., this Agreement shall terminate automatically as of the date of default.

SECTION 13. TRACT PARTICIPATION. In Exhibit "B" attached hereto there are listed and numbered the various Tracts within the Unit Area, and set forth opposite each Tract are figures which represent the Tract Participation, during Unit Operations if all Tracts in the Unit Area qualify as provided herein. The Tract Participation of each Tract as shown in Exhibit "B" was determined in accordance with the following formula:

Tract Participation =	Cumulative Primary Production	- 70%
	Original Oil in Place	- 25%
	Past Three Months Production	- 5%
		<u>100%</u>

In the event less than all Tracts are qualified on the Effective Date hereof, the Tract Participation shall be calculated on the basis of all such qualified Tracts rather than all Tracts in the Unit Area.

SECTION 14. TRACTS QUALIFIED FOR PARTICIPATION. On and after the Effective Date hereof, the Tracts within the Unit Area which shall be entitled to participation in the production of Unitized Substances shall be those Tracts more particularly described in Exhibit "B" that corner or have a common boundary (Tracts separated only by a public road or a railroad right-of-way shall be considered to have a common boundary), and that otherwise qualify as follows:

(a) Each Tract as to which Working Interest Owners owning one hundred percent (100%) of the Working Interest have become parties to this Agreement and as to which Royalty Owners owning seventy-five percent (75%) or more of the Royalty Interest have become parties to this Agreement.

(b) Each Tract as to which Working Interest Owners owning one hundred percent (100%) of the Working Interest have become parties to this Agreement, and as to which Royalty Owners owning less than seventy-five percent (75%) of the Royalty Interest have become parties to this Agreement, and as to which (1) the Working Interest Owner who operates the Tract and Working Interest Owners owning at least seventy-five percent (75%) of the remaining Working Interest in such Tract have joined in a request for the inclusion of such Tract, and as to which (2) Working Interest Owners owning at least seventy-five percent (75%) of the combined Unit Participation in all Tracts that meet the requirements of Section 14(a) above have voted in favor of the inclusion of such tract.

(c) Each Tract as to which Working Interest Owners owning less than one hundred percent (100%) of the Working Interest have become parties to this Agreement, regardless of the percentage of Royalty Interest therein that is committed hereto; and as to which (1) the Working Interest Owner who operates the Tract and Working Interest Owner owning at least seventy-five percent (75%) of the remaining Working Interest in such Tract who have become parties to this Agreement have joined in a request for inclusion of such Tract, and have executed and delivered, or obligated themselves to execute and deliver an indemnity agreement indemnifying and agreeing to hold harmless the other owners of committed Working Interests, their successors and assigns, against all claims and demands that may be made by the owners of Working Interest in such Tract who are not parties to this Agreement, and which arise out of the inclusion of the Tract; and as to which (2) Working Interest Owners owning at least seventy-five percent (75%) of the Unit Participation in all Tracts that meet the requirements of Section 14(a) and 14(b) have voted in favor of the inclusion of such Tract and to accept the indemnity agreement. Upon the inclusion of such a Tract, the Tract Participations which would have been attributed to the nonsubscribing owners of Working Interest in such Tract, had they become parties to this Agreement and the Unit Operating Agreement, shall be attributed to the Working Interest Owners in such Tract who have become parties to such agreement, and joined in the indemnity agreement, in proportion to their respective Working Interests in the Tract.

If on the Effective Date of this Agreement there is any Tract or Tracts which have not been effectively committed to or made subject to this Agreement by qualifying as above provided, then such Tract or Tracts shall not be entitled to participate hereunder. Unit Operator shall, when submitting this Agreement for final approval by the Land Commissioner and the A.O., file therewith a schedule of those tracts which have been committed and made subject to this Agreement and are entitled to participate in Unitized Substances. Said schedule shall set forth opposite each such committed Tract the lease number or assignment number, the owner of record of the lease, and the percentage participation of such tract which shall be computed according to the participation formula set forth in Section 13 (Tract Participation) above. This schedule of participation shall be revised Exhibit "B" and upon approval thereof by the Land Commissioner and the A.O., shall become a part of this Agreement and shall govern the allocation of production of Unitized Substances until a new schedule is approved by the Land Commissioner and A.O.

SECTION 15.A. ALLOCATION OF UNITIZED SUBSTANCES. All Unitized Substances produced and saved (less, save and except any part of such Unitized Substances used in conformity with good operating practices on unitized land for drilling, operating, camp and other production or development purposes and for injection or unavoidable loss in accordance with a Plan of Operation approved by the A.O. and Land Commissioner) shall be apportioned among and allocated to the qualified Tracts in accordance with the respective Tract Participations effective hereunder during the respective periods such Unitized Substances were produced, as set forth in the schedule of participation in Exhibit "B". The amount of Unitized Substances so allocated to each Tract, and only that amount (regardless of whether it be more or less than the amount of the actual production of Unitized Substances from the well or wells, if any, on such Tract) shall, for all intents, uses and purposes, be deemed to have been produced from such Tract.

The Unitized Substances allocated to each Tract shall be distributed among, or accounted for, to the parties entitled to share in the production from such Tract in the same manner, in the same proportions, and upon the same conditions, as they would have participated and shared in the production from such Tracts, or in the proceeds thereof, had this Agreement not been entered into; and with the same legal force and effect.

No Tract committed to this Agreement and qualified for participation as above provided shall be subsequently excluded from participation hereunder on account of depletion of Unitized Substances.

If the Working Interest and/or the Royalty Interest in any Tract are divided with respect to separate parcels or portions of such Tract and owned now or hereafter in severalty by different persons, the Tract Participation shall in the absence of a recordable instrument executed by all owners in such Tract and furnish to Unit Operator fixing the divisions of ownership, be divided among such parcels or portions in proportion to the number of surface acres in each.

SECTION 15.B. TAKING UNITIZED SUBSTANCES IN KIND. The Unitized Substances allocated to each Tract shall be delivered in kind to the respective parties entitled thereto by virtue of the ownership of oil and gas rights therein. Each such party shall have the right to construct, maintain and operate all necessary facilities for that purpose within the Unitized Area, provided the same are so constructed, maintained and operated as not to interfere with Unit Operations. Subject to Section 17 hereof, any extra expenditure incurred by Unit Operator by reason of the delivery in kind of any portion of the Unitized Substances shall be borne by the party taking delivery. In the event any Working Interest Owner shall fail to take or otherwise adequately dispose of its proportionate share of the production from the Unitized Formation, then so long as such condition continues, Unit Operator, for the Tract or Tracts concerned, and in order to avoid curtailing the operation of the Unit Area, may, but shall not be required to, sell or otherwise dispose of such production to itself or to others, provided that all contracts of sale by Unit Operator of any other party's share of Unitized Substances shall be only for such reasonable periods of time as are consistent with the minimum needs of the industry under the circumstances, but in no

event shall any such contract be for a period in excess of one year, and at not less than the prevailing market price in the area for like production, and the account of such Working Interest Owner shall be charged therewith as having received such production. The net proceeds, if any, of the Unitized Substances so disposed of by Unit Operator shall be paid to the Working Interest Owner of the Tract or Tracts concerned. Notwithstanding the foregoing, Unit Operator shall not make a sale into interstate commerce of any Working Interest Owner's share of gas production without first giving such Working Interest Owner sixty (60) days' notice of such intended sale.

Any Working Interest Owner receiving in kind or separately disposing of all or any part of the Unitized Substances allocated to any Tract, or receiving the proceeds therefrom if the same is sold or purchased by Unit Operator, shall be responsible for the payment of all royalty, overriding royalty and production payments due thereon, and each such party shall hold each other Working Interest Owner harmless against all claims, demands and causes of action by owners of such royalty, overriding royalty and production payments.

If, after the Effective Date of this Agreement, there is any Tract or Tracts that are subsequently committed hereto, as provided in Section 4 (Expansion) hereof, or any Tract or Tracts within the Unit Area not committed hereto as of the Effective Date hereof but which are subsequently committed hereto under the provisions of Section 14 (Tracts Qualified for Participation) and Section 32 (Nonjoinder and Subsequent Joinder); or if any Tract is excluded from this Agreement as provided for in Section 21 (Loss of Title), the schedule of participation as shown in Exhibit "B" shall be revised by the Unit Operator; and the revised Exhibit "B", upon approval by the Land Commissioner and the A.O., shall govern the allocation of production on and after the effective date thereof until a revised schedule is approved as hereinabove provided.

SECTION 16. OUTSIDE SUBSTANCES. If gas obtained from formations not subject to this Agreement is introduced into the Unitized Formation for use in repressuring, stimulating of production or increasing ultimate recovery which shall be in conformity with a Plan of Operation first approved by the Land Commissioner and the A.O., a like amount of gas with appropriate deduction for loss or depletion from any cause may be withdrawn from unit wells completed in the Unitized Formation royalty free as to dry gas, but not royalty free as to the products extracted therefrom; provided that such withdrawal shall be at such time as may be provided in the approved Plan of Operator or as otherwise may be consented to or prescribed by the Land Commissioner and the A.O. as conforming to good petroleum engineering practices and provided further that such right of withdrawal shall terminate on the termination date of this Agreement.

SECTION 17. ROYALTY SETTLEMENT. The State of New Mexico and United States of America and all Royalty Owners who, under an existing contract, are entitled to take in kind a share of the substances produced from any Tract unitized hereunder, shall continue to be entitled to such right to take in kind their share of the Unitized Substances allocated to such Tract, and Unit Operator shall make deliveries of such Royalty share taken in kind in conformity with the applicable contracts, laws and regulations. Settlement

for Royalty 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 Royalty due under the leases, except that such Royalty shall be computed on Unitized Substances as allocated to each Tract in accordance with the terms of this Agreement. With respect to Federal leases committed hereto on which the royalty rate depends upon the daily average production per well, such average production shall be determined in accordance with the operating regulations pertaining to Federal leases as though the committed Tracts were included in a single consolidated lease.

If the amount of production or the proceeds thereof accruing to any Royalty Owner (except the United States of America) in a Tract depends upon the average production per well or the average pipeline runs per well from such Tract during any period of time, then such production shall be determined from and after the effective date hereof by dividing the quantity of Unitized Substances allocated hereunder to such Tract during such period of time by the number of wells located thereon capable of producing Unitized Substances as of the Effective Date hereof, provided that any Tract not having any well so capable of producing Unitized Substances on the Effective Date hereof shall be considered as having one such well for the purpose of this provision.

All Royalty due the State of New Mexico and the United States of America and the other Royalty Owners hereunder shall be computed and paid on the basis of all Unitized Substances allocated to the respective Tract or Tracts committed hereto, in lieu of actual production from such Tract or Tracts.

With the exception of Federal and State requirement to the contrary, Working Interest Owners may use or consume Unitized Substances for Unit Operations and no Royalty, overriding royalty, production or other payments shall be payable on account of Unitized Substances used, lost, or consumed in Unit Operations.

Each Royalty Owner (other than the State of New Mexico and the United States of America) that executes this Agreement represents and warrants that it is the owner of a Royalty Interest in a Tract of Tracts within the Unit Area as its interest appears in Exhibit "B" attached hereto. If any Royalty Interest in a Tract or Tracts should be lost by title failure or otherwise in whole or in part, during the term of this Agreement, then the Royalty Interest of the party representing himself to be the owner thereof shall be reduced proportionately and the interests of all parties shall be adjusted accordingly.

SECTION 18. RENTAL SETTLEMENT. Rentals or minimum Royalties due on the 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 for lands of the State of New Mexico subject to this Agreement shall be paid at the rate specified in the respective leases from the State of New Mexico. Rental or minimum Royalty for lands of the United States of America subject to this Agreement shall be paid at the rate specified in the respective leases from the United States of America, unless such rental or minimum Royalty is waived, suspended or reduced by law or by approval of the Secretary or his duly authorized representative.

SECTION 19. 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 Federal and State laws and regulations.

SECTION 20. DRAINAGE. The Unit Operator shall take all reasonable and prudent measures to prevent drainage of Unitized Substances from unitized land by wells on land not subject to this Agreement.

The Unit Operator, upon approval by the Working Interest Owners, the A.O. and the Land Commissioner, is hereby empowered to enter into a borderline agreement or agreements with working interest owners of adjoining lands not subject to this Agreement with respect to operation in the border area for the maximum economic recovery, conservation purposes and proper protection of the parties and interest affected.

SECTION 21. 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 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 State or Federal 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 A.O. or Land Commissioner (as the case may be) 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.

If the title or right of any party claiming the right to receive in kind all or any portion of the Unitized Substances allocated to a Tract is in dispute, Unit Operator at the direction of Working Interest Owners shall either:

(a) require that the party to whom such Unitized Substances are delivered to or whom the proceeds thereof are paid furnish security for the proper accounting therefor to the rightful owner if the title or right of such party fails in whole or in part, or

(b) withhold and market the portion of Unitized Substances with respect to which title or right is in dispute, and impound the proceeds thereof until such time as the title or right thereto is established by a final judgment of a court of competent jurisdiction or otherwise to the satisfaction of Working Interest Owners, whereupon the proceeds as impounded shall be paid to the party rightfully entitled thereto.

Each Working Interest Owner shall indemnify, hold harmless, and defend all other Working Interest Owners against any and all claims by any party against the interest attributed to such Working Interest Owner on Exhibit "B".

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

SECTION 22: 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 heret hereby consent that the Secretary and the Land Commissioner, respectively, shall and by their approval hereof, or by the approval hereof by their duly authorized representatives, do 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

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 Tract subject to this Agreement, regardless of whether there is any development of any 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, producing or improved recovery operations performed hereunder shall be deemed to be performed upon and for the benefit of each Tract, 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 within the Unit Area pursuant to direction or consent of the Land Commissioner and the A.O., or their duly authorized representatives, shall be deemed to constitute such suspension pursuant to such direction or consent as to each Tract within the Unitized Area.

(d) Each lease, sublease, or contract relating to the exploration, drilling, development, or operation for oil and gas 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 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.

(f) Any lease embracing lands of the State of New Mexico having only a portion of its land committed hereto shall be segregated as to that portion committed and that not committed, and the terms of such lease shall apply separately to such segregated portions commencing as of the Effective Date hereof. Provided, however, that notwithstanding any of the provisions of this Agreement to the contrary, such lease (including both segregated portions) 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, or has heretofore been discovered in paying quantities on some part of the lands embraced in such

lease committed to this Agreement or, so long as a portion of the Unitized Substances produced from the Unit Area is, under the terms of this Agreement, allocated to the portion of the lands covered by such lease committed to this Agreement, or, at any time during the term hereof, as to any lease that is then valid and subsisting and upon which the leases or the Unit Operator is then engaged in bona fide drilling, reworking, or improved recovery operations on any part of the lands embraced in such lease, then the same as to all lands embraced therein shall remain in full force and effect so long as such operations are diligently prosecuted, and if they result in the production of oil or gas, said lease shall continue in full force and effect as to gas in paying quantities is being produced from any portion of said lands.

(g) 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): "Any (Federal) lease heretofore or hereafter committed to any such (unit) plan embracing lands that are in part within and in part outside of the area covered by any such plan shall be segregated into separate leases as to the lands committed and the lands not committed as of the Effective Date of unitization; Provided, however, that any such lease as to the non-unitized portion shall continue in force and effect for the term thereof but for not less than two years from the date of such segregation and so long thereafter as oil or gas is produced in paying quantities."

SECTION 23. 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 subject hereto shall be binding upon Unit Operator until the first day of the calendar month after Unit Operator is furnished with the original, or acceptable photostatic or certified copy, of the recorded instrument or transfer; and no assignment or transfer of any Royalty Interest subject hereto shall be binding upon the Working Interest Owner responsible therefor until the first day of the calendar month after said Working Interest Owner is furnished with the original, or acceptable photostatic or certified copy, of the recorded instrument or transfer.

SECTION 24. EFFECTIVE DATE AND TERM. This Agreement shall become binding upon each party who executes or ratifies it as of the date of execution or ratification by such party and shall become effective on the first day of the calendar month next following the approval of this Agreement by the A.O., the Land Commissioner and the Commission.

If this Agreement does not become effective on or before January 1, 1989 it shall ipso facto expire on said date (hereinafter called "Expiration Date") and thereafter be of no further force or effect, unless prior thereto this Agreement has been executed or ratified by Working Interest Owners owning a combined Participation of at least seventy-five percent (75%); and at least seventy-five percent (75%) of such Working Interest Owners committed to this Agreement have decided to extend Expiration Date for a period not to exceed one(1) year (hereinafter called "Extended Expiration Date"). If Expiration Date is so extended and this Agreement does not become effective on or before Extended Expiration Date, it shall ipso facto expire on Extended Expiration Date and thereafter be of no further force and effect.

Unit Operator shall file for record within thirty (30) days after the Effective Date of this Agreement, in the office of the County Clerk of Chaves County, New Mexico, where a counterpart of this Agreement has become effective according to its terms and stating further the effective date.

The terms of this Agreement shall be for and during the time that Unitized Substances are produced from the unitized land and so long thereafter as drilling, reworking or other operations (including improved recovery operations) are prosecuted thereon without cessation of more than ninety (90) consecutive days unless sooner terminated as herein provided.

This Agreement may be terminated with the approval of the Land Commission and the A.O. by Working Interest Owners owning eighty percent (80%) of the Unit Participation then in effect whenever such Working Interest Owners determine that Unit Operations are no longer profitable, or in the interest of conservation. Upon approval, such termination shall be effective as of the first day of the month after said Working Interest Owners' determination. Notice of any such termination shall be filed by Unit Operator in the office of the County Clerk of Chaves County, New Mexico, within thirty (30) days of the effective date of termination.

Upon termination of this Agreement, the parties hereto shall be governed by the terms and provisions of the leases and contracts affecting the separate Tracts just as if this Agreement had never been entered into.

Notwithstanding any other provision in the leases unitized under this Agreement, Royalty Owners hereby grant Working Interest Owners a period of six months after termination of this Agreement in which to salvage, sell, distribute or otherwise dispose of the personal property and facilities used in connection with Unit Operations.

SECTION 25. RATE OF PROSPECTING, DEVELOPMENT AND PRODUCTION. All production and the disposal thereof shall be in conformity with allocations and quotas made or fixed by any duly authorized person or regulatory body under any Federal or State status. The A.O. is hereby vested with authority to alter or modify from time to time, in his discretion, the rate of prospecting and development and within the limits made or fixed by the Division to alter or modify the quantity and rate of production under this Agreement, 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; provided further, that no such alteration or modification shall be effective as to any lands of the State of New Mexico as to the rate of prospecting and development in absence of the specific written approval thereof by the Land Commissioner 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 A.O. shall only be exercised after notice to Unit Operator and opportunity for hearing to be held not less than fifteen (15) days from notice, and thereafter subject to administrative appeal before becoming final.

SECTION 26. NONDISCRIMINATION. Unit Operator in connection with the performance of work under this Agreement relating to leases of the United States, agrees to comply with all of the provisions of Section 202(1) to (7) inclusive of Executive Order 11246, (30 F.R. 12319), which are hereby incorporated by reference in this Agreement.

SECTION 27. APPEARANCES. Unit Operator shall have the right to appear for or on behalf of any interests affected hereby before the Land Commissioner, the Department, and the Division, and to appeal from any order issued under the rules and regulations of the Land Commissioner, the Department or the Division, or to apply for relief from any of said rules and regulations or in any proceedings relative to operations before the Land Commissioner, the Department or the Division or any other legally constituted authority; provided, however, that any other interested party shall also have the right at his or its own expense to be heard in any such proceeding.

SECTION 28. NOTICES. All notices, demands, objections or statements required hereunder to be given or rendered to the parties hereto shall be deemed fully given if made in writing and personally delivered to the party or parties or sent by postpaid certified or registered mail, addressed to such party or parties at their last known address set forth in connection with the signatures hereto or to the ratification or consent hereof or to such other address as any such party or parties may have furnished in writing to the party sending the notice, demand or statement.

SECTION 29. 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 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; provided, however, each party hereto covenants that it will not resort to any action to partition the unitized land or the Unit Equipment.

SECTION 30. EQUIPMENT AND FACILITIES NOT FIXTURES ATTACHED TO REALTY. Each Working Interest Owner has heretofore placed and used on its Tract or Tracts committed to this Agreement various well and lease equipment and other property, equipment and facilities. It is also recognized that additional equipment and facilities may hereafter be placed and used upon the Unitized Land as now or hereafter constituted. Therefore, for all purposes to this Agreement, any such equipment shall be considered to be personal property and not fixtures attached to realty. Accordingly, said well and lease equipment and personal property is hereby severed from the mineral estates affected by this Agreement, and it is agreed that any such equipment and personal property shall be and remain personal property of the Working Interest Owners for all purposes.

SECTION 31. UNAVOIDABLE DELAY. All obligations under this Agreement requiring the Unit Operator to commence or continue improved recovery operations 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 agency, unavoidable accident, uncontrollable delays in transportation, inability to obtain necessary materials or equipment in open market, or other matters beyond the reasonable control of the Unit Operator whether similar to matters herein enumerated or not.

SECTION 32. NONJOINDER AND SUBSEQUENT JOINDER. Joinder by any Royalty Owner, at any time, must be accompanied by appropriate joinder of the corresponding Working Interest Owner in order for the interest of such Royalty Owner to be regarded as effectively committed. Joinder to this Agreement by a Working Interest Owner, at any time, must be accompanied by appropriate joinder to the Unit Operating Agreement in order for such interest to be regarded as effectively committed to this Agreement.

Any oil or gas interest in the Unitized Formations not committed hereto prior to submission of this Agreement to the Land Commissioner and the A.O. for final approval may thereafter be committed hereto upon compliance with the applicable provisions of this Section and of Section 14 (Tracts Qualified for Participation) hereo, at any time up to the Effective Date hereof on the same basis of Tract Participation as provided in Section 13, by the owner or owners thereof subscribing, ratifying, or consenting in writing to this Agreement, and if the interest is a Working Interest, by the owner of such interest subscribing also to the Unit Operating Agreement.

It is understood and agreed, however, that from and after the Effective Date hereof the right of subsequent joinder as provided in this Section shall be subject to such requirements or approvals and on such basis as may be agreed upon by Working Interest Owners owning not less than sixty-five percent (65%) of the Unit Participation then in effect, and approved by the Land Commissioner and A.O. Such subsequent joinder by a proposed Working Interest Owner must be evidenced by his execution or ratification of this Agreement and the Unit Operating Agreement and, where State or Federal land is involved, such joinder must be approved by the Land Commissioner or A.O. Such joinder by a proposed Royalty Owner must be evidenced by his execution, ratification or consent of this Agreement and must be consented to in writing by the Working Interest Owner responsible for the payment of any benefits that may accrue hereunder in behalf of such proposed Royalty Owner. Except as may be otherwise herein provided, subsequent joinder to this Agreement shall be effective as of the first day of the month following the filing with the Land Commissioner and A.O. of duly executed counterparts of any and all documents necessary to establish effective commitment of any Tract or interest to this Agreement, unless objection to such joinder by the Land Commissioner or the A.O., is duly made sixty (60) days after such filing.

SECTION 33. COUNTERPARTS. This Agreement may be executed in any number of counterparts, no one of which needs to be executed by all parties and 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 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 land within the described Unit Area. Furthermore, this Agreement shall extend to and be binding on the parties hereto, their successors, heirs and assigns.

SECTION 34. JOINDER IN DUAL CAPACITY. Execution as herein provided by any party as either a Working Interest Owner or a Royalty Owner shall commit all interests owned or controlled by such party; provided, that if the party is the owner of a Working Interest, he must also execute the Unit Operating Agreement.

SECTION 35. TAXES. Each party hereto shall, for its own account, render and pay its share of any taxes levied against or measured by the amount or value of the Unitized Substances produced from the unitized land; provided, however, that if it is required or if it be determined that the Unit Operator or the several Working Interest Owners must pay or advance said taxes for the account of the parties hereto, it is hereby expressly agreed that the parties so paying or advancing said taxes shall be reimbursed therefor by the parties hereto, including Royalty Owners, who may be responsible for the taxes on their respective allocated share of said Unitized Substances. No taxes shall be charged to the United States or to the State of New Mexico, nor to any lessor who has a contract with a lessee which requires his lessee to pay such taxes.

SECTION 36. NO PARTNERSHIP. The duties, obligations and liabilities of the parties hereto are intended to be several and not joint or collective. This Agreement is not intended to create, and shall not be construed to create, an association or trust, or to impose a partnership duty, obligation or liability with regard to any one or more of the parties hereto. Each party hereto shall be individually responsible for its own obligation as herein provided.

SECTION 37. PRODUCTION AS OF THE EFFECTIVE DATE. Unit Operator shall make a proper and timely gauge of all leases and other tanks within the Unit Area in order to ascertain the amount of merchantable oil above the pipeline connection, in such tanks as of 7.00 a.m. on the Effective Date hereof. All such oil which has then been produced in accordance with established allowables shall be and remain the property of the Working Interest Owner entitled thereto, the same as if the unit had not been formed; and the responsible Working Interest Owner shall promptly remove said oil from the unitized land. Any such oil not so removed shall be sold by Unit Operator for the account of such Working Interest Owners, subject to the payment of all Royalty to Royalty Owners under the terms hereof. The oil that is in excess of the prior allowable of the wells from which it was produced shall be regarded as Unitized Substances produced after Effective Date hereof.

If, as of the Effective Date hereof, any Tract is over-produced with respect to the allowable of the wells on that Tract and the amount of over-production has been sold or otherwise disposed of, such over-production shall be regarded as a part of the Unitized Substances produced after the Effective Date hereof and shall be charged to such Tract as having been delivered to the parties entitled to Unitized Substances allocated to such Tract.

SECTION 38. NO SHARING OF MARKET. This Agreement is not intended to provide and shall not be construed to provide, directly or indirectly, for any cooperative refining, joint sale or marketing of Unitized Substances.

SECTION 39. STATUTORY UNITIZATION. If and when Working Interest Owners owning at least seventy-five percent (75%) Unit Participation and Royalty Owners owning at least seventy-five percent (75%) Royalty Interest have become parties to this Agreement or have approved this Agreement in writing and such Working Interest Owners have also become parties to the Unit Operating Agreement, Unit Operator may make application to the Division for statutory unitization of the uncommitted interests pursuant to the Statutory Unitization

Act (Chapter 65, Article 14, N.M.S. 1953 Annotated). If such application is made and statutory unitization is approved by the Division, then effective as of the date of the Division's order approving statutory unitization, this Agreement and/or the Unit Operating Agreement shall automatically be revised and/or amended in accordance with the following:

(1) Section 14 of this Agreement shall be revised by substituting for the entire said section the following:

"SECTION 14. TRACTS QUALIFIED FOR PARTICIPATION. On and after the Effective Date hereof, all Tracts within the Unit Area shall be entitled to participation in the production of Unitized Substances."

(2) Section 24 of this Agreement shall be revised by substituting for the first three paragraphs of said section the following:

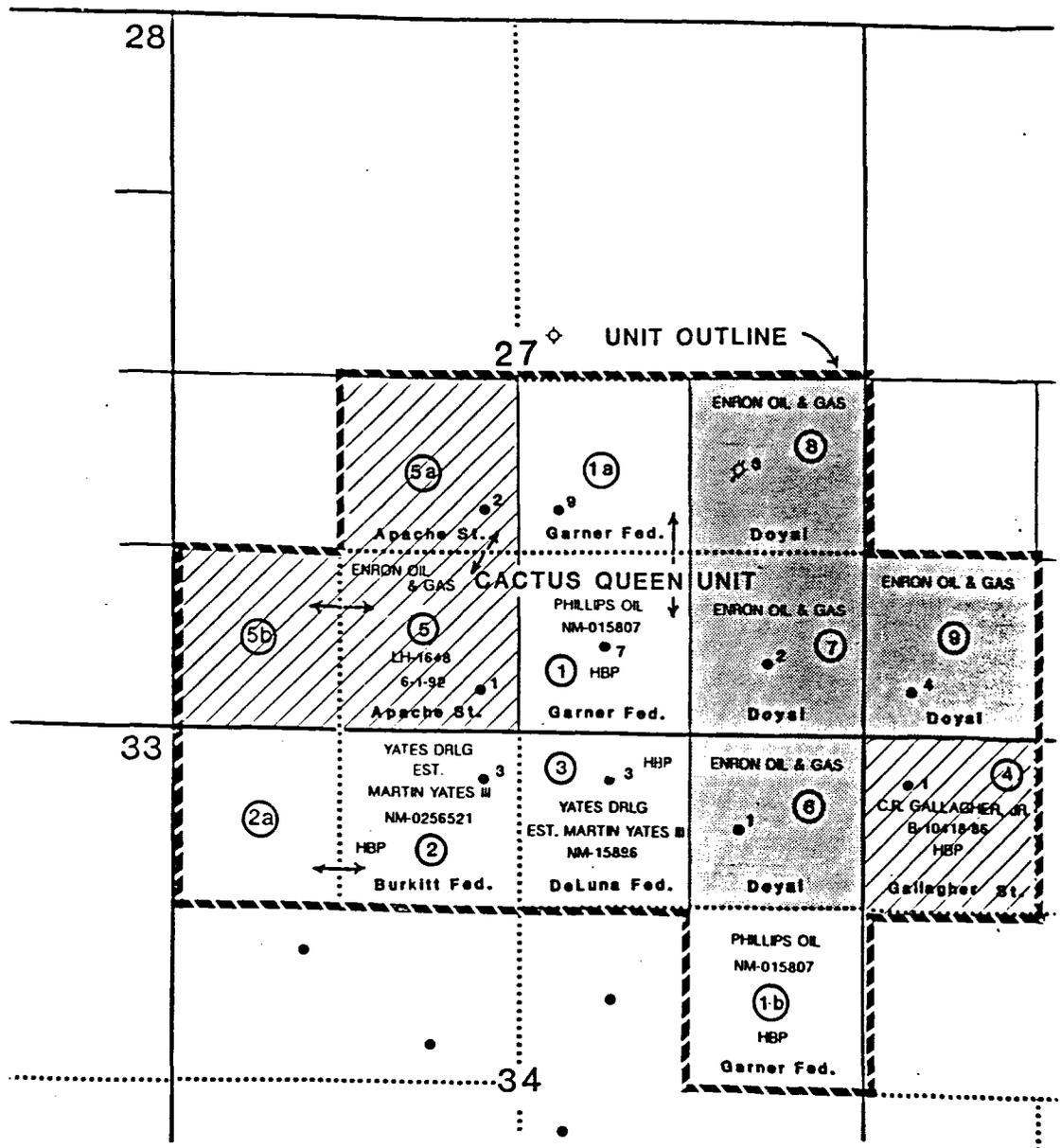
"SECTION 24. EFFECTIVE DATE AND TERM. This Agreement shall become effective on the first day of the calendar month next following the effective date of the Division's order approving statutory unitization upon the terms and conditions of this Agreement, as amended (if any amendment is necessary) to conform to the Division's order; approval of this Agreement, as so amended, by the Land Commissioner; and the A.O. and the filing by Unit Operator of this Agreement or notice thereof for record in the office of the County Clerk of Chaves County, New Mexico. Unit Operator shall not file this Agreement or notice thereof for record, and hence this Agreement shall not become effective, unless within ninety (90) days after the date all other prerequisites for effectiveness of this Agreement have been satisfied, such filing is approved by Working Interest Owners owning a combined Unit Participation of at least seventy-five (75%) as to all Tracts within the Unit Area.

"Unit Operator shall, within thirty (30) days after the Effective Date of this Agreement, file for record in the office of the County Clerk of Chaves County, New Mexico, a certificate to the effect that this Agreement has become effective in accordance with its terms, therein identifying the Division's order approving statutory unitization and stating the Effective Date."

3. This Agreement and/or the Unit Operating Agreement shall be amended in any and all respects necessary to conform to the Division's order approving statutory unitization.

Any and all amendments of this Agreement an/or the Unit Operating Agreement that are necessary to conform said agreements to the Division's order approving statutory unitiation shall be deemed to be hereby approved in writing by the parties hereto without any necessity for further approval by said parties, except as follows:

(a) If any amendment of this Agreement has the effect of reducing any Royalty Owner's participation in the production of Unitized Substances, such Royalty Owner shall not be deemed to have hereby approved the amended agreement without the necessity of further approval in writing by said Royalty Owner; and



YATES DRILLING CO.

CACTUS QUEEN UNIT

T 12S - R 31E

CHAVES COUNTY, NM

EXHIBIT "A"

		ACREAGE	PERCENTAGE
	FEDERAL LAND	240 ACRES	42.86%
	STATE LAND	160 ACRES	28.57%
	FEE LAND	160 ACRES	28.57%
	TRACT NUMBER		

SCALE: 1"=1000'

EXHIBIT "B"
 To Unit Agreement
 CACTUS QUEEN UNIT
 Chaves County, New Mexico

Tract No.	Description	No. of Acres	Serial No. & Date of Expiration	Basic		Lessor of Record	Overriding		Working Interest Owner & Percentage
				Owner & Percentage	Royalty		Owner	Percentage	
1.	T12S-R31E Sec. 27; SW1SE1	40	NM-015807 HBP	USA	12.5%	Phillips Petroleum Company Successor in Interest to Aminol USA, Inc. 100%	F. G. Breckenridge .05 (PPI) Etoile M. Bennett .45 (PPI) W. G. Ross 1.3125 G & P Exploration, Inc. 1.3125 Phillips Petroleum Company 3.1250	Yates Drilling Company Est. of Martin Yates III - 25 Lillie M. Yates Surface through Queen Formation	- 50%
	USA								
1a.	T12S-R31E Sec. 27; NW1SE1	40	NM-015807 HBP	USA	12.5%	Phillips Petroleum Company Successor in Interest to Aminol USA, Inc. 100%	F. G. Breckenridge .05 (PPI) Etoile M. Bennett .45 (PPI) W. G. Ross 1.3125 G & P Exploration, Inc. 1.3125 Phillips Petroleum Company 3.1250	Yates Drilling Company Est. of Martin Yates III - 25 Lillie M. Yates Surface through Queen Formation	- 50%
	USA								

EXHIBIT "B"
 To Unit Agreement
 CACTUS QUEEN UNIT
 Chaves County, New Mexico

Tract No.	Description	No. of Acres	Serial No. & Date of Lease	Basic Royalty & Owner %	Lessee of Record	Overriding		Working Interest	
						Royalty %	Owner	Royalty %	Owner
1b.	T12S-R31E Sec. 34: SE1/4NW1	40	NM-015807 HBP	USA 12.5%	Phillips Petroleum Company Successor in Interest to Aminhoil USA, Inc. 100%	F. G. Breckenridge .05% (PPI) Etoile M. Bennett .45 (PPI) W. G. Ross 1.3125 G & P Exploration, Inc. 1.3125 Phillips Petroleum Company 3.1250	Yates Drilling Company Est. of Martin Yates III Lillie M. Yates Surface through Queen Formation	- 50A - 25 - 25	
2.	T12S-R31E Sec. 34: NE1/4NW1	40	NM-0256521 HBP	USA 12.5	Yates Drilg. Co.50 Est. of Martin Yates III Yates III 50	Erlon E. Nowell R.F. Partnership, Ltd. 1.5	Yates Drilling Company Est. of Martin Yates III Lillie M. Yates	- 50 - 25 - 25	
2a.	T12S-R31E Sec. 34: NW1/4NW1	40	NM-0256521 HBP	USA	Yates Drilg. Co.50 Est. of Martin Yates III Yates III 50	Erlon E. Nowell R.F. Partnership, Ltd. 1.5	Yates Drilling Company Est. of Martin Yates III Lillie M. Yates	- 25 - 25 - 25	
3.	T12S-R31E Sec. 34: NW1/4NE1	40	NM-15896 HBP	USA 12.5	Yates Drilg. Co.50 Est. of Martin Yates III Yates III 50	C.E. Strange - George Globe 2.0	Yates Drilling Company Est. of Martin Yates III Lillie M. Yates	- 50 - 25 - 25	
4.	T12S-R31E Sec. 35: NW1/4NW1	40	TOTAL B-10418-86 HBP	USA 12.5	C.R. Gallagher, Jr. 100	Mary B. Gallagher .00586 C. R. Gallagher, Jr. 1.17383 Gregory J. Gallagher 1.13281 Robin C. Herndon .02344 Raymond Stanley Herndon .02344 Charles Bernard Gallagher .02344 Susan Gallagher Grey .02343	Yates Drilg. Company Est. of Martin Yates III Lillie M. Yates Marrico Exploration, Inc. Richard Yates Peyton Yates Yates Employers 83 Ltd. Surface to 3200'	- 46.0 - 24.5 - 24.5 - 1.0 - 1.0 - 1.0 - 1.0 - 2.0	

To Unit Agreement
 CACTUS QUEEN UNIT
 Chaves County, New Mexico

Tract No. Description No. of Acres Serial No. & Expiration Date of Lease Royalty Owner & Percentage Lessee of Record Royalty Owner & Percentage Working Interest Owner & Percentage

Tract No.	Description	No. of Acres	Serial No. & Expiration Date of Lease	Royalty Owner & Percentage	Lessee of Record	Royalty Owner & Percentage	Working Interest Owner & Percentage
4.	(Continued)			Basic	Veronica Herndon	Overriding Royalty Owner Percentage	
					Christine Gallagher	.02344%	
					Seger	.02344	
					Mary Herndon	.02344	
					Frances Herndon		
					Peter Gregory	.02344	
					Herndon	.02343	
					William G.		
					Pope, Jr.	.02344	
					Mary Margaret		
					Pope	.02344	
					Delphine E. Pope		
					Keller	.02344	
					Natalie Pope	.02344	
					Christopher W.		
					Knierlem	.02343	
					Mary C. Knierlem		
					Taylor	.02344	
					Stephen Lawrence		
					Knierlem	.01172	
					Kathleen M.		
					Gallagher Cooper	.02344	
					Gregory Charles		
					Gallagher	.02344	
					Michael Joseph		
					Gallagher	.02344	
					Marguerite G.		
					Price	.02343	
					Charles Raymond		
					Gallagher III	.02344	
					Mary G. Herndon		
						1.10937	
					Natalie G. Pope		
						1.15625	
					Charlecn G.		
					Knierlem	1.19140	

EXHIBIT "B"
 To Unit Agreement
 CACTUS QUEEN UNIT
 Chaves County, New Mexico

Tract No.	Description	No. of Acres	Serial No. & Date of Expiration or Lease	Basic Royalty Owner & Percentage	Lessee of Record	Overriding Royalty Owner Percentage		Working Interest Owner & Percentage
2.	T12S-R31E	40	NM-0256521 HBP	USA 12.5	Yates Drilg. Co.50 Est. of Martin Yates III	Erlon E. Nowell R.F. Partnership, Yates III	1.5 1.5	Yates Drilling Company Est. of Martin Yates III Lillie M. Yates
	Sec. 34: NE1/4NW1							
2a.	T12S-R31E	40	NM-0256571 HBP	USA	Yates Drilg. Co.50 Est. of Martin Yates III	Erlon E. Nowell R.F. Partnership, Yates III	1.5 1.5	Yates Drilling Company Est. of Martin Yates III Lillie M. Yates
	Sec. 34: NW1/4NW1							
3.	T12S-R31E	40	NM-15896 HBP	USA 12.5	Yates Drilg. Co.50 Est. of Martin Yates III	C.F. Strange - George Globe	2.0 2.0	Yates Drilling Company Est. of Martin Yates III Lillie M. Yates
	Sec. 34: NW1/4NE1/4							
TOTAL 200.00 ACRES OF FEDERAL LANDS								
4.	T12S-31E	40	LH-1648 6-1-92	St. of NM 12.5%	Yates Drilling Company	None	None	Yates Drilling Company - 100%
	Sec. 27: SE1/4SW1							
4a.	T12S-R31E	40	LH-1648 6-1-92	St. of NM 12.5	Yates Drilling Company	None	None	Yates Drilling Company - 100
	Sec. 27: NE1/4SW1							

EXHIBIT "D"
 To Unit Agreement
 CACTUS GUMBIN UNIT
 Chaves County, New Mexico

Tract No.	Description	No. of Acres	Serial No. & Date of Expiration	Basic Royalty & Percentage Lessee of Record		Working Interest Owner & Percentage	
				Owner & Percentage	Lesser of Record		
4b.	T12S-R31E Sec. 27: SW1SW1	40	LH-1648 6-1-92	St. of NM 12.5	Yates Drilling Company 100	None	Yates Drilling Company - 100%
		<u>TOTAL 120.00 ACRES OF STATE LANDS</u>					

RECAPITULATION

200 acres Federal Lands - 62.50% of Unit
 120 acres State Lands - 37.50% of Unit
 TOTALS 320 acres 100.00%

EXHIBIT "B"
 To Unit Agreement
 CACTUS QUEEN UNIT
 Chaves County, New Mexico

Tract No.	Description	No. of Acres	Serial No. & Expiration Date of Lease	Basic		Overriding		Working Interest	
				Royalty Owner	Percentage	Royalty Owner	Percentage	Owner & Percentage	Percentage
7.	T12S-R31E Sec. 27: SE1SE1	40		Veda D. Williams	1.5625%	Yates Drilling Company	100	Yates Drilling Co. - Est. of Martin	66.00000%
				Leo Doyal	1.5625			Yates III	- 16.33335
				Floyd V. Doyal	1.5625			Lillie M. Yates	- 16.33335
				Louis C. Doyal	1.5625			Yates Employees	83
				Clarence Doyal	1.5625			Ltd.	- 1.33330
				Paul J. Doyal	1.5625				
				Ruth J. Penka	1.5625				
				Dorothy Vargus	1.5625				

Surface to 3200'

EXHIBIT "B"
 To Unit Agreement
 CACTUS QUEEN UNIT
 Chaves County, New Mexico

Tract No.	Description	No. of Acres	Serial No. & Date of Expiration of Lease	Basic Royalty Owner & Percentage	Lessee of Record	Overriding		Working Interest Owner & Percentage
						Royalty Owner	Percentage	
8	112S-R31E Sec. 27: NE1/4SE1/4	40	Fee	Vada D. Williamson 1.5625%	Yates Drilling Company 100%	None		Yates Drilling Company 100%
				Leo Doyal 1.5625				
				Floyd V. Doyal 1.5625				
				Louis C. Doyal 1.5625				
				Clarence A. Doyal 1.5625				
				Paul J. Doyal 1.5625				
				Ruth Penka 1.5625				
				Dorothy D. Vargus 1.5625				

EXHIBIT "C"
TO UNIT AGREEMENT

PROPOSED CACTUS QUEEN STATUTORY UNIT CHAVES CO., NM	=====	=====	=====	=====
	PARTICIPATION FRACTION	PARTICIPATION FRACTION	PARTICIPATION FRACTION	PARTICIPATION FRACTION
	=====	=====	=====	=====
	0.700000	0.050000	0.250000	1.000000
	=====	=====	=====	=====

WELLS	CUMULATIVE OIL PROD. THRU JULY 1989 (BBLs)		MAY, JUNE & JULY 1989 PRODUCTION (BBLs)		ORIGINAL OIL IN PLACE (BBLs)		UNIT PARTICIPATION
	AMOUNT	FRACTION	AMOUNT	FRACTION	AMOUNT	FRACTION	
11 iGarner Fed. #7	23,829	0.122941	198	0.108791	333,180	0.218569	0.146141
11 aiGarner Fed. #9	21,039	0.108547	116	0.063736	27,416	0.017985	0.083666
11 bISE/NE 34-128-31E	0	0.000000	0	0.000000	20,483	0.013437	0.003359
12 iBurkitt Fed. #3	6,105	0.031498	75	0.041209	158,740	0.104135	0.050142
12 aiNW/NW 34-128-31E	0	0.000000	0	0.000000	39,371	0.025828	0.006457
13 iDeLuna Fed. #3	12,805	0.066065	102	0.056044	156,168	0.102461	0.074663
14 iGallagher St. #1	19,546	0.100844	194	0.106593	63,018	0.041340	0.086256
15 iApache "27" St. #1	19,618	0.101216	94	0.051648	120,037	0.078745	0.093120
15 aiApache "27" St. #2	6,755	0.034851	56	0.030769	24,152	0.015844	0.029895
15 bISW/SW 27-128-31E	0	0.000000	0	0.000000	24,547	0.016103	0.004026
16 iDoyal #1	45,211	0.233258	538	0.295604	302,899	0.198704	0.227737
17 iDoyal #2	33,613	0.173420	407	0.223626	204,277	0.134007	0.166077
18 iDoyal #3	0	0.000000	0	0.000000	8,844	0.005802	0.001450
19 iDoyal #4	5,303	0.027360	40	0.021978	41,219	0.027040	0.027011
	193,824	1.000000	1,820	1.000000	1,524,371	1.000000	1.000000

YATES DRILLING COMPANY

UNIT OPERATING AGREEMENT

Dated: November 1, 1989

CACTUS (QUEEN) UNIT

Township 12 South, Range 31 East, N.M.P.M.

Section 26: SW $\frac{1}{4}$ SW $\frac{1}{4}$
Section 27: SE $\frac{1}{4}$, E $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$
Section 34: N $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$, N $\frac{1}{4}$ NW $\frac{1}{4}$
Section 35: NW $\frac{1}{4}$ NW $\frac{1}{4}$

Chaves County, New Mexico

BEFORE EXAMINER STOGNER	
OIL CONSERVATION DIVISION	
YATES	EXHIBIT NO. 4A
CASE NO. 9809, 9810, 9823	

UNIT OPERATING AGREEMENT
CACTUS (QUEEN) UNIT
CHAVES COUNTY, NEW MEXICO

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UNIT OPERATING AGREEMENT
CACTUS (QUEEN) UNIT
CHAVES COUNTY, NEW MEXICO

THIS AGREEMENT, entered into as the 1st day of November, 1988 by and between the parties who have signed the original of this instrument, a counterpart thereof, or other instrument agreeing to become a party hereto,

WITNESSETH:

WHEREAS, the parties hereto as Working Interest Owners have executed, as of the date hereof, an Agreement entitled "Unit Agreement, Cactus Queen Unit, Chaves County, New Mexico," herein referred to as "Unit Agreement," which, among other things, provides for a separate agreement to be entered into by Working Interest Owners to provide for Unit Operations as therein defined.

NOW, THEREFORE, in consideration of the mutual agreements herein set forth, it is agreed as follows:

ARTICLE 1

CONFIRMATION OF UNIT AGREEMENT

1.1 Confirmation of Unit Agreement. The Unit Agreement is hereby confirmed and by reference made a part of this Agreement. The definitions in the Unit Agreement are adopted for all purposes of this Agreement. If there is any conflict between the Unit Agreement and this Agreement, the Unit Agreement shall govern.

ARTICLE 2

EXHIBITS

2.1 Exhibits. The following exhibits are incorporated herein by reference:

2.1.1 Exhibits "A", "B", and "C", of the Unit Agreement.
There is no Exhibit "D".

2.1.2 Exhibit "E", attached hereto, is a schedule showing the Unit Participation of each Working Interest Owner. Exhibit "E", or a revision thereof, shall not be conclusive as to the information therein, except it may be used as showing the Unit Participations of Working Interest Owners for purposes of this Agreement until shown to be in error or revised as herein authorized.

2.1.3 Exhibit "F", attached hereto, is the Accounting Procedure applicable to Unit Operations, If there is any conflict between this Agreement and Exhibit "F", this Agreement shall govern.

2.1.4 Exhibit "G", attached hereto, contains insurance provisions applicable to Unit Operations.

2.2 Revision of Exhibits. Whenever Exhibits "A", "B" or "C" are revised, Exhibit "E" shall be revised accordingly and be effective as of the same date. Unit Operator shall also revise Exhibit "E" from time to time as required to conform to changes in ownership of which Unit Operator has been notified as provided in the Unit Agreement.

2.3 Reference to Exhibits. When reference is made herein to an exhibit, it is to the exhibit as originally attached or if revised, to the last revision.

ARTICLE 3

SUPERVISION OF OPERATIONS BY WORKING INTEREST OWNERS

3.1 Overall Supervision. Working Interest Owners shall exercise overall supervision and control of all matters pertaining to Unit Operations pursuant to this Agreement and the Unit Agreement. In the exercise of such authority, each Working Interest Owner shall act solely in its own behalf in the capacity of an individual owner and not on behalf of the owners as an entirety.

3.2 Specific Authorities and Duties. The matters with respect to which Working Interest Owners shall decide and take action shall include, but not be limited to, the following:

3.2.1 Method of Operation. The method of operation, including the type or types of pressure maintenance, secondary recovery, or other recovery program to be employed.

3.2.2 Drilling of Wells. The drilling of any well whether for production of Unitized Substances, for use as an injection well, or for other purposes.

3.2.3. Well Recompletion and Change of Status. The recompletion, abandonment, or permanent change of status of any well, or the use of any well for injection or other purposes. The Unit Operator shall be responsible for performing such work and such work shall be done at Unit Expense.

3.2.4 Expenditures. The making of any single expenditure in excess of Fifteen Thousand Dollars (\$15,000.00); however, approval by Working Interest Owners of the drilling, reworking, deepening, or plugging back of any well shall include approval of all necessary expenditures required therefore, and for completing, testing and equipping the well, including necessary flow lines, separators, and lease tankage; provided however, that in case of blowout, explosion, fire, flood or other sudden emergencies, Unit Operator may take steps and incur such expenses as in its opinion are required to deal with the emergency and to safeguard life or property but that Unit Operator shall, as promptly as possible, report the emergency to the Working Interest Owners.

3.2.5 Disposition of Unit Equipment. The selling or otherwise disposing of any major item of surplus Unit Equipment, if the current price of new equipment similar thereto is Five Thousand Dollars (\$5,000.00) or more.

3.2.6 Appearance Before a Court or Regulatory Agency. The designating of a representative to appear before any court or regulatory agency in matters pertaining to Unit Operations; however, such designation shall not prevent any Working Interest Owner from appearing in person or from designating another representative in its own behalf.

3.2.7 Audits. The auditing of the accounts of Unit Operator pertaining to Unit Operations hereunder; however, the audits shall

(a) not be conducted more than once each year except upon the resignation or removal of Unit Operator, and

(b) be made upon the approval of the owner or owners of a majority of Working Interest other than that of Unit Operator, at the expense of all Working Interest Owners other than Unit Operator, or

(c) be made at the expense of those Working Interest Owners requesting such audit, if owners of less than a majority of Working Interest, other than that of Unit Operator, request such an audit, and

(d) be made upon not less than thirty (30) days written notice to Unit Operator.

3.2.8 Inventories. The taking of periodic inventories under the terms of Exhibit "F".

3.2.9 Technical Services. The authorizing of charges to the Joint Account of services by consultants or Unit Operator's technical personnel not covered by the overhead charges provided by Exhibit "F".

3.2.10 Assignments to Committees. The appointment of committees to study any problems in connection with Unit Operations.

3.2.11 The removal of Unit Operator and the selection of a successor.

3.2.12 The enlargement of the Unit Area.

3.2.13 The adjustment and readjustment or investments.

3.2.14 The termination of the Unit Agreement.

ARTICLE 4

MANNER OF EXERCISING SUPERVISION

4.1 Designation of Representatives. Each Working Interest Owner shall inform Unit Operator in writing of the names and addresses of the representative and alternate who are authorized to represent and bind such Working Interest Owner with respect to Unit Operations. The representative or alternate may be changed from time to time by written notice to Unit Operator.

4.2 Meetings. All meetings of Working Interest Owners shall be called by Unit Operator upon its own motion or at the request of two (2) or more Working Interest Owners having a total Unit Participation then in effect of not less than ten percent (10%). No meeting shall be called on less than fourteen (14) days advance written notice, with agenda for the meeting attached. Working Interest Owners who attend the meeting may amend items included in the agenda and may act upon an amended item or other items presented at the meeting. The representative of Unit Operator shall be chairman of each meeting.

4.3 Voting Procedure. Working Interest Owners shall decide all matters coming before them as follows:

4.3.1 Voting Interest. Each Working Interest Owner shall have a voting interest equal to its Unit Participation in effect at the time of the vote.

4.3.2 Vote Required. Unless otherwise provided herein or in the Unit Agreement, Working Interest Owners shall determine all matters by the affirmative vote of four or more Working Interest Owners having a combined voting interest of at least seventy-five percent (75%); however, should any one Working Interest Owner have more than twenty-five percent (25%) voting interest, its negative vote or failure to vote shall not defeat a motion, and such motion shall pass if approved by Working Interest Owners having a majority voting interest, unless three or more Working Interest Owners having combined voting interest of at least five percent (5%) likewise vote against the motion or fail to vote.

4.3.3 Vote at Meeting by Nonattending Working Interest Owner. Any Working Interest Owner not represented at a meeting may vote on any agenda item by letter or telegram addressed to the representative of Unit Operator if its vote is received prior to the vote at the meeting, provided the agenda items are not amended.

4.3.4 Poll Votes. Working Interest Owners may vote on and decide, by letter or telegram, any matter submitted in writing to Working Interest Owners. If a meeting is not requested, as provided in Section 4.2, within seven (7) days after a written proposal is sent to Working Interest Owners, the vote taken by letter or telegram shall become final. Unit Operator will give prompt notice of the results of such voting to all Working Interest Owners.

ARTICLE 5

INDIVIDUAL RIGHTS OF WORKING INTEREST OWNERS

5.1 Reservation of Rights. Working Interest Owners severally reserve to themselves all their rights, except as otherwise provided in this Agreement and the Unit Agreement.

5.2 Specific Rights. Each Working Interest Owner shall have among others, the following specific rights:

5.2.1 Access to Unit Area. Access to the Unit Area at all reasonable times to inspect Unit Operations, all wells, and the records and data pertaining thereto.

5.2.2 Reports. The right to receive from Unit Operator, upon written request, copies of all reports to any governmental agency, reports of crude oil runs and stocks, inventory reports, and all other information pertaining to Unit Operations. The cost of gathering and furnishing information not ordinarily furnished by Unit Operator to all Working Interest Owners shall be charged to the Working Interest Owner that requests the information.

5.3 Undrilled Locations. Unit Operator shall have the option to drill any undrilled locations on tracts committed to the Unit Area at Unit Expense subject to partners approval as listed under Article 4.3.

ARTICLE 6

UNIT OPERATOR

6.1 Unit Operator. Yates Drilling Company, a New Mexico corporation, is hereby designated as Initial Unit Operator.

6.2 Resignation or Removal and Selection of Successor. The resignation or removal of Unit Operator and the selection of a successor shall be governed by the provisions of the Unit Agreement.

ARTICLE 7

AUTHORITIES AND DUTIES OF UNIT OPERATOR

7.1 Exclusive Right to Operate Unit. Subject to the provisions of this Agreement and to instructions from Working Interest Owners, Unit Operator shall have the exclusive right and be obligated to conduct Unit Operations.

7.2 Workmanlike Conduct. Unit Operator shall conduct Unit Operations in a good and workmanlike manner as would a prudent operator under the same or similar circumstances. Unit Operator shall freely consult with Working Interest Owners and keep them informed of all matters which Unit Operator, in the exercise of its best judgment, considers important. Unit Operator shall not be liable to Working Interest Owners for damages, unless such damages result from its gross negligence or willful misconduct.

7.3 Liens and Encumbrances. Unit Operator shall endeavor to keep the lands and leases in the Unit Area and Unit Equipment free from all liens and encumbrances occasioned by Unit Operations, except the lien and security interest of Unit Operator and Working Interest Owners granted hereunder.

7.4 Employees. The number of employees used by Unit Operator in conducting Unit Operations, their selection, hours of labor, and compensation shall be determined by Unit Operator. Such employees shall be the employees of Unit Operator.

7.5 Records. Unit Operator shall keep correct books, accounts, and records of Unit Operations.

7.6 Reports to Working Interest Owners. Unit Operator shall furnish Working Interest Owners quarterly reports of Unit Operations.

7.7 Reports to Governmental Authorities. Unit Operator shall make all reports to governmental authorities that it has the duty to make as Unit Operator.

7.8 Engineering and Geological Information. Unit Operator shall furnish to a Working Interest Owner, upon written request, a copy of all logs and other engineering and geological data pertaining to wells drilled for Unit Operations.

7.9 Expenditures Unit Operator is authorized to make single expenditures not in excess of Thirty Thousand Dollars (\$30,000.00) without prior approval of Working Interest Owners. If an emergency occurs, Unit Operator may immediately make or incur such expenditures as in its opinion are required to deal with the emergency. Unit Operator shall report to Working Interest Owners, as promptly as possible, the nature of the emergency and the action taken.

7.10 Wells Drilled by Unit Operator. All wells drilled by Unit Operator shall be at the usual rates prevailing in the area. Unit Operator may employ its own tools and equipment, but the charge therefor shall not exceed the usual rates prevailing in the area, and the work shall be performed by Unit Operator under the same terms and conditions as are usual in the area in contracts of independent contractors doing work of a similar nature.

7.11 Mathematical Errors. Unit Operator is empowered to correct any mathematical errors which might exist in the pertinent exhibits to this Agreement.

7.12 Border Agreement. Subject to the provisions and conditions in the Unit Agreement, Unit Operator shall have the right and authority to enter into border protection agreements.

7.13 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 provisions

thereof to the extent that the said Unit Operator or the 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.

ARTICLE 8

TAXES

8.1 Ad Valorem Taxes. Beginning with the first calendar year after the Effective Date hereof, Unit Operator shall make and file all necessary ad valorem tax renditions and returns with the proper taxing authorities with respect to all property of each Working Interest Owner used or held by Unit Operator for Unit Operations. Unit Operator shall settle assessments arising therefrom. Any Working Interest Owner dissatisfied with any proposed rendition or assessment of its interest in property shall have the right, at its own expense, to protest and resist the same. All such ad Valorem taxes shall be paid by Unit Operator and charged to the joint account; however, if the interest of a Working Interest Owner is subject to a separately assessed overriding royalty interest, production payment, or other interest in excess of one-eighth (1/8) royalty, such Working Interest Owner shall notify Unit Operator of such interest prior to the rendition date and shall be given credit for the reduction in taxes paid resulting therefrom.

8.2 Other Taxes. Each Working Interest Owner shall pay or cause to be paid all production, severance, gathering, and other taxes imposed upon or with respect to the production or handling of its share of Unitized Substances.

ARTICLE 9

INSURANCE

9.1 Insurance Unit Operator, with respect to Unit Operations, shall:

- (a) comply with the Workmen's Compensation Laws of the State,
- (b) carry Employer's Liability and other insurance required by the laws of the State, and
- (c) provide other insurance as set forth in Exhibit "G".

ARTICLE 10

ADJUSTMENT OF INVESTMENTS

10.1 Personal Property Taken Over. Upon the Effective Date, Working Interest Owners shall deliver to Unit Operator the following:

- 10.1.1 Wells. All wells completed in the Unitized Formation.

10.1.2 Well and Lease Equipment. The casing and tubing in each such well, the wellhead connections thereon, and all other lease and operating equipment that is used in the operation of such wells which Working Interest Owners determine is necessary or desirable for conducting Unit Operations.

10.1.3 Records. A copy of all production and well records for such wells.

10.2 Inventory and Evaluation of Personal Property. Working Interest Owners shall at Unit Expense inventory and evaluate, as determined by Working Interest Owners, the personal property taken over by Unit Operator under Section 10.1.2. Such inventory shall include and be limited to those items of equipment considered controllable under Exhibit "F" except, upon determination of Working Interest Owners, items considered noncontrollable may be included in the inventory in order to be included in the inventory for record purposes, but shall be excluded from evaluation and investment adjustment.

10.3 Investment Adjustment. Upon approval by Working Interest Owners of the inventory and evaluation, each Working Interest Owner shall be credited with the value, as determined in accordance with Section 10.2 above, of its interest in all personal property taken over by Unit Operator under Section 10.1.2. and charged with an amount equal to that obtained by multiplying the total value of all such personal property taken over the Unit Operator under Section 10.1.2. by such Working Interest Owner's Unit Participation. If the charge against any Working Interest Owner is greater than the amount credited to such Working Interest Owner, the resulting net charge shall be paid and in all other respects be treated as any other item of Unit Expense chargeable against such Working Interest Owners. If against such Working Interest Owner, the resulting net credit shall be paid to such Working Interest Owner by Unit Operator out of funds received by it in settlement of the net charges described above.

10.4 General Facilities. The acquisition of warehouses, warehouse stocks, lease houses, camps, facility system, and office buildings necessary for Unit Operations shall be by negotiation by the owners thereof and Unit Operator, subject to the approval of Working Interest Owners.

10.5 Ownership of Personal Property and Facilities. Each Working Interest Owner, individually, shall by virtue hereof own an undivided interest, equal to its Unit Participation, in all wells, equipment, personal property and facilities taken over or otherwise acquired by Unit Operator pursuant to this agreement.

ARTICLE 11

UNIT EXPENSE

11.1 Basis for Charge to Working Interest Owners. Unit Operator initially shall pay all Unit Expenditures. Each Working Interest Owner shall reimburse Unit Operator for its share of Unit Expenditures. Each Working Interest Owner's share of such Unit Expenditures shall be the same as its Unit Participation for:

(a) items in the nature of capital assets including, without limitation, real property if acquired;

(b) acquiring, drilling, redrilling, equipping and re-equipping water injection wells, replugging or converting oil wells to water injection wells, pumping and pipeline facilities for such wells, and changing any injection interval in any such well;

(c) re-entry and replugging of wells outside the unit area as necessary to permit water injection into appropriate wells within the unit area;

(d) gathering lines and facilities and common tank batteries utilized or acquired for Unit Operations, and

(e) water purchased or otherwise contained for injection purposes and the costs of injection thereof into the Unit Area.

Each Working Interest Owner's share of all other Unit Expenditures shall be the same as its Unit Participation in effect at that time. All charges, credits and accounting for Unit Expenditures shall be in accordance with Exhibit "F".

11.2 Budgets. Before or as soon as practical after the Effective Date, Unit Operator shall prepare a budget of estimated Unit Expense for the remainder of the calendar year and on or before the first day of each October thereafter shall prepare such a budget for the ensuing calendar year. Budgets shall be estimates only, and shall be adjusted or corrected by Working Interest Owners and Unit Operator whenever an adjustment or correction is proper. A copy of each budget and adjusted budget shall be furnished promptly to each Working Interest Owner.

11.3 Advance Billings. Unit Operator shall have the right, without prejudice to other rights or remedies, to require Working Interest Owners to advance their respective share of estimated Capital Unit Expense by submitting to Working Interest Owners, on or before the 15th day of any month, an itemized estimate thereof for the succeeding month, with a request for payment in advance. Within fifteen (15) days after receipt of the estimate, each Working Interest Owner shall pay to Unit Operator its share of such estimate. Adjustments between estimated and actual Unit Expense shall be made by Unit Operator at the close of each calendar month, and the accounts of Working Interest Owners shall be adjusted accordingly.

11.4 Commingling of Funds. Funds received by Unit Operator under this agreement need not be segregated or maintained by it as a separate fund, but may be commingled with its own funds.

11.5 Lien and Security Interest of Unit Operator and the Working Interest Owners. Each Working Interest Owner grants to Unit Operator a lien upon its Oil and Gas Rights in each Tract and a security interest in its share of Unitized Substances when extracted and its interest in all Unit Equipment to secure payment of its share of Unit Expense, together with interest thereon at the rate of twelve percent (12%) per annum, with the further provision that Unit Operator grants a like lien to Working Interest Owners. To the extent

that Unit Operator has a security interest under the Uniform Commercial Code of the State of New Mexico, Unit Operator shall be entitled to exercise the rights and remedies of a secured party under the Code. The bringing of a suit and the obtaining of a judgment by Unit Operator for the secured indebtedness shall not be deemed an election of remedies or otherwise affect the lien rights or security interest as security for the payment thereof. In addition, upon default by any Working Interest Owners in the payment of its share of Unit Expense, Unit Operator shall have the right, without prejudice, to other rights or remedies, to collect from the purchaser the proceeds from the sale of such Working Interest Owner's share of Unitized Substances until the amount owed by such Working Interest Owners, plus interest, has been paid. Each purchaser shall be entitled to rely upon Unit Operator's written statement concerning the amount of any default. The rights herein granted the Unit Operator shall in like manner apply to the other Working Interest Owners.

11.6 Unpaid Unit Expense. If any Working Interest Owner fails to pay its share of Unit Expense within sixty (60) days after rendition of a statement therefor by Unit Operator, each Working Interest Owner agrees upon request by Unit Operator, to pay its proportionate part of the unpaid share of Unit Expense of the defaulting Working Interest Owner. Working Interest Owners that pay the share of Unit Expense of a defaulting Working Interest Owner shall be reimbursed by Unit Operator for the amount so paid, plus any interest collected thereon, upon receipt by Unit Operator of any past due amount collected from the defaulting Working Interest Owners. Any share of Unit Expense shall, to obtain reimbursement thereof, be subrogated to the lien and other rights herein granted Unit Operator.

11.7 Carved-Out Interest. If any Working Interest Owners shall, after executing this agreement, create an overriding royalty, production payment, net proceeds interest, carried interest, or any other interest out of its Working Interest, such carved-out interest shall be subject to the terms and provisions of this agreement, specifically including, but without limitation, Section 11.5 hereof entitled "Lien of Unit Operator." If the Working Interest Owner creating such carved-out interest (a) fails to pay any Unit Expense chargeable to such Working Interest Owner under this agreement, and the production of Unitized Substances accruing to the credit of such Working Interest Owner is insufficient for that purpose, or (b) withdraws from this agreement under the terms and provisions of Article 17 hereof, the carved-out interest shall be chargeable with a pro rata portion of all Unit Expense incurred hereunder, the same as though such carved-out interest were a Working Interest, and Unit Operator shall have the right to enforce against such carved-out interest the lien and all other rights granted in Section 11.5 for the purpose of collecting the Unit Expense chargeable to the carved-out interest.

11.8 Uncommitted Royalty. Should an owner of a Royalty Interest in any Tract fail to become a party to the Unit Agreement, and, as a result thereof, the actual royalty Interest payments with respect to such Tract are more or less than the Royalty Interest payments computed on the basis of the Unitized Substances that are allocated to such Tract under the Unit Agreement, the difference to be borne by or inure to the benefit of Working Interest Owners shall not exceed an amount computed on the basis of one-eighth (1/8) of the difference between the Unitized Substances allocated to the Tract and the Unitized Substances produced from the Tract. Such adjustments shall be made by charges and credits to the joint account.

11.9 Salvage Credit. Credit for Unit Equipment salvaged during shall be divided in the same proportion as the Unit Participation.

11.10 Rentals. The Working Interest Owners in each Tract shall pay all rentals, minimum royalty, advance rentals or delay rentals due under the lease thereon and shall concurrently submit to the Unit Operator evidence of payment.

ARTICLE 12

NCN-UNITIZED FORMATIONS

12.1 Right to Operate. Any Working Interest Owner that now has or hereafter acquires the right to drill for and produce oil, gas, or other minerals, from a formation underlying the Unit Area other than the Unitized Formation, shall have the right to do so notwithstanding this Agreement or the Unit Agreement. In exercising the right, however, the Working Interest Owner shall exercise care to prevent unreasonable interference with Unit Operations. No Working Interest Owner shall produce Unitized Substances through any well drilled or operated by it. If any Working Interest Owner drills any well into or through the Unitized Formation, the Unitized Formation shall be protected in a manner satisfactory to Working Interest Owners so that the production of Unitized Substances will not be affected adversely.

ARTICLE 13

TITLES

13.1 Warranty and Indemnity. Each Working Interest Owner represents and warrants that it is the owner of the respective working interests set forth opposite its name in Exhibit "B" of the Unit Agreement, and agrees to indemnify and hold harmless the other Working Interest Owners from any loss due to failure, in whole or in part, or its title to any such interest, except failure of title arising out of Unit Operations; however, such indemnity and any liability for breach of warranty shall be limited to an amount equal to the net value that has been received from the sale or receipt of Unitized Substances attributed to the interest as to which title failed. Each failure of title will be deemed to be effective, insofar as this Agreement is concerned, as of 7:00 a.m. on the first day of the calendar month in which such failure is finally determined, and there shall be no retroactive adjustment of Unit Expense, or retroactive allocation of Unitized Substances or the proceeds therefrom, as a result of title failure.

13.2 Failure Because of Unit Operations. The failure of title of any Working Interest in any Tract because of Unit Operations, including nonproduction from such Tract, shall not change the Unit Participation of the Working Interest Owner whose title failed in relation to the Unit Participations of the other Working Interest Owners at the time of the title failure.

ARTICLE 14

LIABILITY, CLAIMS, AND SUITS

14.1 Individual Liability. The duties, obligations, and liabilities of Working Interest Owners shall be several and not joint or collective; and nothing herein shall ever be construed as creating a partnership of any kind, joint venture, association, or trust among Working Interest Owners.

14.2 Settlements. Unit Operator may settle any single damage claim or suit involving Unit Operations if the expenditure does not exceed Fifteen Thousand Dollars (\$15,000.00) and if the payment is in complete settlement of such claim or suit. If the amount required for settlement exceeds the above amount, Working Interest Owners shall assume and take over the further handling of the claim or suit, unless such authority, is delegated to Unit Operator. All costs and expense of handling, settling, or otherwise discharging such claim or suit shall be an item of Unit Expense. If a claim is made against any Working Interest Owner or if any Working Interest Owner is sued on account of any matter arising from Unit Operations over which such Working Interest Owner individually has no control because of the rights given Working Interest Owners and Unit Operator by this Agreement and the Unit Agreement, the Working Interest Owner shall immediately notify Unit Operator, and the claim or suit shall be treated as any other claim or suit involving Unit Operations.

ARTICLE 15

LAWS AND REGULATIONS

15.1 Internal Revenue Provision. Notwithstanding any provisions herein that the rights and liabilities of the parties hereunder are several and not joint or collective, or that this Agreement and operations hereunder shall not constitute a partnership, if for Federal income tax purposes this Agreement and the operations hereunder are regarded as a partnership then each of the parties hereto elects to be excluded from the application of all of the provisions of Subchapter K, Chapter 1, Subtitle A, of the Internal Revenue Code of 1954, as permitted and authorized by Section 761 of the Code and the regulations promulgated thereunder. Unit Operator is hereby authorized and directed to execute on behalf of each of the parties hereto such evidence of this election as may be required by the Secretary of the Treasury of the United States or the Federal Internal Revenue Service, including specifically, but not by way of limitation, all of the returns, statements, and the data required by Federal Regulations 1.761-1(a). Should there be any requirement that each party hereto further evidence this election, each party hereto agrees to execute such documents and furnish such other evidence as may be required by the Federal Internal Revenue Service or as may be necessary to evidence this election. Each party hereto further agrees not to give any notices or take any other action inconsistent with the election made hereby. If any present or future income tax laws of the state or states in which the Unit Area is located, or any future income tax of the United States, contain provisions similar to those in Subchapter K, Chapter 1, Subtitle A, of the Internal Revenue Code of 1954, under which an election similar to that provided by Section 761 of the Code is permitted, each of the parties agrees to make

such election as may be permitted, or required by such laws. In making this election, each of the parties states that the income derived by such party from the operations under this Agreement can be adequately determined without the computation of partnership taxable income.

15.2 Statutory Unitization. If working Interest Owners owning at least seventy-five percent (75%) of the Unit Participation have become parties to this Agreement and if Royalty Interest Owners owning at least seventy-five percent (75%) of the Royalty Interest have become parties hereto, the Unit Operator may make application to the New Mexico Oil Conservation Division of the Energy and Minerals Department for statutory unitization of the uncommitted interests.

ARTICLE 16

NOTICES

16.1 Notices. All notices required hereunder shall be in writing and shall be deemed to have been properly served when sent by mail or telegram to the address of the representative of each Working Interest Owner as furnished to Unit Operator in accordance with Article 4.

ARTICLE 17

WITHDRAWAL OF WORKING INTEREST OWNER

17.1 Withdrawal. A Working Interest Owner may withdraw from this Agreement by transferring, without warranty of title, either express or implied, to the other Working Interest Owners, all its Oil and Gas Rights, exclusive of Royalty Interests, together with its interest in all Unit Equipment and in all wells used in Unit Operations. The instrument of transfer may be delivered to Unit Operator for the transferees. Such transfer shall not relieve the Working Interest Owner from any obligation or liability incurred prior to the date of the delivery of the instrument of transfer; however, the tender has to be accepted unless Working Interest Owners decide within ninety (90) days to terminate the Unit. The interest transferred shall be owned by the transferees in proportion to their respective Unit Participations then in effect. The transferees, in proportion to the respective interests so acquired, shall pay transferor, for its interest in Unit Equipment, the net salvage value thereof as determined by Working Interest Owners. In the event such withdrawing party's interest in the aforesaid fair salvage value after deducting the estimated cost of salvaging same is less than the withdrawing party's share of the estimated cost of plugging and abandoning all wells then being used or held for Unit Operations, then the withdrawing party, as a condition precedent to withdrawal, shall pay in cash to the party or parties succeeding to its interest a sum equal to the deficiency. After the date of delivery of the instrument of transfer, the withdrawing Working Interest Owner shall be relieved from all further obligations and liability hereunder and under the Unit Agreement, and the rights of such Working Interest Owner hereunder and under the Unit Agreement shall cease insofar as they existed by virtue of the interest transferred.

ARTICLE 18

ABANDONMENT OF WELLS

18.1 Rights of Former Owners. If Working Interest Owners decide to permanently abandon any well within the Unit Area prior to termination of the Unit Agreement, Unit Operator shall give written notice thereof to the Working Interest Owners of the Tract on which the well is located, and they shall have the option for a period of ninety (90) days after the sending of such notice to notify Unit Operator in writing of their election to take over and own the well. Within ten (10) days after the Working Interest Owners of the Tract have notified Unit Operator of their election to take over the well, they shall pay Unit Operator, for credit to the joint account, the amount determined by Working Interest Owners to be the net salvage value of the casing and equipment in on the well. The Working Interest Owners of the Tract, by taking over the well, agree to seal off the Unitized formation, and upon abandonment to plug the well in compliance with applicable laws and regulations.

18.2 Plugging. If the Working Interest Owners of a Tract do not elect to take over a well located within the Unit Area that is proposed for abandonment, Unit Operator shall plug and abandon the well in compliance with applicable laws and regulations.

ARTICLE 19

EFFECTIVE DATE AND TERM

19.1 Effective Date. This Agreement shall become effective when the Unit Agreement becomes effective.

19.2 Term. This Agreement shall continue in effect so long as the Unit Agreement remains in effect, and thereafter until (a) all Unit wells have been plugged and abandoned or turned over to Working Interest Owners in accordance with Article 20; (b) all Unit Equipment and real property acquired for the joint account have been disposed of by Unit Operator in accordance with instructions of Working Interest Owners; and (c) there has been a final accounting.

ARTICLE 20

ABANDONMENT OF OPERATIONS

20.1 Termination. Upon termination of the Unit Agreement, the following will occur:

20.1.1 Oil and Gas Rights. Oil and Gas Rights in and to each separate Tract shall no longer be affected by this Agreement, and thereafter the parties shall be governed by the terms and provisions of the leases, contracts and other instruments affecting the separate Tracts.

20.1.2. Right to Operate. Working Interest Owners of any tract that desire to take over and continue to operate wells located thereon may do so by paying Unit Operator, for credit to the joint account, the net salvage values, as determined by Working Interest Owners, of the casing and equipment in and on the wells taken over and by agreeing upon abandonment to plug each well in compliance with applicable laws and regulations.

20.1.3 Cost of Abandonment. The cost of abandonment of Unit Operations shall be Unit Expense.

20.1.4 Distribution of Assets. Working Interest Owners shall share in the distribution of Unit Equipment, or the proceeds thereof, in proportion to their Unit Participations.

ARTICLE 21

.EXECUTION

21.1 Original, Counterpart, or other Instrument. An owner of a Working Interest may become a party to this Agreement by signing the original of this instrument, a counterpart thereof, or other instrument agreeing to become a party hereto. The signing of any such instrument shall have the same effect as if all parties had signed the same instrument.

ARTICLE 22

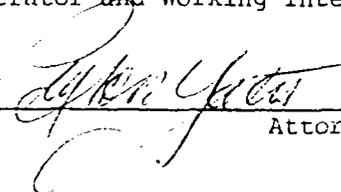
SUCCESSORS AND ASSIGNS

22.1 Successors and Assigns. This Agreement shall extend to, be binding upon, and inure to the benefit of the parties hereto and their respective heirs, devisees, legal representative, successors, and assigns, and shall constitute a covenant running with the lands, leases, and interests covered hereby.

No party hereto shall assign or convey less than his entire interest in any Tract committed hereto unless such leased interest, if any, is an undivided interest in such entire tract; and, should any interest committed hereto be or become owned by three (3) or more parties, then all of such parties shall be obligated to appoint a single agent to represent such interest for the purpose of accepting billings and receiving payments, if any arising hereunder, or under the Unit Agreement, and for vote upon any matter which is the subject of determination of by the Working Interest Owners.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the dates opposite their respective signatures.

YATES DRILLING COMPANY
Unit Operator and Working Interest Owner

By  Attorney-in-Fact

SIGNATURE PAGE ATTACHED TO AND MADE A PART OF UNIT OPERATING AGREEMENT
COVERING CATUS (QUEEN) UNIT, CHAVES COUNTY, NEW MEXICO.

STATE OF NEW MEXICO)
 : ss
COUNTY OF EDDY)

The foregoing instrument was acknowledged before me this 6th day
of November, 1989 by Peyton Yates, Attorney-in-Fact for YATES DRILLING
COMPANY, a New Mexico corporation, on behalf of said corporation.

My commission expires:
March 1, 1990

Dwight A. Keston
Notary Public

EXHIBIT "E"
TO UNIT OPERATING AGREEMENT

PROPOSED CACTUS QUEEN	=====	=====	=====	=====
STATUTORY UNIT	PARTICIPATION FRACTION	PARTICIPATION FRACTION	PARTICIPATION FRACTION	PARTICIPATION FRACTION
CHAVES CO., NM	=====	=====	=====	=====
	0.700000	0.050000	0.250000	1.000000
	=====	=====	=====	=====

WELLS	CUMULATIVE OIL PRODD. THRU JULY 1989 (BBLs)		MAY, JUNE & JULY 1989 PRODUCTION (BBLs)		ORIGINAL OIL IN PLACE (BBLs)		UNIT PARTICIPATION
	AMOUNT	FRACTION	AMOUNT	FRACTION	AMOUNT	FRACTION	
11 iGarner Fed. #7	23,829	0.122941	178	0.108791	333,180	0.218569	0.146141
11 aGarner Fed. #9	21,039	0.108547	116	0.063736	27,416	0.017985	0.083666
11 bSE/NE 34-128-31E	0	0.000000	0	0.000000	20,483	0.013437	0.003359
12 iBurkitt Fed. #3	6,105	0.031498	75	0.041209	158,740	0.104135	0.050142
12 aINW/NW 34-128-31E	0	0.000000	0	0.000000	39,371	0.025828	0.006457
13 iDeLuna Fed. #3	12,805	0.066065	102	0.056044	156,188	0.102461	0.074663
14 iGallagher St. #1	19,546	0.100844	194	0.106593	63,018	0.041340	0.086256
15 iApache "27" St. #1	19,618	0.101216	94	0.051648	120,037	0.078745	0.093120
15 aApache "27" St. #2	6,755	0.034651	56	0.030769	24,152	0.015844	0.029895
15 bSW/SW 27-128-31E	0	0.000000	0	0.000000	24,547	0.016103	0.004026
16 iDoyal #1	45,211	0.233258	538	0.295604	302,699	0.198704	0.227737
17 iDoyal #2	33,613	0.173420	407	0.223626	204,277	0.134007	0.166077
18 iDoyal #3	0	0.000000	0	0.000000	8,844	0.005802	0.001450
19 iDoyal #4	5,303	0.027360	40	0.021978	41,219	0.027040	0.027011
	193,824	1.000000	1,820	1.000000	1,524,371	1.000000	1.000000

Attached to and made a part of Unit Operating Agreement
Cactus (Queen) Unit, Chaves County, New Mexico

ACCOUNTING PROCEDURE JOINT OPERATIONS

I. GENERAL PROVISIONS

1. Definitions

"Joint Property" shall mean the real and personal property subject to the agreement to which this Accounting Procedure is attached.

"Joint Operations" shall mean all operations necessary or proper for the development, operation, protection and maintenance of the Joint Property.

"Joint Account" shall mean the account showing the charges paid and credits received in the conduct of the Joint Operations and which are to be shared by the Parties.

"Operator" shall mean the party designated to conduct the Joint Operations.

"Non-Operators" shall mean the parties to this agreement other than the Operator.

"Parties" shall mean Operator and Non-Operators.

"First Level Supervisors" shall mean those employees whose primary function in Joint Operations is the direct supervision of other employees and/or contract labor directly employed on the Joint Property in a field operating capacity.

"Technical Employees" shall mean those employees having special and specific engineering, geological or other professional skills, and whose primary function in Joint Operations is the handling of specific operating conditions and problems for the benefit of the Joint Property.

"Personal Expenses" shall mean travel and other reasonable reimbursable expenses of Operator's employees.

"Material" shall mean personal property, equipment or supplies acquired or held for use on the Joint Property.

"Controllable Material" shall mean Material which at the time is so classified in the Material Classification Manual as most recently recommended by the Council of Petroleum Accountants Societies of North America.

2. Statement and Billings

Operator shall bill Non-Operators on or before the last day of each month for their proportionate share of the Joint Account for the preceding month. Such bills will be accompanied by statements which identify the authority for expenditure, lease or facility, and all charges and credits, summarized by appropriate classifications of investment and expense except that items of Controllable Material and unusual charges and credits shall be separately identified and fully described in detail.

3. Advances and Payments by Non-Operators

Unless otherwise provided for in the agreement, the Operator may require the Non-Operators to advance their share of estimated cash outlay for the succeeding month's operation. Operator shall adjust each monthly billing to reflect advances received from the Non-Operators.

Each Non-Operator shall pay its proportion of all bills within fifteen (15) days after receipt. If payment is not made within such time, the unpaid balance shall bear interest monthly at the rate of twelve percent (12%) per annum or the maximum contract rate permitted by the applicable usury laws in the state in which the Joint Property is located, whichever is the lesser, plus attorney's fees, court costs, and other costs in connection with the collection of unpaid amounts.

4. Adjustments

Payment of any such bills shall not prejudice the right of any Non-Operator to protest or question the correctness thereof; provided, however, all bills and statements rendered to Non-Operators by Operator during any calendar year shall conclusively be presumed to be true and correct after twenty-four (24) months following the end of any such calendar year, unless within the said twenty-four (24) month period a Non-Operator takes written exception thereto and makes claim on Operator for adjustment. No adjustment favorable to Operator shall be made unless it is made within the same prescribed period. The provisions of this paragraph shall not prevent adjustments resulting from a physical inventory of Controllable Material as provided for in Section V.

5. Audits

A. Non-Operator, upon notice in writing to Operator and all other Non-Operators, shall have the right to audit Operator's accounts and records relating to the Joint Account for any calendar year within the twenty-four (24) month period following the end of such calendar year; provided, however, the making of an audit shall not extend the time for the taking of written exception to and the adjustments of accounts as provided for in Paragraph 4 of this Section 1. Where there are two or more Non-Operators, the Non-Operators shall make every reasonable effort to conduct joint or simultaneous audits in a manner which will result in a minimum of inconvenience to the Operator. Operator shall bear no portion of the Non-Operators' audit cost incurred under this paragraph unless agreed to by the Operator.

6. Approval by Non-Operators

Where an approval or other agreement of the Parties or Non-Operators is expressly required under other sections of this Accounting Procedure and if the agreement to which this Accounting Procedure is attached contains no contrary provisions in regard thereto, Operator shall notify all Non-Operators of the Operator's proposal, and the agreement or approval of a majority in interest of the Non-Operators shall be controlling on all Non-Operators.

II. DIRECT CHARGES

Operator shall charge the Joint Account with the following items:

1. Rentals and Royalties

Lease rentals and royalties paid by Operator for the Joint Operations.

2. Labor

A. (1) Salaries and wages of Operator's field employees directly employed on the Joint Property in the conduct of Joint Operations.

(2) Salaries of First Level Supervisors in the field.

(3) Salaries and wages of Technical Employees directly employed on the Joint Property if such charges are excluded from the Overhead rates.

B. Operator's cost of holiday, vacation, sickness and disability benefits and other customary allowances paid to employees whose salaries and wages are chargeable to the Joint Account under Paragraph 2A of this Section II. Such costs under this Paragraph 2B may be charged on a "when and as paid basis" or by "percentage assessment" on the amount of salaries and wages chargeable to the Joint Account under Paragraph 2A of this Section II. If percentage assessment is used, the rate shall be based on the Operator's cost experience.

C. Expenditures or contributions made pursuant to assessments imposed by governmental authority which are applicable to Operator's costs chargeable to the Joint Account under Paragraphs 2A and 2B of this Section II.

D. Personal Expenses of those employees whose salaries and wages are chargeable to the Joint Account under Paragraph 2A of this Section II.

3. Employee Benefits

Operator's current costs of established plans for employees' group life insurance, hospitalization, pension, retirement, stock purchase, thrift, bonus, and other benefit plans of a like nature, applicable to Operator's labor cost chargeable to the Joint Account under Paragraphs 2A and 2B of this Section II shall be Operator's actual cost not to exceed twenty per cent (20%), or percentage most recently recommended by COPAS.

4. Material

Material purchased or furnished by Operator for use on the Joint Property as provided under Section IV. Only such Material shall be purchased for or transferred to the Joint Property as may be required for immediate use and is reasonably practical and consistent with efficient and economical operations. The accumulation of surplus stocks shall be avoided.

5. Transportation

Transportation of employees and Material necessary for the Joint Operations but subject to the following limitations:

A. If Material is moved to the Joint Property from the Operator's warehouse or other properties, no charge shall be made to the Joint Account for a distance greater than the distance from the nearest reliable supply store, recognized barge terminal, or railway receiving point where like material is normally available, unless agreed to by the Parties.

B. If surplus Material is moved to Operator's warehouse or other storage point, no charge shall be made to the Joint Account for a distance greater than the distance to the nearest reliable supply store, recognized barge terminal, or railway receiving point unless agreed to by the Parties. No charge shall be made to the Joint Account for moving Material to other properties belonging to Operator, unless agreed to by the Parties.

C. In the application of Subparagraphs A and B above, there shall be no equalization of actual gross trucking cost of \$200 or less excluding accessorial charges.

6. Services

The cost of contract services, equipment and utilities provided by outside sources, except services excluded by Paragraph 9 of Section II and Paragraph 1. ii of Section III. The cost of professional consultant services and contract services of technical personnel directly engaged on the Joint Property if such charges are excluded from the Overhead rates. The cost of professional consultant services or contract services of technical personnel not directly engaged on the Joint Property shall not be charged to the Joint Account unless previously agreed to by the Parties.

7. Equipment and Facilities Furnished by Operator

A. Operator shall charge the Joint Account for use of Operator owned equipment and facilities at rates commensurate with costs of ownership and operation. Such rates shall include costs of maintenance, repairs, other operating expense, insurance, taxes, depreciation, and interest on investment not to exceed eight per cent (8%) per annum. Such rates shall not exceed average commercial rates currently prevailing in the immediate area of the Joint Property.

B. In lieu of charges in Paragraph 7A above, Operator may elect to use average commercial rates prevailing in the immediate area of the Joint Property less 20%. For automotive equipment, Operator may elect to use rates published by the Petroleum Motor Transport Association.

8. Damages and Losses to Joint Property

All costs or expenses necessary for the repair or replacement of Joint Property made necessary because of damages or losses incurred by fire, flood, storm, theft, accident, or other cause, except those resulting from Operator's gross negligence or willful misconduct. Operator shall furnish Non-Operator written notice of damages or losses incurred as soon as practicable after a report thereof has been received by Operator.

9. Legal Expense

Expense of handling, investigating and settling litigation or claims, discharging of liens, payment of judgments, and amounts paid for settlement of claims incurred in or resulting from operations under the agreement or necessary to protect or recover the Joint Property, except that no charge for services of Operator's legal staff or fees or expense of outside attorneys shall be made unless previously agreed to by the Parties. All other legal expense is considered to be covered by the overhead provisions of Section III unless otherwise agreed to by the Parties, except as provided in Section I, Paragraph 3.

10. Taxes

All taxes of every kind and nature assessed or levied upon or in connection with the Joint Property, the operation thereof, or the production therefrom, and which taxes have been paid by the Operator for the benefit of the Parties.

11. Insurance

Net premiums paid for insurance required to be carried for the Joint Operations for the protection of the Parties. In the event Joint Operations are conducted in a state in which Operator may act as self-insurer for Workmen's Compensation and/or Employers Liability under the respective state's laws, Operator may, at its election, include the risk under its self-insurance program and in that event, Operator shall include a charge at Operator's cost not to exceed manual rates.

12. Other Expenditures

Any other expenditure not covered or dealt with in the foregoing provisions of this Section II, or in Section III, and which is incurred by the Operator in the necessary and proper conduct of the Joint Operations.

III. OVERHEAD

1. Overhead - Drilling and Producing Operations

i. As compensation for administrative, supervision, office services and warehousing costs, Operator shall charge drilling and producing operations on either:

- (X) Fixed Rate Basis, Paragraph 1A, or
- () Percentage Basis, Paragraph 1B.

Unless otherwise agreed to by the Parties, such charge shall be in lieu of costs and expenses of all offices and salaries or wages plus applicable burdens and expenses of all personnel, except those directly chargeable under Paragraph 2A, Section II. The cost and expense of services from outside sources in connection with matters of taxation, traffic, accounting or matters before or involving governmental agencies shall be considered as included in the Overhead rates provided for in the above selected Paragraph of this Section III unless such cost and expense are agreed to by the Parties as a direct charge to the Joint Account.

ii. The salaries, wages and Personal Expenses of Technical Employees and/or the cost of professional consultant services and contract services of technical personnel directly employed on the Joint Property shall () shall not (X) be covered by the Overhead rates.

A. Overhead - Fixed Rate Basis

(1) Operator shall charge the Joint Account at the following rates per well per month:

Drilling Well Rate \$ 3550.00
Producing Well Rate \$ 355.00

(2) Application of Overhead - Fixed Rate Basis shall be as follows:

(a) Drilling Well Rate

- [1] Charges for onshore drilling wells shall begin on the date the well is spudded and terminate on the date the drilling or completion rig is released, whichever is later, except that no charge shall be made during suspension of drilling operations for fifteen (15) or more consecutive days.
- [2] Charges for offshore drilling wells shall begin on the date when drilling or completion equipment arrives on location and terminate on the date the drilling or completion equipment moves off location or rig is released, whichever occurs first, except that no charge shall be made during suspension of drilling operations for fifteen (15) or more consecutive days.
- [3] Charges for wells undergoing any type of workover or recompletion for a period of five (5) consecutive days or more shall be made at the drilling well rate. Such charges shall be applied for the period from date workover operations, with rig, commence through date of rig release, except that no charge shall be made during suspension of operations for fifteen (15) or more consecutive days.

(b) Producing Well Rates

- [1] An active well either produced or injected into for any portion of the month shall be considered as a one-well charge for the entire month.
- [2] Each active completion in a multi-completed well in which production is not commingled down hole shall be considered as a one-well charge providing each completion is considered a separate well by the governing regulatory authority.
- [3] An inactive gas well shut in because of overproduction or failure of purchaser to take the production shall be considered as a one-well charge providing the gas well is directly connected to a permanent sales outlet.
- [4] A one-well charge may be made for the month in which plugging and abandonment operations are completed on any well.
- [5] All other inactive wells (including but not limited to inactive wells covered by unit allowable, lease allowable, transferred allowable, etc.) shall not qualify for an overhead charge.

(3) The well rates shall be adjusted as of the first day of April each year following the effective date of the agreement to which this Accounting Procedure is attached. The adjustment shall be computed by multiplying the rate currently in use by the percentage increase or decrease in the average weekly earnings of Crude Petroleum and Gas Production Workers for the last calendar year compared to the calendar year preceding as shown by the index of average weekly earnings of Crude Petroleum and Gas Fields Production Workers as published by the United States Department of Labor, Bureau of Labor Statistics, or the equivalent Canadian index as published by Statistics Canada, as applicable. The adjusted rates shall be the rates currently in use, plus or minus the computed adjustment.

B. Overhead - Percentage is

(1) Operator shall charge the Joint Account at the following rates:

(a) Development

_____ Percent (%) of the cost of Development of the Joint Property exclusive of costs provided under Paragraph 8 of Section II and all salvage credits.

(b) Operating

_____ Percent (%) of the cost of Operating the Joint Property exclusive of costs provided under Paragraphs 1 and 9 of Section II, all salvage credits, the value of injected substances purchased for secondary recovery and all taxes and assessments which are levied, assessed and paid upon the mineral interest in and to the Joint Property.

(2) Application of Overhead - Percentage Basis shall be as follows:

For the purpose of determining charges on a percentage basis under Paragraph 1B of this Section III, development shall include all costs in connection with drilling, redrilling, deepening or any remedial operations on any or all wells involving the use of drilling crew and equipment; also, preliminary expenditures necessary in preparation for drilling and expenditures incurred in abandoning when the well is not completed as a producer, and original cost of construction or installation of fixed assets, the expansion of fixed assets and any other project clearly discernible as a fixed asset, except Major Construction as defined in Paragraph 2 of this Section III. All other costs shall be considered as Operating.

2. Overhead - Major Construction

To compensate Operator for overhead costs incurred in the construction and installation of fixed assets, the expansion of fixed assets, and any other project clearly discernible as a fixed asset required for the development and operation of the Joint Property, Operator shall either negotiate a rate prior to the beginning of construction, or shall charge the Joint Account for Overhead based on the following rates for any Major Construction project in excess of \$ 25,000 _____:

A. 6 % of total costs if such costs are more than \$ 25,000 _____ but less than \$ 100,000 _____; plus

B. 6 % of total costs in excess of \$ 100,000 _____ but less than \$1,000,000; plus

C. 5 % of total costs in excess of \$1,000,000.

Total cost shall mean the gross cost of any one project. For the purpose of this paragraph, the component parts of a single project shall not be treated separately and the cost of drilling and workover wells shall be excluded.

3. Amendment of Rates

The Overhead rates provided for in this Section III may be amended from time to time only by mutual agreement between the Parties hereto if, in practice, the rates are found to be insufficient or excessive.

IV. PRICING OF JOINT ACCOUNT MATERIAL PURCHASES, TRANSFERS AND DISPOSITIONS

Operator is responsible for Joint Account Material and shall make proper and timely charges and credits for all material movements affecting the Joint Property. Operator shall provide all Material for use on the Joint Property; however, at Operator's option, such Material may be supplied by the Non-Operator. Operator shall make timely disposition of idle and/or surplus Material, such disposal being made either through sale to Operator or Non-Operator, division in kind, or sale to outsiders. Operator may purchase, but shall be under no obligation to purchase, interest of Non-Operators in surplus condition A or B Material. The disposal of surplus Controllable Material not purchased by the Operator shall be agreed to by the Parties.

1. Purchases

Material purchased shall be charged at the price paid by Operator after deduction of all discounts received. In case of Material found to be defective or returned to vendor for any other reason, credit shall be passed to the Joint Account when adjustment has been received by the Operator.

2. Transfers and Dispositions

Material furnished to the Joint Property and Material transferred from the Joint Property or disposed of by the Operator, unless otherwise agreed to by the Parties, shall be priced on the following bases exclusive of cash discounts:

A. New Material (Condition A)

(1) Tubular goods, except line pipe, shall be priced at the current new price in effect on date of movement on a maximum carload or barge load weight basis, regardless of quantity transferred, equalized to the lowest published price f.o.b. railway receiving point or recognized barge terminal nearest the Joint Property where such Material is normally available.

(2) Line Pipe

(a) Movement of less than 30,000 pounds shall be priced at the current new price, in effect at date of movement, as listed by a reliable supply store nearest the Joint Property where such Material is normally available.

(b) Movement of 30,000 pounds or more shall be priced under provisions of tubular goods pricing in Paragraph 2A (1) of this Section IV.

(3) Other Material shall be priced at the current new price, in effect at date of movement, as listed by a reliable supply store or f.o.b. railway receiving point nearest the Joint Property where such Material is normally available.

B. Good Used Material (Condition B)

Material in sound and serviceable condition and suitable for reuse without reconditioning:

(1) Material moved to the Joint Property

(a) At seventy-five percent (75%) of current new price, as determined by Paragraph 2A of this Section IV.

(2) Material moved from the Joint Property

(a) At seventy-five percent (75%) of current new price, as determined by Paragraph 2A of this Section IV, if Material was originally charged to the Joint Account as new Material, or

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(b) at sixty-five percent (65%) of current new price, as determined by Paragraph 2A of this Section IV, if Material was originally charged to the Joint Account as good used Material at seventy-five percent (75%) of current new price.

The cost of reconditioning, if any, shall be absorbed by the transferring property.

C. Other Used Material (Condition C and D)

(1) Condition C

Material which is not in sound and serviceable condition and not suitable for its original function until after reconditioning shall be priced at fifty percent (50%) of current new price as determined by Paragraph 2A of this Section IV. The cost of reconditioning shall be charged to the receiving property, provided Condition C value plus cost of reconditioning does not exceed Condition B value.

(2) Condition D

All other Material, including junk, shall be priced at a value commensurate with its use or at prevailing prices. Material no longer suitable for its original purpose but usable for some other purpose, shall be priced on a basis comparable with that of items normally used for such other purpose. Operator may dispose of Condition D Material under procedures normally utilized by the Operator without prior approval of Non-Operators.

D. Obsolete Material

Material which is serviceable and usable for its original function but condition and or value of such Material is not equivalent to that which would justify a price as provided above may be specially priced as agreed to by the Parties. Such price should result in the Joint Account being charged with the value of the service rendered by such Material.

E. Pricing Conditions

(1) Loading and unloading costs may be charged to the Joint Account at the rate of fifteen cents (15¢) per hundred weight on all tubular goods movements, in lieu of loading and unloading costs sustained, when actual hauling cost of such tubular goods are equalized under provisions of Paragraph 5 of Section II.

(2) Material involving erection costs shall be charged at applicable percentage of the current knocked-down price of new Material.

3. Premium Prices

Whenever Material is not readily obtainable at published or listed prices because of national emergencies, strikes or other unusual causes over which the Operator has no control, the Operator may charge the Joint Account for the required Material at the Operator's actual cost incurred in providing such Material, in making it suitable for use, and in moving it to the Joint Property; provided notice in writing is furnished to Non-Operators of the proposed charge prior to billing Non-Operators for such Material. Each Non-Operator shall have the right, by so electing and notifying Operator within ten days after receiving notice from Operator, to furnish in kind all or part of his share of such Material suitable for use and acceptable to Operator.

4. Warranty of Material Furnished by Operator

Operator does not warrant the Material furnished. In case of defective Material, credit shall not be passed to the Joint Account until adjustment has been received by Operator from the manufacturers or their agents.

V. INVENTORIES

The Operator shall maintain detailed records of Controllable Material.

1. Periodic Inventories, Notice and Representation

At reasonable intervals, Inventories shall be taken by Operator of the Joint Account Controllable Material. Written notice of intention to take inventory shall be given by Operator at least thirty (30) days before any inventory is to begin so that Non-Operators may be represented when any inventory is taken. Failure of Non-Operators to be represented at an inventory shall bind Non-Operators to accept the inventory taken by Operator.

2. Reconciliation and Adjustment of Inventories

Reconciliation of a physical inventory with the Joint Account shall be made, and a list of overages and shortages shall be furnished to the Non-Operators within six months following the taking of the inventory. Inventory adjustments shall be made by Operator with the Joint Account for overages and shortages, but Operator shall be held accountable only for shortages due to lack of reasonable diligence.

3. Special Inventories

Special Inventories may be taken whenever there is any sale or change of interest in the Joint Property. It shall be the duty of the party selling to notify all other Parties as quickly as possible after the transfer of interest takes place. In such cases, both the seller and the purchaser shall be governed by such inventory.

4. Expense of Conducting Periodic Inventories

The expense of conducting periodic Inventories shall not be charged to the Joint Account unless agreed to by the Parties.

EXHIBIT "G"

ADDITIONAL INSURANCE PROVISIONS

Operator, during the term of this agreement, shall carry insurance for the benefit and at the expense of the parties hereto, as follows:

- (A) Workmen's Compensation Insurance as contemplated by the state in which operations will be conducted, and Employer's Liability Insurance with limits of not less than \$100,000.00 per employee.

- (B) Public Liability Insurance:
Bodily Injury - \$500,000.00 each occurrence.

- (C) Automobile Public Liability Insurance:
Bodily Injury - \$250,000.00 each person.
\$500,000.00 each occurrence.

Property Damage - \$100,000.00 each occurrence.

Except as authorized by this Exhibit "G", Operator shall not make any charge to the joint account for insurance premiums. Losses not covered by Operator's insurance (or by insurance required by this agreement to be carried for the benefit and at the expense of the parties hereto) shall be charged to the joint account.

YATES DRILLING COMPANY

UNIT OPERATING AGREEMENT

Dated: November 1, 1989

CACTUS (QUEEN) UNIT

Township 12 South, Range 31 East, N.M.P.M.

Section 27: W $\frac{1}{2}$ SE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$

Section 34: N $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NW $\frac{1}{4}$

Chaves County, New Mexico

BEFORE EXAMINER STOGNER	
OIL CONSERVATION DIVISION	
YATES	EXHIBIT NO 4B
CASE NO. 9809, 9810, 9823	

UNIT OPERATING AGREEMENT
CACTUS QUEEN UNIT
CHAVES COUNTY, NEW MEXICO

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UNIT OPERATING AGREEMENT
CACTUS (QUEEN) UNIT
CHAVES COUNTY, NEW MEXICO

THIS AGREEMENT, entered into as the 1st day of November, 1988 by and between the parties who have signed the original of this instrument, a counterpart thereof, or other instrument agreeing to become a party hereto,

WITNESSETH:

WHEREAS, the parties hereto as Working Interest Owners have executed, as of the date hereof, an Agreement entitled "Unit Agreement, Cactus Queen Unit, Chaves County, New Mexico," herein referred to as "Unit Agreement," which, among other things, provides for a separate agreement to be entered into by Working Interest Owners to provide for Unit Operations as therein defined.

NOW, THEREFORE, in consideration of the mutual agreements herein set forth, it is agreed as follows:

ARTICLE 1

CONFIRMATION OF UNIT AGREEMENT

1.1 Confirmation of Unit Agreement. The Unit Agreement is hereby confirmed and by reference made a part of this Agreement. The definitions in the Unit Agreement are adopted for all purposes of this Agreement. If there is any conflict between the Unit Agreement and this Agreement, the Unit Agreement shall govern.

ARTICLE 2

EXHIBITS

2.1 Exhibits. The following exhibits are incorporated herein by reference:

2.1.1 Exhibits "A", "B", and "C", of the Unit Agreement.
There is no Exhibit "D".

2.1.2 Exhibit "E", attached hereto, is a schedule showing the Unit Participation of each Working Interest Owner. Exhibit "E", or a revision thereof, shall not be conclusive as to the information therein, except it may be used as showing the Unit Participations of Working Interest Owners for purposes of this Agreement until shown to be in error or revised as herein authorized.

2.1.3 Exhibit "F", attached hereto, is the Accounting Procedure applicable to Unit Operations, If there is any conflict between this Agreement and Exhibit "F", this Agreement shall govern.

2.1.4 Exhibit "G", attached hereto, contains insurance provisions applicable to Unit Operations.

2.2 Revision of Exhibits. Whenever Exhibits "A", "B" or "C" are revised, Exhibit "E" shall be revised accordingly and be effective as of the same date. Unit Operator shall also revise Exhibit "E" from time to time as required to conform to changes in ownership of which Unit Operator has been notified as provided in the Unit Agreement.

2.3 Reference to Exhibits. When reference is made herein to an exhibit, it is to the exhibit as originally attached or if revised, to the last revision.

ARTICLE 3

SUPERVISION OF OPERATIONS BY WORKING INTEREST OWNERS

3.1 Overall Supervision. Working Interest Owners shall exercise overall supervision and control of all matters pertaining to Unit Operations pursuant to this Agreement and the Unit Agreement. In the exercise of such authority, each Working Interest Owner shall act solely in its own behalf in the capacity of an individual owner and not on behalf of the owners as an entirety.

3.2 Specific Authorities and Duties. The matters with respect to which Working Interest Owners shall decide and take action shall include, but not be limited to, the following:

3.2.1 Method of Operation. The method of operation, including the type or types of pressure maintenance, secondary recovery, or other recovery program to be employed.

3.2.2 Drilling of Wells. The drilling of any well whether for production of Unitized Substances, for use as an injection well, or for other purposes.

3.2.3. Well Recompletion and Change of Status. The recompletion, abandonment, or permanent change of status of any well, or the use of any well for injection or other purposes. The Unit Operator shall be responsible for performing such work and such work shall be done at Unit Expense.

3.2.4 Expenditures. The making of any single expenditure in excess of Fifteen Thousand Dollars (\$15,000.00); however, approval by Working Interest Owners of the drilling, reworking, deepening, or plugging back of any well shall include approval of all necessary expenditures required therefore, and for completing, testing and equipping the well, including necessary flow lines, separators, and lease tankage; provided however, that in case of blowout, explosion, fire, flood or other sudden emergencies, Unit Operator may take steps and incur such expenses as in its opinion are required to deal with the emergency and to safeguard life or property but that Unit Operator shall, as promptly as possible, report the emergency to the Working Interest Owners.

3.2.5 Disposition of Unit Equipment. The selling or otherwise disposing of any major item of surplus Unit Equipment, if the current price of new equipment similar thereto is Five Thousand Dollars (\$5,000.00) or more.

3.2.6 Appearance Before a Court or Regulatory Agency. The designating of a representative to appear before any court or regulatory agency in matters pertaining to Unit Operations; however, such designation shall not prevent any Working Interest Owner from appearing in person or from designating another representative in its own behalf.

3.2.7 Audits. The auditing of the accounts of Unit Operator pertaining to Unit Operations hereunder; however, the audits shall

(a) not be conducted more than once each year except upon the resignation or removal of Unit Operator, and

(b) be made upon the approval of the owner or owners of a majority of Working Interest other than that of Unit Operator, at the expense of all Working Interest Owners other than Unit Operator, or

(c) be made at the expense of those Working Interest Owners requesting such audit, if owners of less than a majority of Working Interest, other than that of Unit Operator, request such an audit, and

(d) be made upon not less than thirty (30) days written notice to Unit Operator.

3.2.8 Inventories. The taking of periodic inventories under the terms of Exhibit "F".

3.2.9 Technical Services. The authorizing of charges to the Joint Account of services by consultants or Unit Operator's technical personnel not covered by the overhead charges provided by Exhibit "F".

3.2.10 Assignments to Committees. The appointment of committees to study any problems in connection with Unit Operations.

3.2.11 The removal of Unit Operator and the selection of a successor.

3.2.12 The enlargement of the Unit Area.

3.2.13 The adjustment and readjustment or investments.

3.2.14 The termination of the Unit Agreement.

ARTICLE 4

MANNER OF EXERCISING SUPERVISION

4.1 Designation of Representatives. Each Working Interest Owner shall inform Unit Operator in writing of the names and addresses of the representative and alternate who are authorized to represent and bind such Working Interest Owner with respect to Unit Operations. The representative or alternate may be changed from time to time by written notice to Unit Operator.

4.2 Meetings. All meetings of Working Interest Owners shall be called by Unit Operator upon its own motion or at the request of two (2) or more Working Interest Owners having a total Unit Participation then in effect of not less than ten percent (10%). No meeting shall be called on less than fourteen (14) days advance written notice, with agenda for the meeting attached. Working Interest Owners who attend the meeting may amend items included in the agenda and may act upon an amended item or other items presented at the meeting. The representative of Unit Operator shall be chairman of each meeting.

4.3 Voting Procedure. Working Interest Owners shall decide all matters coming before them as follows:

4.3.1 Voting Interest. Each Working Interest Owner shall have a voting interest equal to its Unit Participation in effect at the time of the vote.

4.3.2 Vote Required. Unless otherwise provided herein or in the Unit Agreement, Working Interest Owners shall determine all matters by the affirmative vote of four or more Working Interest Owners having a combined voting interest of at least seventy-five percent (75%); however, should any one Working Interest Owner have more than twenty-five percent (25%) voting interest, its negative vote or failure to vote shall not defeat a motion, and such motion shall pass if approved by Working Interest Owners having a majority voting interest, unless three or more Working Interest Owners having combined voting interest of at least five percent (5%) likewise vote against the motion or fail to vote.

4.3.3 Vote at Meeting by Nonattending Working Interest Owner. Any Working Interest Owner not represented at a meeting may vote on any agenda item by letter or telegram addressed to the representative of Unit Operator if its vote is received prior to the vote at the meeting, provided the agenda items are not amended.

4.3.4 Poll Votes. Working Interest Owners may vote on and decide, by letter or telegram, any matter submitted in writing to Working Interest Owners. If a meeting is not requested, as provided in Section 4.2, within seven (7) days after a written proposal is sent to Working Interest Owners, the vote taken by letter or telegram shall become final. Unit Operator will give prompt notice of the results of such voting to all Working Interest Owners.

ARTICLE 5

INDIVIDUAL RIGHTS OF WORKING INTEREST OWNERS

5.1 Reservation of Rights. Working Interest Owners severally reserve to themselves all their rights, except as otherwise provided in this Agreement and the Unit Agreement.

5.2 Specific Rights. Each Working Interest Owner shall have among others, the following specific rights:

5.2.1 Access to Unit Area. Access to the Unit Area at all reasonable times to inspect Unit Operations, all wells, and the records and data pertaining thereto.

5.2.2 Reports. The right to receive from Unit Operator, upon written request, copies of all reports to any governmental agency, reports of crude oil runs and stocks, inventory reports, and all other information pertaining to Unit Operations. The cost of gathering and furnishing information not ordinarily furnished by Unit Operator to all Working Interest Owners shall be charged to the Working Interest Owner that requests the information.

5.3 Undrilled Locations. Unit Operator shall have the option to drill any undrilled locations on tracts committed to the Unit Area at Unit Expense subject to partners approval as listed under Article 4.3.

ARTICLE 6

UNIT OPERATOR

6.1 Unit Operator. Yates Drilling Company, a New Mexico corporation, is hereby designated as Initial Unit Operator.

6.2 Resignation or Removal and Selection of Successor. The resignation or removal of Unit Operator and the selection of a successor shall be governed by the provisions of the Unit Agreement.

ARTICLE 7

AUTHORITIES AND DUTIES OF UNIT OPERATOR

7.1 Exclusive Right to Operate Unit. Subject to the provisions of this Agreement and to instructions from Working Interest Owners, Unit Operator shall have the exclusive right and be obligated to conduct Unit Operations.

7.2 Workmanlike Conduct. Unit Operator shall conduct Unit Operations in a good and workmanlike manner as would a prudent operator under the same or similar circumstances. Unit Operator shall freely consult with Working Interest Owners and keep them informed of all matters which Unit Operator, in the exercise of its best judgment, considers important. Unit Operator shall not be liable to Working Interest Owners for damages, unless such damages result from its gross negligence or willful misconduct.

7.3 Liens and Encumbrances. Unit Operator shall endeavor to keep the lands and leases in the Unit Area and Unit Equipment free from all liens and encumbrances occasioned by Unit Operations, except the lien and security interest of Unit Operator and Working Interest Owners granted hereunder.

7.4 Employees. The number of employees used by Unit Operator in conducting Unit Operations, their selection, hours of labor, and compensation shall be determined by Unit Operator. Such employees shall be the employees of Unit Operator.

7.5 Records. Unit Operator shall keep correct books, accounts, and records of Unit Operations.

7.6 Reports to Working Interest Owners. Unit Operator shall furnish Working Interest Owners quarterly reports of Unit Operations.

7.7 Reports to Governmental Authorities. Unit Operator shall make all reports to governmental authorities that it has the duty to make as Unit Operator.

7.8 Engineering and Geological Information. Unit Operator shall furnish to a Working Interest Owner, upon written request, a copy of all logs and other engineering and geological data pertaining to wells drilled for Unit Operations.

7.9 Expenditures Unit Operator is authorized to make single expenditures not in excess of Thirty Thousand Dollars (\$30,000.00) without prior approval of Working Interest Owners. If an emergency occurs, Unit Operator may immediately make or incur such expenditures as in its opinion are required to deal with the emergency. Unit Operator shall report to Working Interest Owners, as promptly as possible, the nature of the emergency and the action taken.

7.10 Wells Drilled by Unit Operator. All wells drilled by Unit Operator shall be at the usual rates prevailing in the area. Unit Operator may employ its own tools and equipment, but the charge therefor shall not exceed the usual rates prevailing in the area, and the work shall be performed by Unit Operator under the same terms and conditions as are usual in the area in contracts of independent contractors doing work of an similar nature.

7.11 Mathematical Errors. Unit Operator is empowered to correct any mathematical errors which might exist in the pertinent exhibits to this Agreement.

7.12 Border Agreement. Subject to the provisions and conditions in the Unit Agreement, Unit Operator shall have the right and authority to enter into border protection agreements.

7.13 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 provisions

thereof to the extent that the said Unit Operator or the 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.

ARTICLE 3

TAXES

8.1 Ad Valorem Taxes. Beginning with the first calendar year after the Effective Date hereof, Unit Operator shall make and file all necessary ad valorem tax renditions and returns with the proper taxing authorities with respect to all property of each Working Interest Owner used or held by Unit Operator for Unit Operations. Unit Operator shall settle assessments arising therefrom. Any Working Interest Owner dissatisfied with any proposed rendition or assessment of its interest in property shall have the right, at its own expense, to protest and resist the same. All such ad Valorem taxes shall be paid by Unit Operator and charged to the joint account; however, if the interest of a Working Interest Owner is subject to a separately assessed overriding royalty interest, production payment, or other interest in excess of one-eighth (1/8) royalty, such Working Interest Owner shall notify Unit Operator of such interest prior to the rendition date and shall be given credit for the reduction in taxes paid resulting therefrom.

8.2 Other Taxes. Each Working Interest Owner shall pay or cause to be paid all production, severance, gathering, and other taxes imposed upon or with respect to the production or handling of its share of Unitized Substances.

ARTICLE 9

INSURANCE

9.1 Insurance Unit Operator, with respect to Unit Operations, shall:

- (a) comply with the Workmen's Compensation Laws of the State,
- (b) carry Employer's Liability and other insurance required by the laws of the State, and
- (c) provide other insurance as set forth in Exhibit "G".

ARTICLE 10

ADJUSTMENT OF INVESTMENTS

10.1 Personal Property Taken Over. Upon the Effective Date, Working Interest Owners shall deliver to Unit Operator the following:

- 10.1.1 Wells. All wells completed in the Unitized Formation.

10.1.2 Well and Lease Equipment. The casing and tubing in each such well, the wellhead connections thereon, and all other lease and operating equipment that is used in the operation of such wells which Working Interest Owners determine is necessary or desirable for conducting Unit Operations.

10.1.3 Records. A copy of all production and well records for such wells.

10.2 Inventory and Evaluation of Personal Property. Working Interest Owners shall at Unit Expense inventory and evaluate, as determined by Working Interest Owners, the personal property taken over by Unit Operator under Section 10.1.2. Such inventory shall include and be limited to those items of equipment considered controllable under Exhibit "F" except, upon determination of Working Interest Owners, items considered noncontrollable may be included in the inventory in order to be included in the inventory for record purposes, but shall be excluded from evaluation and investment adjustment.

10.3 Investment Adjustment. Upon approval by Working Interest Owners of the inventory and evaluation, each Working Interest Owner shall be credited with the value, as determined in accordance with Section 10.2 above, of its interest in all personal property taken over by Unit Operator under Section 10.1.2. and charged with an amount equal to that obtained by multiplying the total value of all such personal property taken over the Unit Operator under Section 10.1.2. by such Working Interest Owner's Unit Participation. If the charge against any Working Interest Owner is greater than the amount credited to such Working Interest Owner, the resulting net charge shall be paid and in all other respects be treated as any other item of Unit Expense chargeable against such Working Interest Owners. If against such Working Interest Owner, the resulting net credit shall be paid to such Working Interest Owner by Unit Operator out of funds received by it in settlement of the net charges described above.

10.4 General Facilities. The acquisition of warehouses, warehouse stocks, lease houses, camps, facility system, and office buildings necessary for Unit Operations shall be by negotiation by the owners thereof and Unit Operator, subject to the approval of Working Interest Owners.

10.5 Ownership of Personal Property and Facilities. Each Working Interest Owner, individually, shall by virtue hereof own an undivided interest, equal to its Unit Participation, in all wells, equipment, personal property and facilities taken over or otherwise acquired by Unit Operator pursuant to this agreement.

ARTICLE 11

UNIT EXPENSE

11.1 Basis for Charge to Working Interest Owners. Unit Operator initially shall pay all Unit Expenditures. Each Working Interest Owner shall reimburse Unit Operator for its share of Unit Expenditures. Each Working Interest Owner's share of such Unit Expenditures shall be the same as its Unit Participation for:

- (a) items in the nature of capital assets including, without limitation, real property if acquired;
- (b) acquiring, drilling, re-drilling, equipping and re-equipping water injection wells, replugging or converting oil wells to water injection wells, pumping and pipeline facilities for such wells, and changing any injection interval in any such well;
- (c) re-entry and replugging of wells outside the unit area as necessary to permit water injection into appropriate wells within the unit area;
- (d) gathering lines and facilities and common tank batteries utilized or acquired for Unit Operations, and
- (e) water purchased or otherwise contained for injection purposes and the costs of injection thereof into the Unit Area.

Each Working Interest Owner's share of all other Unit Expenditures shall be the same as its Unit Participation in effect at that time. All charges, credits and accounting for Unit Expenditures shall be in accordance with Exhibit "F".

11.2 Budgets. Before or as soon as practical after the Effective Date, Unit Operator shall prepare a budget of estimated Unit Expense for the remainder of the calendar year and on or before the first day of each October thereafter shall prepare such a budget for the ensuing calendar year. Budgets shall be estimates only, and shall be adjusted or corrected by Working Interest Owners and Unit Operator whenever an adjustment or correction is proper. A copy of each budget and adjusted budget shall be furnished promptly to each Working Interest Owner.

11.3 Advance Billings. Unit Operator shall have the right, without prejudice to other rights or remedies, to require Working Interest Owners to advance their respective share of estimated Capital Unit Expense by submitting to Working Interest Owners, on or before the 15th day of any month, an itemized estimate thereof for the succeeding month, with a request for payment in advance. Within fifteen (15) days after receipt of the estimate, each Working Interest Owner shall pay to Unit Operator its share of such estimate. Adjustments between estimated and actual Unit Expense shall be made by Unit Operator at the close of each calendar month, and the accounts of Working Interest Owners shall be adjusted accordingly.

11.4 Commingling of Funds. Funds received by Unit Operator under this agreement need not be segregated or maintained by it as a separate fund, but may be commingled with its own funds.

11.5 Lien and Security Interest of Unit Operator and the Working Interest Owners. Each Working Interest Owner grants to Unit Operator a lien upon its Oil and Gas Rights in each Tract and a security interest in its share of Unitized Substances when extracted and its interest in all Unit Equipment to secure payment of its share of Unit Expense, together with interest thereon at the rate of twelve percent (12%) per annum, with the further provision that Unit Operator grants a like lien to Working Interest Owners. To the extent

that Unit Operator has a security interest under the Uniform Commercial Code of the State of New Mexico, Unit Operator shall be entitled to exercise the rights and remedies of a secured party under the Code. The bringing of a suit and the obtaining of a judgment by Unit Operator for the secured indebtedness shall not be deemed an election of remedies or otherwise affect the lien rights or security interest as security for the payment thereof. In addition, upon default by any Working Interest Owners in the payment of its share of Unit Expense, Unit Operator shall have the right, without prejudice, to other rights or remedies, to collect from the purchaser the proceeds from the sale of such Working Interest Owner's share of Unitized Substances until the amount owed by such Working Interest Owners, plus interest, has been paid. Each purchaser shall be entitled to rely upon Unit Operator's written statement concerning the amount of any default. The rights herein granted the Unit Operator shall in like manner apply to the other Working Interest Owners.

11.6 Unpaid Unit Expense. If any Working Interest Owner fails to pay its share of Unit Expense within sixty (60) days after rendition of a statement therefor by Unit Operator, each Working Interest Owner agrees upon request by Unit Operator, to pay its proportionate part of the unpaid share of Unit Expense of the defaulting Working Interest Owner. Working Interest Owners that pay the share of Unit Expense of a defaulting Working Interest Owner shall be reimbursed by Unit Operator for the amount so paid, plus any interest collected thereon, upon receipt by Unit Operator of any past due amount collected from the defaulting Working Interest Owners. Any share of Unit Expense shall, to obtain reimbursement thereof, be subrogated to the lien and other rights herein granted Unit Operator.

11.7 Carved-Out Interest. If any Working Interest Owners shall, after executing this agreement, create an overriding royalty, production payment, net proceeds interest, carried interest, or any other interest out of its Working Interest, such carved-out interest shall be subject to the terms and provisions of this agreement, specifically including, but without limitation, Section 11.5 hereof entitled "Lien of Unit Operator." If the Working Interest Owner creating such carved-out interest (a) fails to pay any Unit Expense chargeable to such Working Interest Owner under this agreement, and the production of Unitized Substances accruing to the credit of such Working Interest Owner is insufficient for that purpose, or (b) withdraws from this agreement under the terms and provisions of Article 17 hereof, the carved-out interest shall be chargeable with a pro rata portion of all Unit Expense incurred hereunder, the same as though such carved-out interest were a Working Interest, and Unit Operator shall have the right to enforce against such carved-out interest the lien and all other rights granted in Section 11.5 for the purpose of collecting the Unit Expense chargeable to the carved-out interest.

11.8 Uncommitted Royalty. Should an owner of a Royalty Interest in any Tract fail to become a party to the Unit Agreement, and, as a result thereof, the actual Royalty Interest payments with respect to such Tract are more or less than the Royalty Interest payments computed on the basis of the Unitized Substances that are allocated to such Tract under the Unit Agreement, the difference to be borne by or inure to the benefit of Working Interest Owners shall not exceed an amount computed on the basis of one-eighth (1/8) of the difference between the Unitized Substances allocated to the Tract and the Unitized Substances produced from the Tract. Such adjustments shall be made by charges and credits to the joint account.

11.9 Salvage Credit. Credit for Unit Equipment salvaged during shall be divided in the same proportion as the Unit Participation.

11.10 Rentals. The Working Interest Owners in each Tract shall pay all rentals, minimum royalty, advance rentals or delay rentals due under the lease thereon and shall concurrently submit to the Unit Operator evidence of payment.

ARTICLE 12

NON-UNITIZED FORMATIONS

12.1 Right to Operate. Any Working Interest Owner that now has or hereafter acquires the right to drill for and produce oil, gas, or other minerals, from a formation underlying the Unit Area other than the Unitized Formation, shall have the right to do so notwithstanding this Agreement or the Unit Agreement. In exercising the right, however, the Working Interest Owner shall exercise care to prevent unreasonable interference with Unit Operations. No Working Interest Owner shall produce Unitized Substances through any well drilled or operated by it. If any Working Interest Owner drills any well into or through the Unitized Formation, the Unitized Formation shall be protected in a manner satisfactory to Working Interest Owners so that the production of Unitized Substances will not be affected adversely.

ARTICLE 13

TITLES

13.1 Warranty and Indemnity. Each Working Interest Owner represents and warrants that it is the owner of the respective working interests set forth opposite its name in Exhibit "B" of the Unit Agreement, and agrees to indemnify and hold harmless the other Working Interest Owners from any loss due to failure, in whole or in part, or its title to any such interest, except failure of title arising out of Unit Operations; however, such indemnity and any liability for breach of warranty shall be limited to an amount equal to the net value that has been received from the sale or receipt of Unitized Substances attributed to the interest as to which title failed. Each failure of title will be deemed to be effective, insofar as this Agreement is concerned, as of 7:00 a.m. on the first day of the calendar month in which such failure is finally determined, and there shall be no retroactive adjustment of Unit Expense, or retroactive allocation of Unitized Substances or the proceeds therefrom, as a result of title failure.

13.2 Failure Because of Unit Operations. The failure of title of any Working Interest in any Tract because of Unit Operations, including nonproduction from such Tract, shall not change the Unit Participation of the Working Interest Owner whose title failed in relation to the Unit Participations of the other Working Interest Owners at the time of the title failure.

ARTICLE 14

LIABILITY, CLAIMS, AND SUITS

14.1 Individual Liability. The duties, obligations, and liabilities of Working Interest Owners shall be several and not joint or collective; and nothing herein shall ever be construed as creating a partnership of any kind, joint venture, association, or trust among Working Interest Owners.

14.2 Settlements. Unit Operator may settle any single damage claim or suit involving Unit Operations if the expenditure does not exceed Fifteen Thousand Dollars (\$15,000.00) and if the payment is in complete settlement of such claim or suit. If the amount required for settlement exceeds the above amount, Working Interest Owners shall assume and take over the further handling of the claim or suit, unless such authority, is delegated to Unit Operator. All costs and expense of handling, settling, or otherwise discharging such claim or suit shall be an item of Unit Expense. If a claim is made against any Working Interest Owner or if any Working Interest Owner is sued on account of any matter arising from Unit Operations over which such Working Interest Owner individually has no control because of the rights given Working Interest Owners and Unit Operator by this Agreement and the Unit Agreement, the Working Interest Owner shall immediately notify Unit Operator, and the claim or suit shall be treated as any other claim or suit involving Unit Operations.

ARTICLE 15

LAWS AND REGULATIONS

15.1 Internal Revenue Provision. Notwithstanding any provisions herein that the rights and liabilities of the parties hereunder are several and not joint or collective, or that this Agreement and operations hereunder shall not constitute a partnership, if for Federal income tax purposes this Agreement and the operations hereunder are regarded as a partnership then each of the parties hereto elects to be excluded from the application of all of the provisions of Subchapter K, Chapter 1, Subtitle A, of the Internal Revenue Code of 1954, as permitted and authorized by Section 761 of the Code and the regulations promulgated thereunder. Unit Operator is hereby authorized and directed to execute on behalf of each of the parties hereto such evidence of this election as may be required by the Secretary of the Treasury of the United States or the Federal Internal Revenue Service, including specifically, but not by way of limitation, all of the returns, statements, and the data required by Federal Regulations 1.761-1(a). Should there be any requirement that each party hereto further evidence this election, each party hereto agrees to execute such documents and furnish such other evidence as may be required by the Federal Internal Revenue Service or as may be necessary to evidence this election. Each party hereto further agrees not to give any notices or take any other action inconsistent with the election made hereby. If any present or future income tax laws of the state or states in which the Unit Area is located, or any future income tax of the United States, contain provisions similar to those in Subchapter K, Chapter 1, Subtitle A, of the Internal Revenue Code of 1954, under which an election similar to that provided by Section 761 of the Code is permitted, each of the parties agrees to make

such election as may be permitted, or required by such laws. In making this election, each of the parties states that the income derived by such party from the operations under this Agreement can be adequately determined without the computation of partnership taxable income.

15.2 Statutory Unitization. If working Interest Owners owning at least seventy-five percent (75%) of the Unit Participation have become parties to this Agreement and if Royalty Interest Owners owning at least seventy-five percent (75%) of the Royalty Interest have become parties hereto, the Unit Operator may make application to the New Mexico Oil Conservation Division of the Energy and Minerals Department for statutory unitization of the uncommitted interests.

ARTICLE 16

NOTICES

16.1 Notices. All notices required hereunder shall be in writing and shall be deemed to have been properly served when sent by mail or telegram to the address of the representative of each Working Interest Owner as furnished to Unit Operator in accordance with Article 4.

ARTICLE 17

WITHDRAWAL OF WORKING INTEREST OWNER

17.1 Withdrawal. A Working Interest Owner may withdraw from this Agreement by transferring, without warranty of title, either express or implied, to the other Working Interest Owners, all its Oil and Gas Rights, exclusive of Royalty Interests, together with its interest in all Unit Equipment and in all wells used in Unit Operations. The instrument of transfer may be delivered to Unit Operator for the transferees. Such transfer shall not relieve the Working Interest Owner from any obligation or liability incurred prior to the date of the delivery of the instrument of transfer; however, the tender has to be accepted unless Working Interest Owners decide within ninety (90) days to terminate the Unit. The interest transferred shall be owned by the transferees in proportion to their respective Unit Participations then in effect. The transferees, in proportion to the respective interests so acquired, shall pay transferor, for its interest in Unit Equipment, the net salvage value thereof as determined by Working Interest Owners. In the event such withdrawing party's interest in the aforesaid fair salvage value after deducting the estimated cost of salvaging same is less than the withdrawing party's share of the estimated cost of plugging and abandoning all wells then being used or held for Unit Operations, then the withdrawing party, as a condition precedent to withdrawal, shall pay in cash to the party or parties succeeding to its interest a sum equal to the deficiency. After the date of delivery of the instrument of transfer, the withdrawing Working Interest Owner shall be relieved from all further obligations and liability hereunder and under the Unit Agreement, and the rights of such Working Interest Owner hereunder and under the Unit Agreement shall cease insofar as they existed by virtue of the interest transferred.

ARTICLE 18

ABANDONMENT OF WELLS

18.1 Rights of Former Owners. If Working Interest Owners decide to permanently abandon any well within the Unit Area prior to termination of the Unit Agreement, Unit Operator shall give written notice thereof to the Working Interest Owners of the Tract on which the well is located, and they shall have the option for a period of ninety (90) days after the sending of such notice to notify Unit Operator in writing of their election to take over and own the well. Within ten (10) days after the Working Interest Owners of the Tract have notified Unit Operator of their election to take over the well, they shall pay Unit Operator, for credit to the joint account, the amount determined by Working Interest Owners to be the net salvage value of the casing and equipment in on the well. The Working Interest Owners of the Tract, by taking over the well, agree to seal off the Unitized formation, and upon abandonment to plug the well in compliance with applicable laws and regulations.

18.2 Plugging. If the Working Interest Owners of a Tract do not elect to take over a well located within the Unit Area that is proposed for abandonment, Unit Operator shall plug and abandon the well in compliance with applicable laws and regulations.

ARTICLE 19

EFFECTIVE DATE AND TERM

19.1 Effective Date. This Agreement shall become effective when the Unit Agreement becomes effective.

19.2 Term. This Agreement shall continue in effect so long as the Unit Agreement remains in effect, and thereafter until (a) all Unit wells have been plugged and abandoned or turned over to Working Interest Owners in accordance with Article 20; (b) all Unit Equipment and real property acquired for the joint account have been disposed of by Unit Operator in accordance with instructions of Working Interest Owners; and (c) there has been a final accounting.

ARTICLE 20

ABANDONMENT OF OPERATIONS

20.1 Termination. Upon termination of the Unit Agreement, the following will occur:

20.1.1 Oil and Gas Rights. Oil and Gas Rights in and to each separate Tract shall no longer be affected by this Agreement, and thereafter the parties shall be governed by the terms and provisions of the leases, contracts and other instruments affecting the separate Tracts.

20.1.2. Right to Operate. Working Interest Owners of any tract that desire to take over and continue to operate wells located thereon may do so by paying Unit Operator, for credit to the joint account, the net salvage values, as determined by Working Interest Owners, of the casing and equipment in and on the wells taken over and by agreeing upon abandonment to plug each well in compliance with applicable laws and regulations.

20.1.3 Cost of Abandonment. The cost of abandonment of Unit Operations shall be Unit Expense.

20.1.4 Distribution of Assets. Working Interest Owners shall share in the distribution of Unit Equipment, or the proceeds thereof, in proportion to their Unit Participations.

ARTICLE 21

EXECUTION

21.1 Original, Counterpart, or other Instrument. An owner of a Working Interest may become a party to this Agreement by signing the original of this instrument, a counterpart thereof, or other instrument agreeing to become a party hereto. The signing of any such instrument shall have the same effect as if all parties had signed the same instrument.

ARTICLE 22

SUCCESSORS AND ASSIGNS

22.1 Successors and Assigns. This Agreement shall extend to, be binding upon, and inure to the benefit of the parties hereto and their respective heirs, devisees, legal representative, successors, and assigns, and shall constitute a covenant running with the lands, leases, and interests covered hereby.

No party hereto shall assign or convey less than his entire interest in any Tract committed hereto unless such leased interest, if any, is an undivided interest in such entire tract; and, should any interest committed hereto be or become owned by three (3) or more parties, then all of such parties shall be obligated to appoint a single agent to represent such interest for the purpose of accepting billings and receiving payments, if any arising hereunder, or under the Unit Agreement, and for vote upon any matter which is the subject of determination of by the Working Interest Owners.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the dates opposite their respective signatures.

YATES DRILLING COMPANY
Unit Operator and Working Interest Owner

By _____
Attorney-in-Fact

SIGNATURE PAGE ATTACHED TO AND MADE A PART OF UNIT OPERATING AGREEMENT
COVERING CATUS (QUEEN) UNIT, CHAVES COUNTY, NEW MEXICO.

STATE OF NEW MEXICO)
 : ss
COUNTY OF EDDY)

The foregoing instrument was acknowledged before me this 6th day
of November, 1989 by Peyton Yates, Attorney-in-Fact for YATES DRILLING
COMPANY, a New Mexico corporation, on behalf of said corporation.

My commission expires:
March 1, 1990

Miriam J. Stolor
Notary Public

EXHIBIT "E"

TO UNIT OPERATING AGREEMENT

PROPOSED				
WORKING INTEREST UNIT				
CHAVES CO., NH	0.730000	0.020000	0.250000	1.000000

WELLS	CUMULATIVE OIL PROD. (MAY, JUNE & JULY 1989)		THRU JULY 1989 (BBLS)		PRODUCTION (BBLS)		ORIGINAL OIL IN PLACE (BBLS)		UNIT PARTICIPATION
	AMOUNT	FRACTION	AMOUNT	FRACTION	AMOUNT	FRACTION	AMOUNT	FRACTION	
11 1Barner Fed. #7	23,329	0.264323	198	0.308892	333,180	0.377058			0.294735
11 31Barner Fed. #9	21,939	0.233375	115	0.180957	27,416	0.031027			0.180168
12 1Burkitt Fed. #3	6,105	0.067720	75	0.117005	158,740	0.179645			0.098165
12 a1NW/NW 34-12S-31E	0	0.000000	0	0.000000	39,371	0.044556			0.011139
13 1DeLuns Fed. #3	12,505	0.142039	102	0.159126	156,188	0.176757			0.151573
15 1Apache "27" St. #1	19,518	0.217613	94	0.146646	120,037	0.135345			0.193622
15 a1Apache "27" St. #2	6,755	0.074930	56	0.087363	24,152	0.027333			0.063652
15 b1SW/SW 27-12S-31E	0	0.000000	0	0.000000	24,547	0.027780			0.006945
	90,151	1.000000	641	1.000000	883,631	1.000000			1.000000

Attached to and made a part of Unit Operating Agreement
Cactus Queen Unit, Chaves County, New Mexico

ACCOUNTING PROCEDURE JOINT OPERATIONS

I. GENERAL PROVISIONS

1. Definitions

"Joint Property" shall mean the real and personal property subject to the agreement to which this Accounting Procedure is attached.

"Joint Operations" shall mean all operations necessary or proper for the development, operation, protection and maintenance of the Joint Property.

"Joint Account" shall mean the account showing the charges paid and credits received in the conduct of the Joint Operations and which are to be shared by the Parties.

"Operator" shall mean the party designated to conduct the Joint Operations.

"Non-Operators" shall mean the parties to this agreement other than the Operator.

"Parties" shall mean Operator and Non-Operators.

"First Level Supervisors" shall mean those employees whose primary function in Joint Operations is the direct supervision of other employees and/or contract labor directly employed on the Joint Property in a field operating capacity.

"Technical Employees" shall mean those employees having special and specific engineering, geological or other professional skills, and whose primary function in Joint Operations is the handling of specific operating conditions and problems for the benefit of the Joint Property.

"Personal Expenses" shall mean travel and other reasonable reimbursable expenses of Operator's employees.

"Material" shall mean personal property, equipment or supplies acquired or held for use on the Joint Property.

"Controllable Material" shall mean Material which at the time is so classified in the Material Classification Manual as most recently recommended by the Council of Petroleum Accountants Societies of North America.

2. Statement and Billings

Operator shall bill Non-Operators on or before the last day of each month for their proportionate share of the Joint Account for the preceding month. Such bills will be accompanied by statements which identify the authority for expenditure, lease or facility, and all charges and credits, summarized by appropriate classifications of investment and expense except that items of Controllable Material and unusual charges and credits shall be separately identified and fully described in detail.

3. Advances and Payments by Non-Operators

Unless otherwise provided for in the agreement, the Operator may require the Non-Operators to advance their share of estimated cash outlay for the succeeding month's operation. Operator shall adjust each monthly billing to reflect advances received from the Non-Operators.

Each Non-Operator shall pay its proportion of all bills within fifteen (15) days after receipt. If payment is not made within such time, the unpaid balance shall bear interest monthly at the rate of twelve percent (12%) per annum or the maximum contract rate permitted by the applicable usury laws in the state in which the Joint Property is located, whichever is the lesser, plus attorney's fees, court costs, and other costs in connection with the collection of unpaid amounts.

4. Adjustments

Payment of any such bills shall not prejudice the right of any Non-Operator to protest or question the correctness thereof; provided, however, all bills and statements rendered to Non-Operators by Operator during any calendar year shall conclusively be presumed to be true and correct after twenty-four (24) months following the end of any such calendar year, unless within the said twenty-four (24) month period a Non-Operator takes written exception thereto and makes claim on Operator for adjustment. No adjustment favorable to Operator shall be made unless it is made within the same prescribed period. The provisions of this paragraph shall not prevent adjustments resulting from a physical inventory of Controllable Material as provided for in Section V.

5. Audits

A. Non-Operator, upon notice in writing to Operator and all other Non-Operators, shall have the right to audit Operator's accounts and records relating to the Joint Account for any calendar year within the twenty-four (24) month period following the end of such calendar year; provided, however, the making of an audit shall not extend the time for the taking of written exception to and the adjustments of accounts as provided for in Paragraph 4 of this Section 1. Where there are two or more Non-Operators, the Non-Operators shall make every reasonable effort to conduct joint or simultaneous audits in a manner which will result in a minimum of inconvenience to the Operator. Operator shall bear no portion of the Non-Operators' audit cost incurred under this paragraph unless agreed to by the Operator.

6. Approval by Non-Operators

Where an approval or other agreement of the Parties or Non-Operators is expressly required under other sections of this Accounting Procedure and if the agreement to which this Accounting Procedure is attached contains no contrary provisions in regard thereto, Operator shall notify all Non-Operators of the Operator's proposal, and the agreement or approval of a majority in interest of the Non-Operators shall be controlling on all Non-Operators.

II. DIRECT CHARGES

Operator shall charge the Joint Account with the following items:

1. Rentals and Royalties

Lease rentals and royalties paid by Operator for the Joint Operations.

2. Labor

- A. (1) Salaries and wages of Operator's field employees directly employed on the Joint Property in the conduct of Joint Operations.
- (2) Salaries of First Level Supervisors in the field.
- (3) Salaries and wages of Technical Employees directly employed on the Joint Property if such charges are excluded from the Overhead rates.
- B. Operator's cost of holiday, vacation, sickness and disability benefits and other customary allowances paid to employees whose salaries and wages are chargeable to the Joint Account under Paragraph 2A of this Section II. Such costs under this Paragraph 2B may be charged on a "when and as paid basis" or by "percentage assessment" on the amount of salaries and wages chargeable to the Joint Account under Paragraph 2A of this Section II. If percentage assessment is used, the rate shall be based on the Operator's cost experience.
- C. Expenditures or contributions made pursuant to assessments imposed by governmental authority which are applicable to Operator's costs chargeable to the Joint Account under Paragraphs 2A and 2B of this Section II.
- D. Personal Expenses of those employees whose salaries and wages are chargeable to the Joint Account under Paragraph 2A of this Section II.

3. Employee Benefits

Operator's current costs of established plans for employees' group life insurance, hospitalization, pension, retirement, stock purchase, thrift, bonus, and other benefit plans of a like nature, applicable to Operator's labor cost chargeable to the Joint Account under Paragraphs 2A and 2B of this Section II shall be Operator's actual cost not to exceed twenty per cent (20%), or percentage most recently recommended by COPAS.

4. Material

Material purchased or furnished by Operator for use on the Joint Property as provided under Section IV. Only such Material shall be purchased for or transferred to the Joint Property as may be required for immediate use and is reasonably practical and consistent with efficient and economical operations. The accumulation of surplus stocks shall be avoided.

5. Transportation

Transportation of employees and Material necessary for the Joint Operations but subject to the following limitations:

- A. If Material is moved to the Joint Property from the Operator's warehouse or other properties, no charge shall be made to the Joint Account for a distance greater than the distance from the nearest reliable supply store, recognized barge terminal, or railway receiving point where like material is normally available, unless agreed to by the Parties.
- B. If surplus Material is moved to Operator's warehouse or other storage point, no charge shall be made to the Joint Account for a distance greater than the distance to the nearest reliable supply store, recognized barge terminal, or railway receiving point unless agreed to by the Parties. No charge shall be made to the Joint Account for moving Material to other properties belonging to Operator, unless agreed to by the Parties.
- C. In the application of Subparagraphs A and B above, there shall be no equalization of actual gross trucking cost of \$200 or less excluding accessorial charges.

6. Services

The cost of contract services, equipment and utilities provided by outside sources, except services excluded by Paragraph 9 of Section II and Paragraph 1. ii of Section III. The cost of professional consultant services and contract services of technical personnel directly engaged on the Joint Property if such charges are excluded from the Overhead rates. The cost of professional consultant services or contract services of technical personnel not directly engaged on the Joint Property shall not be charged to the Joint Account unless previously agreed to by the Parties.

7. Equipment and Facilities Furnished by Operator

- A. Operator shall charge the Joint Account for use of Operator owned equipment and facilities at rates commensurate with costs of ownership and operation. Such rates shall include costs of maintenance, repairs, other operating expense, insurance, taxes, depreciation, and interest on investment not to exceed eight per cent (8%) per annum. Such rates shall not exceed average commercial rates currently prevailing in the immediate area of the Joint Property.
- B. In lieu of charges in Paragraph 7A above, Operator may elect to use average commercial rates prevailing in the immediate area of the Joint Property less 20%. For automotive equipment, Operator may elect to use rates published by the Petroleum Motor Transport Association.

8. Damages and Losses to Joint Property

All costs or expenses necessary for the repair or replacement of Joint Property made necessary because of damages or losses incurred by fire, flood, storm, theft, accident, or other cause, except those resulting from Operator's gross negligence or willful misconduct. Operator shall furnish Non-Operator written notice of damages or losses incurred as soon as practicable after a report thereof has been received by Operator.

9. Legal Expense

Expense of handling, investigating and settling litigation or claims, discharging of liens, payment of judgments and amounts paid for settlement of claims incurred in or resulting from operations under the agreement or necessary to protect or recover the Joint Property, except that no charge for services of Operator's legal staff or fees or expense of outside attorneys shall be made unless previously agreed to by the Parties. All other legal expense is considered to be covered by the overhead provisions of Section III unless otherwise agreed to by the Parties, except as provided in Section I, Paragraph 3.

10. Taxes

All taxes of every kind and nature assessed or levied upon or in connection with the Joint Property, the operation thereof, or the production therefrom, and which taxes have been paid by the Operator for the benefit of the Parties.

11. Insurance

Net premiums paid for insurance required to be carried for the Joint Operations for the protection of the Parties. In the event Joint Operations are conducted in a state in which Operator may act as self-insurer for Workmen's Compensation and/or Employers Liability under the respective state's laws, Operator may, at its election, include the risk under its self-insurance program and in that event, Operator shall include a charge at Operator's cost not to exceed manual rates.

12. Other Expenditures

Any other expenditure not covered or dealt with in the foregoing provisions of this Section II, or in Section III, and which is incurred by the Operator in the necessary and proper conduct of the Joint Operations.

III. OVERHEAD

1. Overhead - Drilling and Producing Operations

i. As compensation for administrative, supervision, office services and warehousing costs, Operator shall charge drilling and producing operations on either:

- (X) Fixed Rate Basis, Paragraph 1A, or
- () Percentage Basis, Paragraph 1B.

Unless otherwise agreed to by the Parties, such charge shall be in lieu of costs and expenses of all offices and salaries or wages plus applicable burdens and expenses of all personnel, except those directly chargeable under Paragraph 2A, Section II. The cost and expense of services from outside sources in connection with matters of taxation, traffic, accounting or matters before or involving governmental agencies shall be considered as included in the Overhead rates provided for in the above selected Paragraph of this Section III unless such cost and expense are agreed to by the Parties as a direct charge to the Joint Account.

ii. The salaries, wages and Personal Expenses of Technical Employees and/or the cost of professional consultant services and contract services of technical personnel directly employed on the Joint Property shall () shall not (X) be covered by the Overhead rates.

A. Overhead - Fixed Rate Basis

(1) Operator shall charge the Joint Account at the following rates per well per month:

Drilling Well Rate \$ 3550.00
Producing Well Rate \$ 355.00

(2) Application of Overhead - Fixed Rate Basis shall be as follows:

(a) Drilling Well Rate

- [1] Charges for onshore drilling wells shall begin on the date the well is spudded and terminate on the date the drilling or completion rig is released, whichever is later, except that no charge shall be made during suspension of drilling operations for fifteen (15) or more consecutive days.
- [2] Charges for offshore drilling wells shall begin on the date when drilling or completion equipment arrives on location and terminate on the date the drilling or completion equipment moves off location or rig is released, whichever occurs first, except that no charge shall be made during suspension of drilling operations for fifteen (15) or more consecutive days.
- [3] Charges for wells undergoing any type of workover or recompletion for a period of five (5) consecutive days or more shall be made at the drilling well rate. Such charges shall be applied for the period from date workover operations, with rig, commence through date of rig release, except that no charge shall be made during suspension of operations for fifteen (15) or more consecutive days.

(b) Producing Well Rates

- [1] An active well either produced or injected into for any portion of the month shall be considered as a one-well charge for the entire month.
- [2] Each active completion in a multi-completed well in which production is not commingled down hole shall be considered as a one-well charge providing each completion is considered a separate well by the governing regulatory authority.
- [3] An inactive gas well shut in because of overproduction or failure of purchaser to take the production shall be considered as a one-well charge providing the gas well is directly connected to a permanent sales outlet.
- [4] A one-well charge may be made for the month in which plugging and abandonment operations are completed on any well.
- [5] All other inactive wells (including but not limited to inactive wells covered by unit allowable, lease allowable, transferred allowable, etc.) shall not qualify for an overhead charge.

(3) The well rates shall be adjusted as of the first day of April each year following the effective date of the agreement to which this Accounting Procedure is attached. The adjustment shall be computed by multiplying the rate currently in use by the percentage increase or decrease in the average weekly earnings of Crude Petroleum and Gas Production Workers for the last calendar year computed to the calendar year preceding as shown by the index of average weekly earnings of Crude Petroleum and Gas Field Production Workers as published by the United States Department of Labor, Bureau of Labor Statistics, or the equivalent Canadian index as published by Statistics Canada, as applicable. The adjusted rates shall be the rates currently in use, plus or minus the computed adjustment.

B. Overhead - Percentage () is

(1) Operator shall charge the Joint Account at the following rates:

(a) Development

_____ Percent (%) of the cost of Development of the Joint Property exclusive of costs provided under Paragraph 8 of Section II and all salvage credits.

(b) Operating

_____ Percent (%) of the cost of Operating the Joint Property exclusive of costs provided under Paragraphs 1 and 9 of Section II, all salvage credits, the value of injected substances purchased for secondary recovery and all taxes and assessments which are levied, assessed and paid upon the mineral interest in and to the Joint Property.

(2) Application of Overhead - Percentage Basis shall be as follows:

For the purpose of determining charges on a percentage basis under Paragraph 1B of this Section III, development shall include all costs in connection with drilling, re-drilling, deepening or any remedial operations on any or all wells involving the use of drilling crew and equipment; also, preliminary expenditures necessary in preparation for drilling and expenditures incurred in abandoning when the well is not completed as a producer, and original cost of construction or installation of fixed assets, the expansion of fixed assets and any other project clearly discernible as a fixed asset, except Major Construction as defined in Paragraph 2 of this Section III. All other costs shall be considered as Operating.

2. Overhead - Major Construction

To compensate Operator for overhead costs incurred in the construction and installation of fixed assets, the expansion of fixed assets, and any other project clearly discernible as a fixed asset required for the development and operation of the Joint Property, Operator shall either negotiate a rate prior to the beginning of construction, or shall charge the Joint Account for Overhead based on the following rates for any Major Construction project in excess of \$ 25,000 _____:

A. 6 % of total costs if such costs are more than \$ 25,000 _____ but less than \$ 100,000 _____; plus

B. 6 % of total costs in excess of \$ 100,000 _____ but less than \$1,000,000; plus

C. 5 % of total costs in excess of \$1,000,000.

Total cost shall mean the gross cost of any one project. For the purpose of this paragraph, the component parts of a single project shall not be treated separately and the cost of drilling and workover wells shall be excluded.

3. Amendment of Rates

The Overhead rates provided for in this Section III may be amended from time to time only by mutual agreement between the Parties hereto if, in practice, the rates are found to be insufficient or excessive.

IV. PRICING OF JOINT ACCOUNT MATERIAL PURCHASES, TRANSFERS AND DISPOSITIONS

Operator is responsible for Joint Account Material and shall make proper and timely charges and credits for all material movements affecting the Joint Property. Operator shall provide all Material for use on the Joint Property; however, at Operator's option, such Material may be supplied by the Non-Operator. Operator shall make timely disposition of idle and/or surplus Material, such disposal being made either through sale to Operator or Non-Operator, division in kind, or sale to outsiders. Operator may purchase, but shall be under no obligation to purchase, interest of Non-Operators in surplus condition A or B Material. The disposal of surplus Controllable Material not purchased by the Operator shall be agreed to by the Parties.

1. Purchases

Material purchased shall be charged at the price paid by Operator after deduction of all discounts received. In case of Material found to be defective or returned to vendor for any other reason, credit shall be passed to the Joint Account when adjustment has been received by the Operator.

2. Transfers and Dispositions

Material furnished to the Joint Property and Material transferred from the Joint Property or disposed of by the Operator, unless otherwise agreed to by the Parties, shall be priced on the following bases exclusive of cash discounts:

A. New Material (Condition A)

(1) Tubular goods, except line pipe, shall be priced at the current new price in effect on date of movement on a maximum carload or large load weight basis, regardless of quantity transferred, equalized to the lowest published price f.o.b. railway receiving point or recognized barge terminal nearest the Joint Property where such Material is normally available.

(2) Line Pipe

(a) Movement of less than 30,000 pounds shall be priced at the current new price, in effect at date of movement, as listed by a reliable supply store nearest the Joint Property where such Material is normally available.

(b) Movement of 30,000 pounds or more shall be priced under provisions of tubular goods pricing in Paragraph 2A (1) of this Section IV.

(3) Other Material shall be priced at the current new price, in effect at date of movement, as listed by a reliable supply store or f.o.b. railway receiving point nearest the Joint Property where such Material is normally available.

B. Good Used Material (Condition B)

Material in sound and serviceable condition and suitable for reuse without reconditioning:

(1) Material moved to the Joint Property

(a) At seventy-five percent (75%) of current new price, as determined by Paragraph 2A of this Section IV.

(2) Material moved from the Joint Property

(a) At seventy-five percent (75%) of current new price, as determined by Paragraph 2A of this Section IV, if Material was originally charged to the Joint Account as new Material, or

EXHIBIT "G"

ADDITIONAL INSURANCE PROVISIONS

Operator, during the term of this agreement, shall carry insurance for the benefit and at the expense of the parties hereto, as follows:

- (A) Workmen's Compensation Insurance as contemplated by the state in which operations will be conducted, and Employer's Liability Insurance with limits of not less than \$100,000.00 per employee.

- (B) Public Liability Insurance:
Bodily Injury - \$500,000.00 each occurrence.

- (C) Automobile Public Liability Insurance:
Bodily Injury - \$250,000.00 each person.
\$500,000.00 each occurrence.

Property Damage - \$100,000.00 each occurrence.

Except as authorized by this Exhibit "G", Operator shall not make any charge to the joint account for insurance premiums. Losses not covered by Operator's insurance (or by insurance required by this agreement to be carried for the benefit and at the expense of the parties hereto) shall be charged to the joint account.

EXHIBIT 5

CACTUS QUEEN UNIT
Township 21 South, Range 31 East, N.M.P.M.
Chaves County, New Mexico

I. Working Interest Owners: Statutory Unit

<u>Name</u>	<u>Percentage of Unit</u>
Yates Drilling Company	62.3626%
Estate of Martin Yates III	18.3225
Lillie M. Yates	18.3225
Richard Yates	.0863
Peyton Yates	.0863
Yates Employees '83 Ltd.	.7336
Marico Exploration	.0863
	<u>100.0000%</u>

II. Based on Tract Participation Formula

BEFORE EXAMINER STOGNER	
OIL CONSERVATION DIVISION	
YATES	EXHIBIT NO. <u>5</u>
CASE NO. <u>9809, 9810, 9823</u>	

EXHIBIT 5-A

CACTUS QUEEN UNIT
Township 21 South, Range 31 East, N.M.P.M.
Chaves County, New Mexico

I. Working Interest Owners: Voluntary Unit

<u>Name</u>	<u>Percentage of Unit</u>
Yates Drilling Company	63.3298%
Estate of Martin Yates III	18.3506
Lillie M. Yates	18.3506
	<u>100.0000%</u>

II. Based on Tract Participation Formula

PROPOSED	Apache 27	Apache 27	Burkitt	DeLuna	Doyal	Doyal	Doyal	Doyal	Doyal	Gallagher	Garner	Garner	ISE/NE	NW/NW	SW/SW	TOTALS			
NET REV., INTEREST	State #1	State #2	Federal	Federal	#1	#2	#3	#4	State #1	Federal	Federal	134-125-31	134-125-31	127-125-31	0	0	0	0	
PARTICIPATION			#3	#3					#7	#9	(GARNER)	(BURKITT)	(APACHE)						
COMPANY VS WELL																			
U.S.A	10.000000	10.000000	10.006268	10.009333	10.000000	10.000000	10.000000	10.000000	10.000000	10.010782	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.045554
State of NH	10.011640	10.003737	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.010782	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.026662
Williamson, Veda D.	10.000000	10.000000	10.000000	10.000000	10.003558	10.002595	10.000023	10.000422	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.006598
Doyal, Leo	10.000000	10.000000	10.000000	10.000000	10.003558	10.002595	10.000023	10.000422	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.006598
Doyal, Floyd V.	10.000000	10.000000	10.000000	10.000000	10.003558	10.002595	10.000023	10.000422	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.006598
Doyal, Louis C.	10.000000	10.000000	10.000000	10.000000	10.003558	10.002595	10.000023	10.000422	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.006598
Doyal, Clarence	10.000000	10.000000	10.000000	10.000000	10.003558	10.002595	10.000023	10.000422	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.006598
Doyal, Paul J.	10.000000	10.000000	10.000000	10.000000	10.003558	10.002595	10.000023	10.000422	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.006598
Penka, Ruth J.	10.000000	10.000000	10.000000	10.000000	10.003558	10.002595	10.000023	10.000422	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.006598
Yargus, Dorothy	10.000000	10.000000	10.000000	10.000000	10.003558	10.002595	10.000023	10.000422	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.000000	10.006598
TOTAL	10.011640	10.003737	10.006268	10.009333	10.029467	10.020760	10.000181	10.003376	10.010782	10.018268	10.010458	10.000420	10.000807	10.000503	10.000000	10.000000	10.000000	10.000000	10.125000

BEFORE EXAMINER STOGNER
OIL CONSERVATION DIVISION

YATES EXHIBIT NO. 6

CASE NO. 9809, 9810, 9823



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Roswell District Office
P.O. Box 1397
Roswell, New Mexico 88202-1397



IN REPLY
REFER TO

3180 (065)

NOV 27 1989

Yates Drilling Company
207 W. 4th. Street
Artesia, NM 88210

Re: Proposed Cactus Queen Unit
Chaves County, New Mexico

Gentlemen:

This office is in receipt of the information submitted by Yates Drilling Company in regards to the Proposed Cactus Queen Unit located in Chaves County, New Mexico. This proposed unit would include the following lands:

T. 12 S., R. 31 E., NMPM, Chaves County, NM
sec. 26, SW $\frac{1}{2}$ SW $\frac{1}{2}$;
sec. 27, SW $\frac{1}{2}$ SW $\frac{1}{2}$, E $\frac{1}{2}$ SW $\frac{1}{2}$, SE $\frac{1}{2}$;
sec. 34, N $\frac{1}{2}$ N $\frac{1}{2}$, SE $\frac{1}{2}$ NE $\frac{1}{2}$;
sec. 35, NW $\frac{1}{2}$ NW $\frac{1}{2}$.

The information has been reviewed and this office believes that the subject lands would be logical for the formation of a secondary unit. If you have any questions please contact Jerry Dutchover or the Branch of Fluid Minerals at (505) 622-9042.

Sincerely,

for Joe G. Lara
Assistant District Manager,
Minerals

BEFORE EXAMINER STOGNER	
OIL CONSERVATION DIVISION	
YATES	EXHIBIT NO. 7
CASE NO. 9809, 9810, 9823	

BEFORE THE

OIL CONSERVATION DIVISION

NEW MEXICO DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES

IN THE MATTER OF THE APPLICATION
OF YATES DRILLING COMPANY FOR
STATUTORY UNITIZATION,
CHAVES COUNTY, NEW MEXICO.

CASE NO. 9809

IN THE MATTER OF THE APPLICATION
OF YATES DRILLING COMPANY FOR
A WATERFLOOD PROJECT,
CHAVES COUNTY, NEW MEXICO.

CASE NO. 9810

IN THE MATTER OF THE APPLICATION
OF YATES DRILLING COMPANY FOR
A UNIT AGREEMENT,
CHAVES COUNTY, NEW MEXICO.

CASE NO. 9823

AFFIDAVIT

STATE OF NEW MEXICO)
)ss.
COUNTY OF SANTA FE)

BEFORE EXAMINER STOGNER	
OIL CONSERVATION DIVISION	
YATES	EXHIBIT NO. 8
CASE NO. 9809, 9810, 9823	

WILLIAM F. CARR, attorney in fact and authorized representative of Yates Drilling Company, the Applicant herein, being first duly sworn, upon oath, states that the notice provisions of Rule 1207 of the New Mexico Oil Conservation Division have been complied with, that Applicant has caused to be conducted a good faith diligent effort to find the correct addresses of all interested persons entitled to receive notice in the above-

referenced cases as shown by Exhibit "A" attached hereto, and that pursuant to Rule 1207, notice has been given at the correct addresses provided by such rule.


WILLIAM F. CARR

SUBSCRIBED AND SWORN to before me this 28th day of November, 1989.


Notary Public

My Commission Expires:

January 7, 1991

EXHIBIT A

Mr. Raymond Spears
307 N. 7th Street
Lovington, New Mexico 88260

Enserch Exploration, Inc.
6 Desta Drive, Suite 5250
Midland, Texas 79705
Attn: Steve Wright

Reading & Bates Petroleum Company
2412 N. Grandview, Suite 201
Odessa, Texas 79761
Attn: Don Kipgen

Rich Partnership
Post Office Box 3402
Casper, Wyoming 82602
Attn: Ken Snyder

Dalport Oil Corporation
3471 Interfirst One
Dallas, Texas 75202

C. R. Gallagher, Jr.
1005 Texas Commerce Bank
1208 - 14th Street
Lubbock, Texas 79401

Robin C. Herndon, III
c/o Robin C. Herndon, Jr.
Post Office Box 2031
Mobile, Alabama 36601

Floyd V. Doyal
919 E. McGaffey
Roswell, New Mexico 88201

Paul J. Doyal
Post Office Box 2877
Roswell, New Mexico 88201

Mrs. J. D. Spears
Box 1017
Carlsbad, New Mexico 88220

Phillips Petroleum Company
4001 Penbrook
Odessa, Texas 79762
Attn: Frank Hulse

Burk Royalty
Post Office Box BRC
Wichita Falls, Texas 76307

Great Western Drilling Company
Box 1659
Midland, Texas 79702
Attn: Pat L. Shannahan

E. S. Mayer, Jr.
c/o Reading & Bates Petroleum Co.
2412 N. Grandview, Suite 201
Odessa, Texas 79761
Attn: Don Kipgen

Gregory J. Gallagher
8550 Kathy Freeway, Suite 208
Houston, Texas 77024

Yates Drilling Company
105 South Fourth Street
Artesia, New Mexico 88210
Attn: Toby Rhodes

Clarence Doyal
308 S. Kansas
Roswell, New Mexico 88201

F. G. Breckenridge
Post Office Drawer 4667
Midland, Texas 79704

Etoile M. Bennett
c/o F.G. Breckenridge
Post Office Drawer 3000
Midland, Texas 79702

G & P Exploration, Inc.
4800 San Felipe, Suite 620
Houston, Texas 77056
Attn: John W.T. Mediarly

Mary B. Gallagher
1005 Texas Commerce Bank Bldg.
1208 - 14th Street
Lubbock, Texas 79401

R.F. Partnership, Ltd.
Post Office Box 243
Wheat Ridge, Colorado 80034

Raymond Stanley Herndon
c/o Robin C. Herndon, Jr.
Post Office Box 1283
Mobile, Alabama 36601

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Natalie G. Pope
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Los Angeles, California 90024

Veronica Herndon
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Mobile, Alabama 36601

Frances Herndon
Post Office Box 1283
Mobile, Alabama 36601

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Lubbock, Texas 79407

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Bakersfield, California 93384

C. E. Strange
Post Office Box 6438
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1322 Marc Anthony Drive
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Charles Bernard Gallagher
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Winnetka, Illinois 60093

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Mobile, Alabama 36601

Mary Herndon Ray
Post Office Box 1283
Mobile, Alabama 36601

Peter G. Herndon
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Mobile, Alabama 36601

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4417 Tracy
Meraux, Louisiana 70075

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Houston, Texas 77024

Marguerite Gallagher Price
8550 Katy Freeway, Suite 208
Houston, Texas 77024

Gregory Charles Gallagher
8550 Katy Freeway, Suite 208
Houston, Texas 77024

Delphine Pope Keller
9330 NE Schuyler
Portland, Oregon 97220

Mary Knieriem Taylor
4535 Miller Oak Drive
Auburn, California 95603

Veda D. Williamson
c/o United New Mexico Bank
Post Office Box 1977
Roswell, New Mexico 88201

Louis Doyal
810 Meadow Place
Roswell, New Mexico 88201

Ruth J. Penka
c/o James T. Hill, Attorney
Post Office Box 421
Durham, North Carolina 27702

Natalie Pope
8550 Katy Freeway, Suite 208
Houston, Texas 77024

Stephen Lawrence Knieriem
8550 Katy Freeway, Suite 208
Houston, Texas 77024

Michael J. Gallagher
8550 Katy Freeway, Suite 208
Houston, Texas 77024

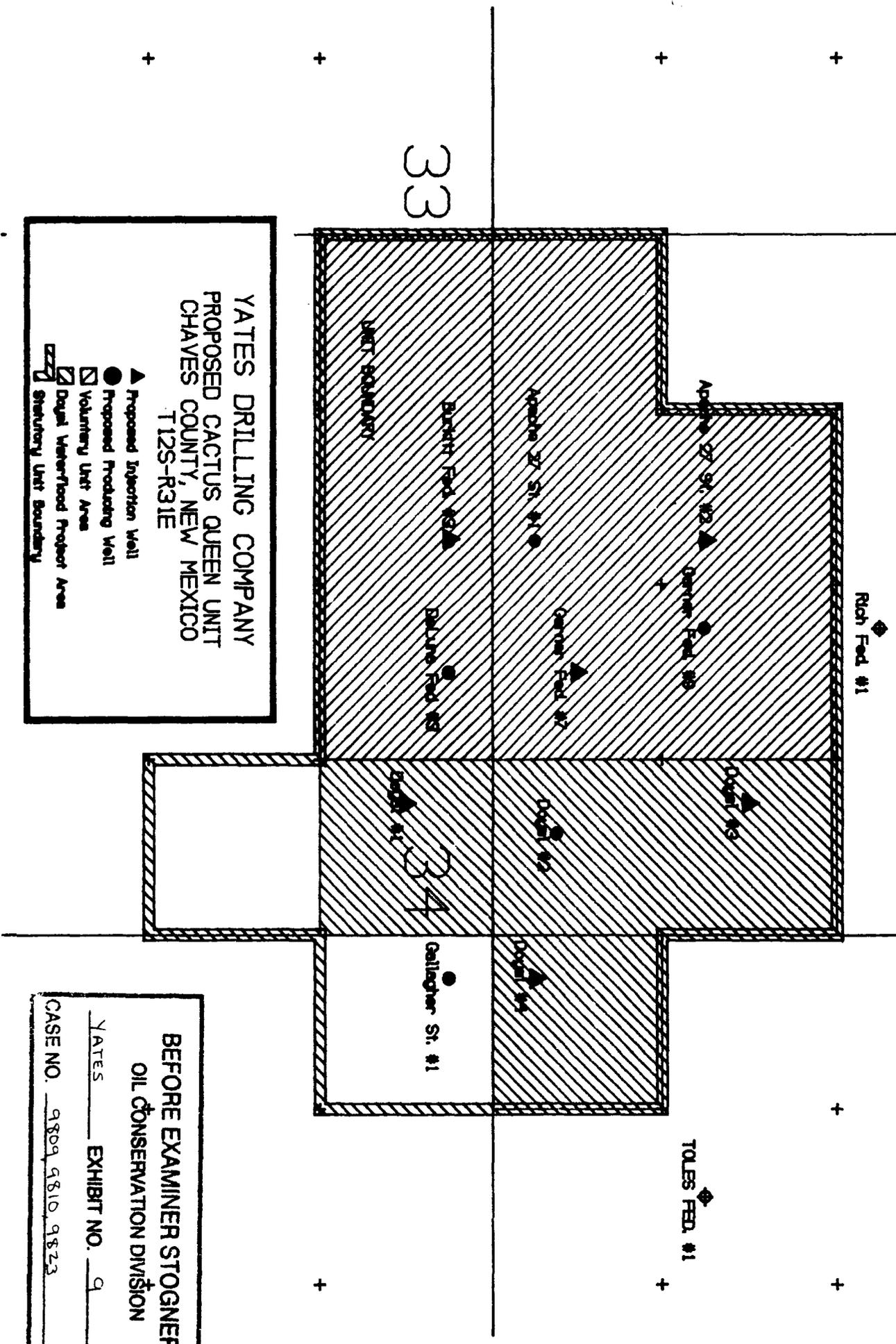
Christopher W. Knieriem
Post Office Box 5404
Petaleuma, California 94953

Kathleen Gallagher Cooper
Post Office Box 814
Vacaville, California 95688

Dorothy Vargas
2055 Dalis
Concord, California 94520

Leo Doyal
Box 183
Elida, New Mexico 88116

NMOCDC CASE NO. _____ EXHIBIT NO. 9
 Application of Yates Drilling Company
 For a Secondary Recovery Project
 (Proposed Cactus Queen Unit)
 Chaves County, New Mexico



YATES DRILLING COMPANY
PROPOSED CACTUS QUEEN UNIT
CHAVES COUNTY, NEW MEXICO
T12S-R31E

Proposed Injection Well
 Proposed Producing Well
 Voluntary Unit Area
 Douglas Water-Flood Project Area
 Structural Unit Boundary

BEFORE EXAMINER STOGNER
OIL CONSERVATION DIVISION

YATES _____ EXHIBIT NO. 9

CASE NO. 9809 9810 9823

**YATES DRILLING COMPANY
 STATUTORY UNIT vs VOLUNTARY UNIT & DOYAL PROJECT
 PREDICTED SECONDARY RECOVERY**

YEAR	STATUTORY UNIT SECONDARY RECOVERY	VOLUNTARY UNIT SECONDARY RECOVERY	DOYAL PROJECT SECONDARY RECOVERY	GALLAGHER ST. #1 SECONDARY RECOVERY	TOTAL
1990	5700	2722	1635	996	5353
1991	46000	21970	13193	8041	43203
1992	72000	34387	20650	12586	67622
1993	50984	24350	14622	8912	47884
1994	27715	13237	7949	4845	26030
1995	17253	8240	4948	3016	16204
1996	11704	5590	3357	2046	10992
1997	8423	4023	1299	1472	6794
1998	6333	0	0	590	590
1999	4924	0	0	0	0
TOTALS	251036	114518	67652	42503	224674

BEFORE EXAMINER STOGNER
OIL CONSERVATION DIVISION
 YATES _____ EXHIBIT NO. 10
 CASE NO. 9809, 9810, 9823

NMOCD CASE NO. _____ EXHIBIT NO. 10
 Application of Yates Drilling Company
 For a Secondary Recovery Project
 (Proposed Cactus Queen Unit)
 Chaves County, New Mexico

**PREDICTED FUTURE RECOVERY
REMAINING PRIMARY AND/OR SECONDARY
FROM
PROPOSED CACTUS QUEEN UNIT AREA**

-
- CASE 1 No secondary recovery program of any kind is initiated. All wells are allowed to produce until uneconomic. No additional expenses are encountered other than normal LOE.
- CASE 2 Two separate waterflood projects are initiated; one voluntary unit and one project on the Doyal lease. No additional wells are drilled in either project. Each project and any offsetting wells are allowed to operate until uneconomic.
- CASE 3 The entire reservoir is unitized under statutory unitization and a single waterflood project is initiated. One additional well is drilled.
-

	INITIAL EXPENSE	BARRLES PREDICTED OIL PROD.	GROSS VALUE @ \$18/BBL	OIL LOST COMPARED TO CASE 3	GROSS \$ VALUE OIL LOST
CASE 1	\$0	5,000	\$90,000	245,000	\$4,410,000
CASE 2	\$474,000	225,000	\$4,050,000	25,000	\$450,000
Case 3	\$509,000	250,000	\$4,500,000	0	\$0

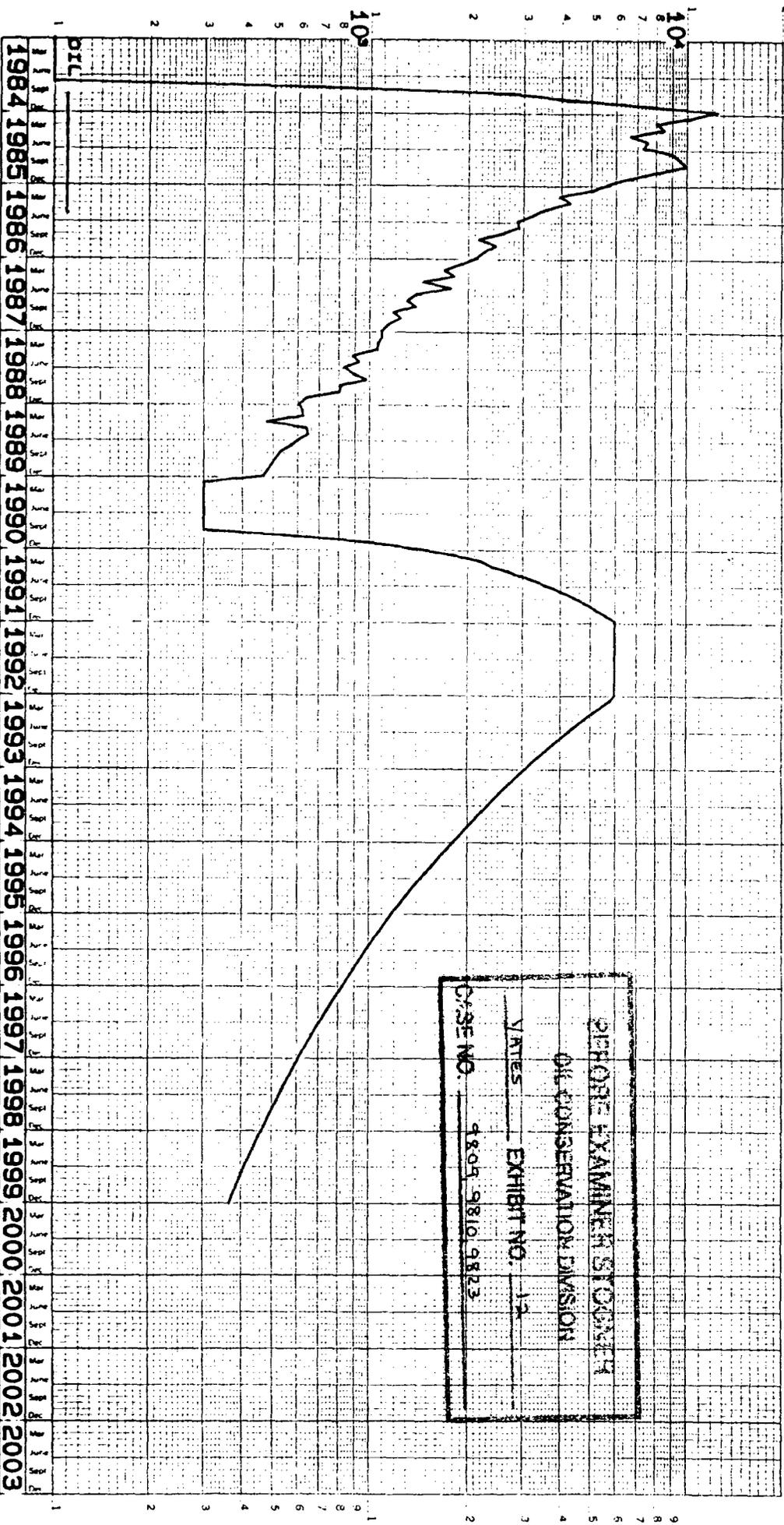
NMOCD CASE NO. _____ EXHIBIT NO. 11
 Application of Yates Drilling Company
 For a Secondary Recovery Project
 (Proposed Cactus Queen Unit)
 Chaves County, New Mexico

BEFORE EXAMINER STOGNER
 OIL CONSERVATION DIVISION
 YATES _____ EXHIBIT NO. 11
 CASE NO. 9809, 9810, 9823

OIL
Cum: 447333.

NMCCD CASE NO. _____ EXHIBIT NO. 12
Application of Yates Drilling Company
For a Secondary Recovery Project
(Proposed Cactus Queen Unit)
Chaves County, New Mexico

Operator YATES DRILLING CO.
Lease - Well CACTUS QUEEN UNIT
Zone QUEEN
Field SE CHAVES QUEEN ASSOC. E
County/State CHAVES/NM

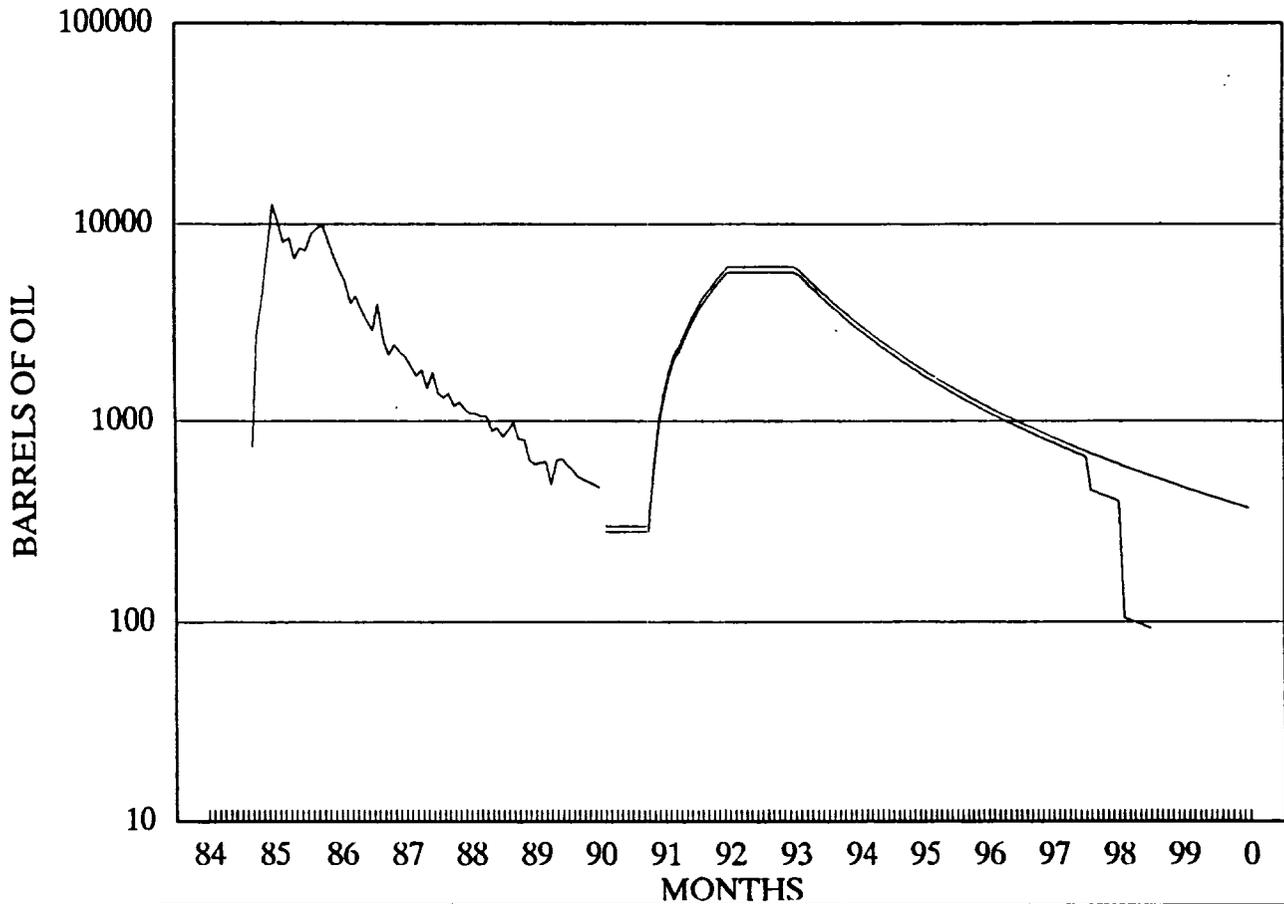


REPORT EXAMINER SIGNATURE
OIL CONSERVATION DIVISION
YATES EXHIBIT NO. 12
CASE NO. 9809 9810 9823

PROJECTED SECONDARY RECOVERY

YATES DRILLING COMPANY

STATUTORY UNIT vs VOLUNTARY UNIT & DOYAL WF



PRIMARY PRODUCTION - The single curves to the left of the graph is a plot of primary production from all of the wells that are part of the proposed Cactus Queen Statutory Unit.

SECONDARY PRODUCTION (STATUTORY UNIT) - The upper smooth curve on the right side of the graph is a plot of the predicted recovery from the proposed statutory unit.

SECONDARY PRODUCTION (VOLUNTARY UNIT, DOYAL WATERFLOOD & GALLAGHER ST. #1) - The lower smooth curve on the right side of the graph is a plot of the combined predicted recovery from the proposed voluntary unit, Doyal waterflood project and the Gallagher St. #1. All three of these properties are within the boundary of the proposed statutory unit. The gap between the two secondary curves is caused by the absence of a newly drilled well in the voluntary unit scenario. The second scenario also shows a reduction in recovery from mid 1987 on, due to the higher expenses associated with operating two separate waterflood projects and a single well.

**YATES DRILLING COMPANY
PROPOSED CACTUS QUEEN UNIT
CHAVES COUNTY, NEW MEXICO**

NMOCD FORM C-108

BEFORE EXAMINER STOGNER	
OIL CONSERVATION DIVISION	
<u>YATES</u>	<u>EXHIBIT NO. 14</u>
<u>CASE NO. 9809, 9810, 9823</u>	

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APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: Secondary Recovery Pressure Maintenance Disposal Storage
Application qualifies for administrative approval? yes no
- II. Operator: Yates Drilling Company
Address: 105 South 4th Street, Artesia, New Mexico 88210
Contact party: Tobin L. Rhodes Phone: (505) 748-1471
- III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? yes no
If yes, give the Division order number authorizing the project _____.
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)
- XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification
- I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Tobin L. Rhodes Title Petroleum EngineerSignature: Tobin L. Rhodes Date: 10-13-89

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal.

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

OIL CONSERVATION DIVISION
FORM C-108 (Supplement)

Application of Yates Drilling Company
For a Secondary Recovery Project
(Proposed Cactus Queen Unit)
Chaves County, New Mexico

I. Purpose:

Application is made for authorization to inject water into the Queen formation underlying the boundaries of the proposed Cactus Queen Unit. The proposed unit consists of 560 acres, more or less, of Federal, State, and Fee lands in Unit M (SW/4 SW/4) of Section 26, Units I, J, K, M, N, O, P, (SE/4, E/2 SW/4, SW/4 SW/4) of Section 27, Units A, B, C, D, H, (N/2 NE/4, N/2 NW/4, SE/4 NE/4) of Section 34 and Unit D (NW/4 NW/4) of Section 35, Township 12 South, Range 31 East, Chaves County New Mexico. This project would be classified as a secondary recovery project with the objective of recovering hydrocarbons that will not and can not be recovered by primary means.

Many wells in the proposed unit area are primary depleted or are very near primary depletion. Our studies show that the injection of water into selected wells will result in the recovery of oil in economic quantities not otherwise recoverable. This project should provide economic benefits to all parties holding any type of interest in the unit acreage.

II. Operator:

Yates Drilling Company
105 South Fourth Street
Artesia, New Mexico 88210

Phone Number: (505) 748-1471

III. Injection Well Data:

A well data sheet is attached for each of the six wells proposed for water injection. Each injection well data sheet includes a downhole schematic of how each individual well will be configured if this application is approved.

IV. Existing Project:

The proposed project is not an expansion of an existing project and will be a totally new project.

V. Ownership:

A lease ownership map is attached which identifies all wells and lease ownership within two miles of any of the six proposed injection wells. A map is also attached on which the area of review has been identified by drawing a one-half mile circle around each injection well.

VI. Well Data:

There are presently seventeen wells including proposed injection wells that fall within the boundaries of the proposed unit or within the area of review. Two of these wells have been plugged and abandoned, one well is temporarily abandoned, and the remaining fourteen wells are active pumping oil wells producing from the Queen formation. Available data for each of the wells is included in the attached well data sheets. Additionally a downhole schematic has been drawn depicting each of the two plugged and abandoned wells.

Production figures and decline curves are attached for each well within the proposed unit that has produced from the Queen formation.

VII. Project Data:

1. The proposed daily average water injection rate is approximately 200 barrels per day for each of the six proposed water injection wells. Total water injection for the unit would be 1200 barrels per day. The maximum injection rate for any individual well will be based on fracture pressure as determined by step-rate pressure tests to be conducted on each injection well.

2. Produced water will be stored in covered steel storage tank(s) and in open top fiberglass tanks making the produced water system an open system. Any fresh water will be stored in a covered steel tank. Produced oil will immediately be separated from produced water.

The oil will be stored in a steel covered production tank until sold.

3. Initially the injection wells may take water on a vacuum, but as the reservoir fills a positive surface injection pressure will be required to inject water. The maximum injection pressure will also be determined by proposed step-rate pressure tests. At no time prior to the step-rate tests will the injection pressure exceed a pressure limitation of 0.2 PSIG per foot of depth to the top of the injection interval.

4. The source of injection fluid will be produced water from the producing wells within the unit and fresh water from the Ogollala aquifer in the area. No commitment has been made but commercial sources of fresh water are available in the area.

5. No water compatibility problems are expected as Ogollala water has been successfully injected into the Queen formation, throughout the Caprock Queen Field, without excessive problems. Compatibility tests have been run commingling the produced water and fresh water and no adverse problems were observed.

VIII. Geologic Data:

The Proposed Cactus Queen Unit produces from the upper sandstone member of the Queen formation, upper Guadalupian series, Permian system. The average producing depth in the field is approximately 2989 feet. The existing producing formation will be the interval into which water will be injected.

The productive/injection interval, as indicated from a whole core analysis on the DeLuna Federal #3 (330' FNL & 1980' FEL, 34-12s-31e) and sidewall core data from numerous wells, is fine grained, friable, gray, quartz sandstone. The grains are sub-angular to sub-rounded and well sorted. The cementing material is variously from anhydrite and dolomite. The exact depositional environment is unknown. Porosity and permeability are intergranular in nature. The sandstone is not naturally fractured.

The Cactus Queen Field is a stratigraphic trap. Cementation of the sandstone results in the loss of porosity and permeability, creating a barrier on all sides with the exception of the east. A tilted oil-water contact limits the production in that direction. The oil/water contact has been established at (+1440)

in the southeast end of the field and (+1446) at the northeast edge.

The primary underground source of fresh water in this area is the Ogollala formation of Tertiary age, the base of which is estimated to be 300 feet below the surface. This aquifer is protected behind the surface pipe and cement of all existing wells in the unit area. The Chinlee formation is also a fresh water aquifer which immediately underlies the Ogollala formation. The Base of the Chinlee is estimated to be approximately 500 feet below the surface in the unit area. The Chinlee is behind the production casing in all existing wells in the unit area.

IX. Stimulation Program:

Each of the currently producing wells has previously received a fracture treatment. The details of these treatments are outlined in the data sheet for each individual well. There are no plans to stimulate any of the existing wells which will be producing wells in this project.

The wells which will be injection wells may require a small clean-up acid treatment prior to injection. We plan to treat each of the proposed injection wells with 1000 to 2000 gallons of 15% hydrochloric acid. This treatment should insure that existing perforations are open and that each well will accept water or gas at the lowest possible pressure.

X. Well Logs:

Well logs for each of the existing wells in the proposed unit have previously been submitted to the Hobbs office of the NMOCD. Attached for zone identification purposes is a cross section containing portions of the logs from wells in the reservoir.

XI. Fresh Water:

The Office of the State Engineer in Roswell has a record of six wells within one mile of the proposed unit. The total depths of two of the wells are unknown, however all six wells are assumed to be producing from the Ogollala formation. Analysis

reports for water taken from three of the wells are attached.

XII. Injection Zone Isolation:

Available engineering and geologic data has been examined and no evidence of open faulting or any other hydrologic connection between the injection zone and any underground source of drinking water has been found.

XIII. Proof of Notice:

A listing of off-set leasehold operators within 1/2 mile of any injection wells and the surface owners that have received a copy of this application by certified mail is attached.

XIV. Certification:

I hereby certify that the information submitted with this application is true and correct to best of my knowledge and belief.

Tobin L. Rhodes



Tobin L. Rhodes

Petroleum Engineer

October 13, 1989

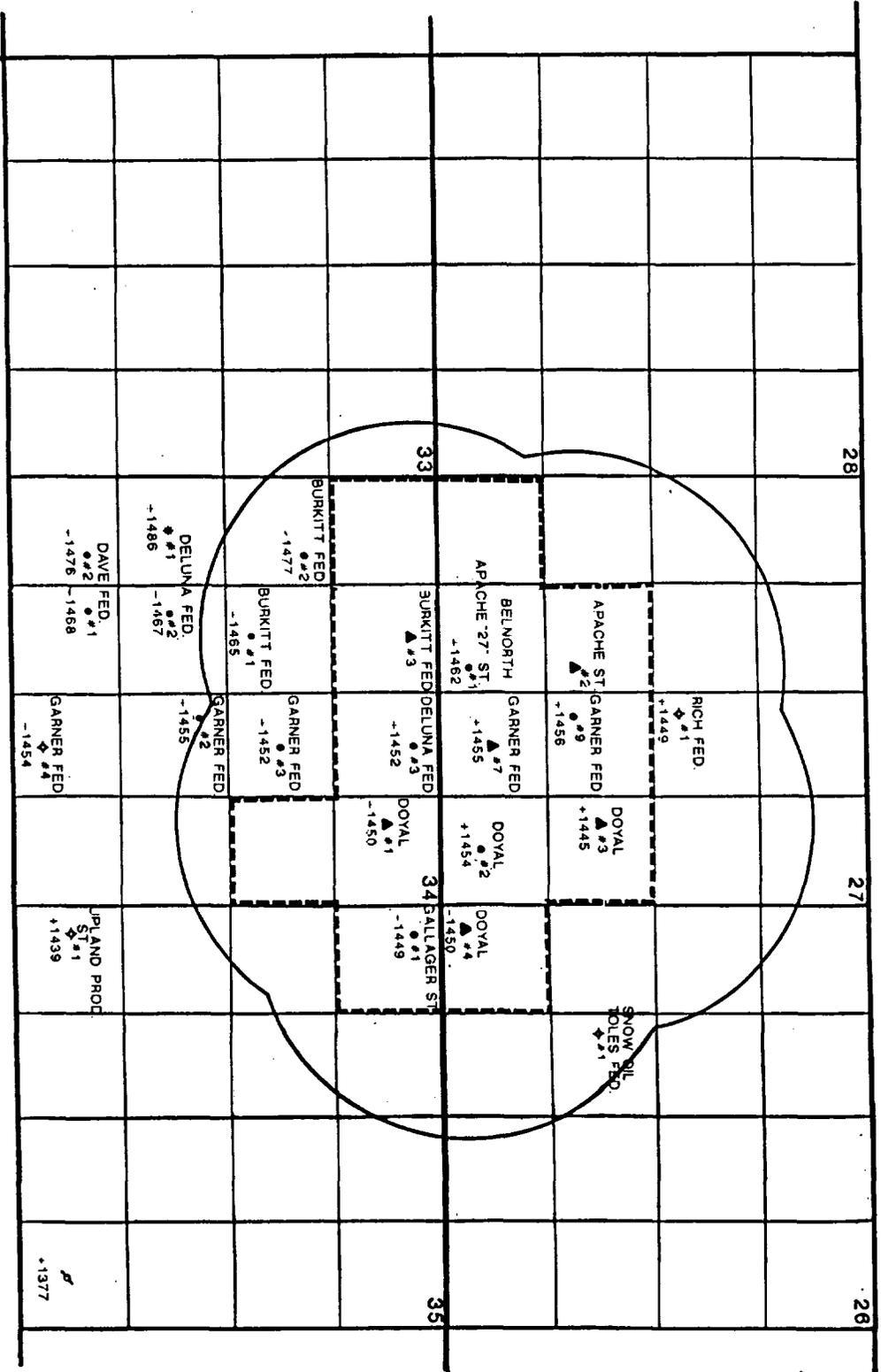
Range 31 E		Range 32 E	
Section	Owner/Notes	Section	Owner/Notes
1	Reading & Bates (to Oil form)	1	Reading & Bates (to Oil form)
2	Reading & Bates (to Oil form)	2	Reading & Bates (to Oil form)
3	Reading & Bates (to Oil form)	3	Reading & Bates (to Oil form)
4	Reading & Bates (to Oil form)	4	Reading & Bates (to Oil form)
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11	Reading & Bates (to Oil form)	11	Reading & Bates (to Oil form)
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17	Reading & Bates (to Oil form)	17	Reading & Bates (to Oil form)
18	Reading & Bates (to Oil form)	18	Reading & Bates (to Oil form)
19	Reading & Bates (to Oil form)	19	Reading & Bates (to Oil form)
20	Reading & Bates (to Oil form)	20	Reading & Bates (to Oil form)
21	Reading & Bates (to Oil form)	21	Reading & Bates (to Oil form)
22	Reading & Bates (to Oil form)	22	Reading & Bates (to Oil form)
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26	Reading & Bates (to Oil form)	26	Reading & Bates (to Oil form)
27	Reading & Bates (to Oil form)	27	Reading & Bates (to Oil form)
28	Reading & Bates (to Oil form)	28	Reading & Bates (to Oil form)
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38	Reading & Bates (to Oil form)	38	Reading & Bates (to Oil form)
39	Reading & Bates (to Oil form)	39	Reading & Bates (to Oil form)
40	Reading & Bates (to Oil form)	40	Reading & Bates (to Oil form)

TOWNSHIP 13 S TOWNSHIP 12 S

RANGE 31 E RANGE 32 E

YATES DRILLING COMPANY
PROPOSED CACTUS QUEEN UNIT
CHAVES CO., NEW MEXICO
LEASE OWNERSHIP MAP

R31E



} AREA OF REVIEW
 ▲ PROPOSED INJECTION WELL
 - - - - - UNIT OUTLINE

YATES DRILLING
 PROPOSED CACTUS QUEEN UNIT
 CHAVES CO., N.M.

T
S

INJECTION WELL DATA SHEET

OPERATOR: Yates Drilling Company LEASE: Apache "27" State

WELL NO.: 2 FOOTAGE: 1650' FSL-2310' FEL SEC: 27-T12s-R31e

TUBULAR DATA

SURFACE CASING

SIZE: 8-5/8" 24# CEMENTED WITH: _____ SX.
TOC: Surface FEET DETERMINED BY: Circulation
HOLE SIZE: 12-1/4" SETTING DEPTH: 454

INTERMEDIATE CASING

SIZE: None CEMENTED WITH: _____ SX.
TOC: _____ FEET DETERMINED BY: _____
HOLE SIZE: _____ SETTING DEPTH: _____

LONG STRING

SIZE: 4-1/2" CEMENTED WITH: _____ SX.
TOC: Surface FEET DETERMINED BY: Circulation
HOLE SIZE: 7-7/8" SETTING DEPTH: 3150'
TOTAL DEPTH: 3150'

INJECTION INTERVAL

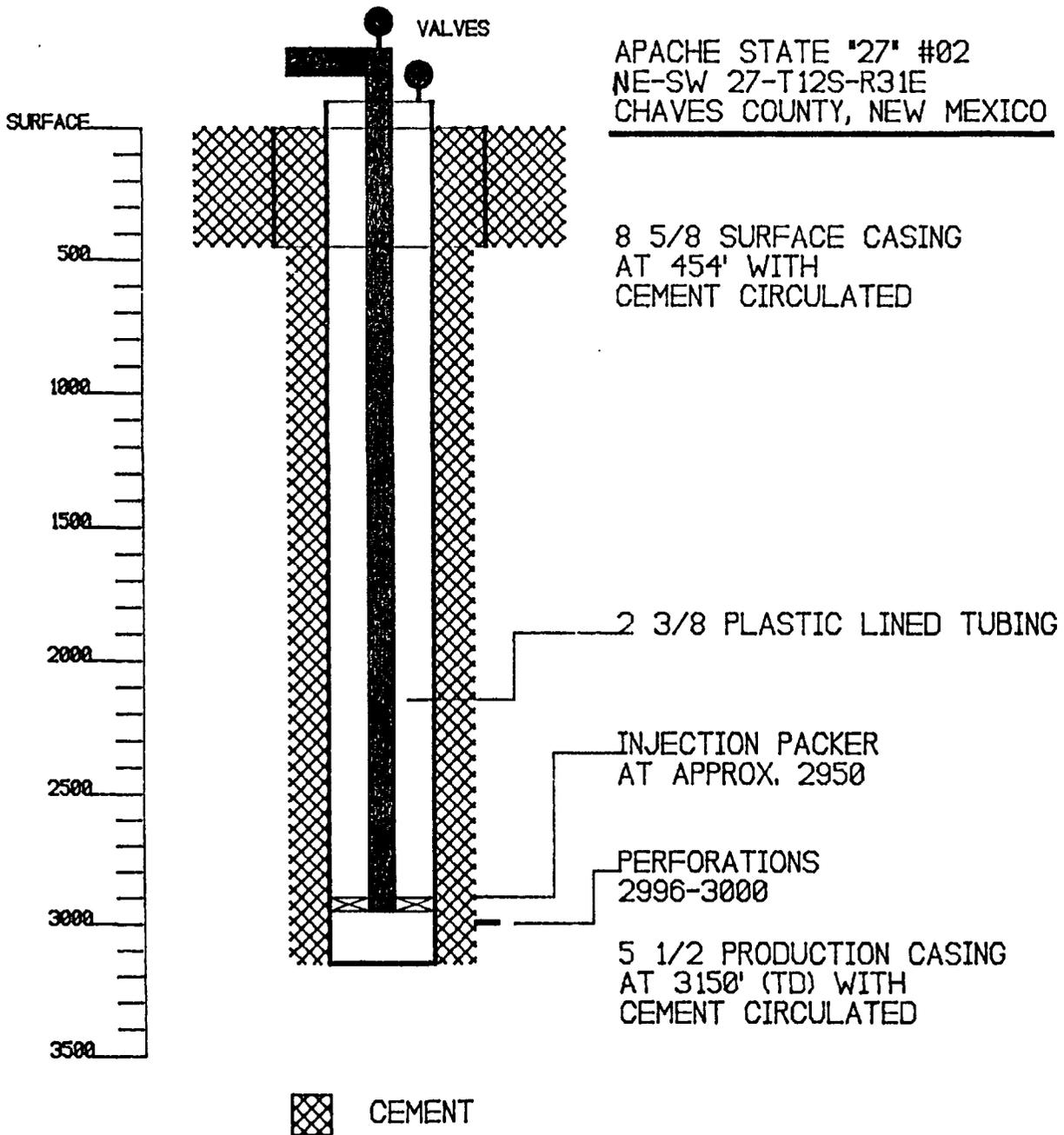
2996' FEET TO 3000' FEET - PERFORATED

TUBING

TUBING SIZE: 2-3/8" LINED WITH: Plastic SET IN A
Baker AD-1 PACKER AT: 2946' FEET

OTHER DATA

1. NAME OF INJECTION FORMATION: Queen
2. NAME OF FIELD OR POOL (IF APPLICABLE): SE Chaves Queen
3. IS THIS A NEW WELL DRILLED FOR INJECTION? No
IF NO, FOR WHAT PURPOSE WAS THE WELL ORIGINALLY DRILLED?
This well was drilled as a Queen producing well.
4. HAS WELL EVER BEEN PERFORATED IN ANY OTHER ZONE(S)? No
LIST ALL SUCH PERFORATED INTERVALS AND GIVE PLUGGING
DETAILS (SACKS OF CEMENT OR BRIDGE PLUG(S) USED): _____
5. GIVE DEPTH TO AND NAME OF ANY OVERLYING AND/OR
UNDERLYING OIL OR GAS ZONES (POOLS) IN THIS AREA: _____
None known.



INJECTION WELL DATA SHEET

OPERATOR: Yates Drilling Co. LEASE: Burkitt Federal

WELL NO.: 3 FOOTAGE: 330'FNL-2310'FWL SEC: 34-T12s-R31e

TUBULAR DATA

SURFACE CASING

SIZE: 8-5/8" 24# CEMENTED WITH: 270 SX.
TOC: Surface FEET DETERMINED BY: Circulation
HOLE SIZE: 12-1/4" SETTING DEPTH: 424

INTERMEDIATE CASING

SIZE: None CEMENTED WITH: _____ SX.
TOC: _____ FEET DETERMINED BY: _____
HOLE SIZE: _____ SETTING DEPTH: _____

LONG STRING

SIZE: 5-1/2" 14# CEMENTED WITH: 260 SX.
TOC: 1640' FEET DETERMINED BY: Temp. Survey
HOLE SIZE: 7-7/8" SETTING DEPTH: 3083'
TOTAL DEPTH: 3100'

INJECTION INTERVAL

2988' FEET TO 2992' FEET - PERFORATED

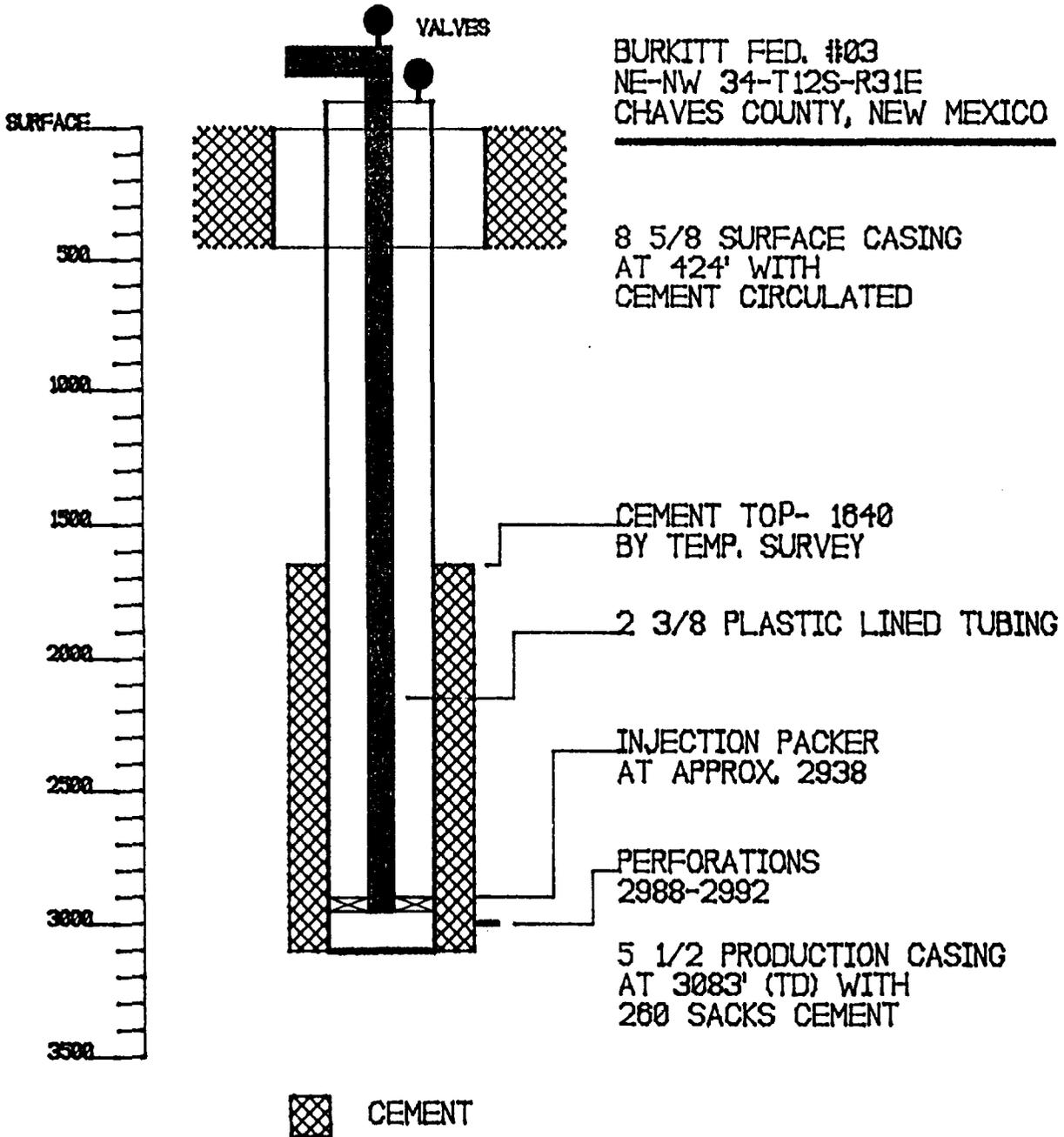
TUBING

TUBING SIZE: 2-3/8" LINED WITH: Elastic SET IN A
Baker AD-1 PACKER AT: 2938' FEET

OTHER DATA

1. NAME OF INJECTION FORMATION: Queen
2. NAME OF FIELD OR POOL (IF APPLICABLE): SE Chaves Queen
3. IS THIS A NEW WELL DRILLED FOR INJECTION? No
IF NO, FOR WHAT PURPOSE WAS THE WELL ORIGINALLY DRILLED?
This well was drilled as a Queen producing well.
4. HAS WELL EVER BEEN PERFORATED IN ANY OTHER ZONE(S)? No
LIST ALL SUCH PERFORATED INTERVALS AND GIVE PLUGGING
DETAILS (SACKS OF CEMENT OR BRIDGE PLUG(S) USED): _____

5. GIVE DEPTH TO AND NAME OF ANY OVERLYING AND/OR
UNDERLYING OIL OR GAS ZONES (POOLS) IN THIS AREA: _____
None known.



INJECTION WELL DATA SHEET

OPERATOR: Yates Drilling Co. LEASE: Doyal

WELL NO.: 1 FOOTAGE: 660' FNL- 990' FEL SEC: 34-T12s-R31e

TUBULAR DATA

SURFACE CASING

SIZE: 8-5/8" 24# CEMENTED WITH: 250 SX.
TOC: Surface FEET DETERMINED BY: Circulation
HOLE SIZE: 12-1/4" SETTING DEPTH: 409.46

INTERMEDIATE CASING

SIZE: None CEMENTED WITH: _____ SX.
TOC: _____ FEET DETERMINED BY: _____
HOLE SIZE: _____ SETTING DEPTH: _____

LONG STRING

SIZE: 5-1/2" 14# CEMENTED WITH: 250 SX.
TOC: 2200' FEET DETERMINED BY: Temp. Survey
HOLE SIZE: 7-7/8" SETTING DEPTH: 3100'
TOTAL DEPTH: 3100'

INJECTION INTERVAL

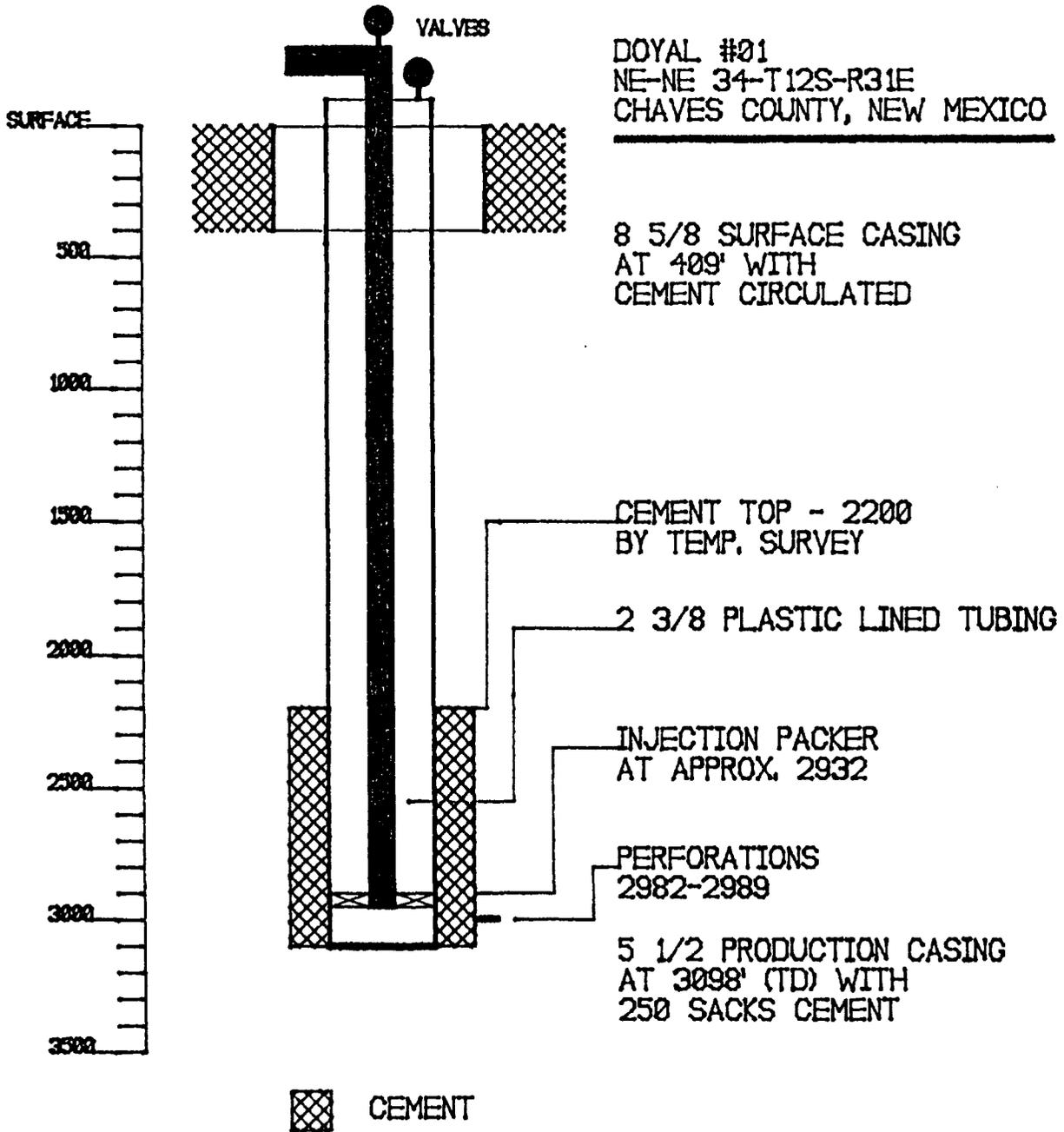
2982' FEET TO 2989' FEET - PERFORATED

TUBING

TUBING SIZE: 2-3/8" LINED WITH: Plastic SET IN A
Baker AD-1 PACKER AT: 2932' FEET

OTHER DATA

1. NAME OF INJECTION FORMATION: Queen
2. NAME OF FIELD OR POOL (IF APPLICABLE): SE Chaves Queen
3. IS THIS A NEW WELL DRILLED FOR INJECTION? No
IF NO, FOR WHAT PURPOSE WAS THE WELL ORIGINALLY DRILLED?
This well was drilled as a Queen producing well.
4. HAS WELL EVER BEEN PERFORATED IN ANY OTHER ZONE(S)? No
LIST ALL SUCH PERFORATED INTERVALS AND GIVE PLUGGING
DETAILS (SACKS OF CEMENT OR BRIDGE PLUG(S) USED): _____
5. GIVE DEPTH TO AND NAME OF ANY OVERLYING AND/OR
UNDERLYING OIL OR GAS ZONES (POOLS) IN THIS AREA: _____
None known.



INJECTION WELL DATA SHEET

OPERATOR: Yates Drilling Co. LEASE: Doyal

WELL NO.: 3 FOOTAGE: 1980'FSL- 990'FEL SEC: 27-T12s-R31e

TUBULAR DATA

SURFACE CASING

SIZE: 8-5/8" 24# CEMENTED WITH: 260 SX.
TOC: Surface FEET DETERMINED BY: Circulation
HOLE SIZE: 12-1/4" SETTING DEPTH: 409'

INTERMEDIATE CASING

SIZE: None CEMENTED WITH: _____ SX.
TOC: _____ FEET DETERMINED BY: _____
HOLE SIZE: _____ SETTING DEPTH: _____

LONG STRING

SIZE: 5-1/2" 14# CEMENTED WITH: 850 SX.
TOC: 630' FEET DETERMINED BY: Cement Bond Log
HOLE SIZE: 7-7/8" SETTING DEPTH: 3099'
TOTAL DEPTH: 3100'

INJECTION INTERVAL

2991' FEET TO 2997' FEET - PERFORATED

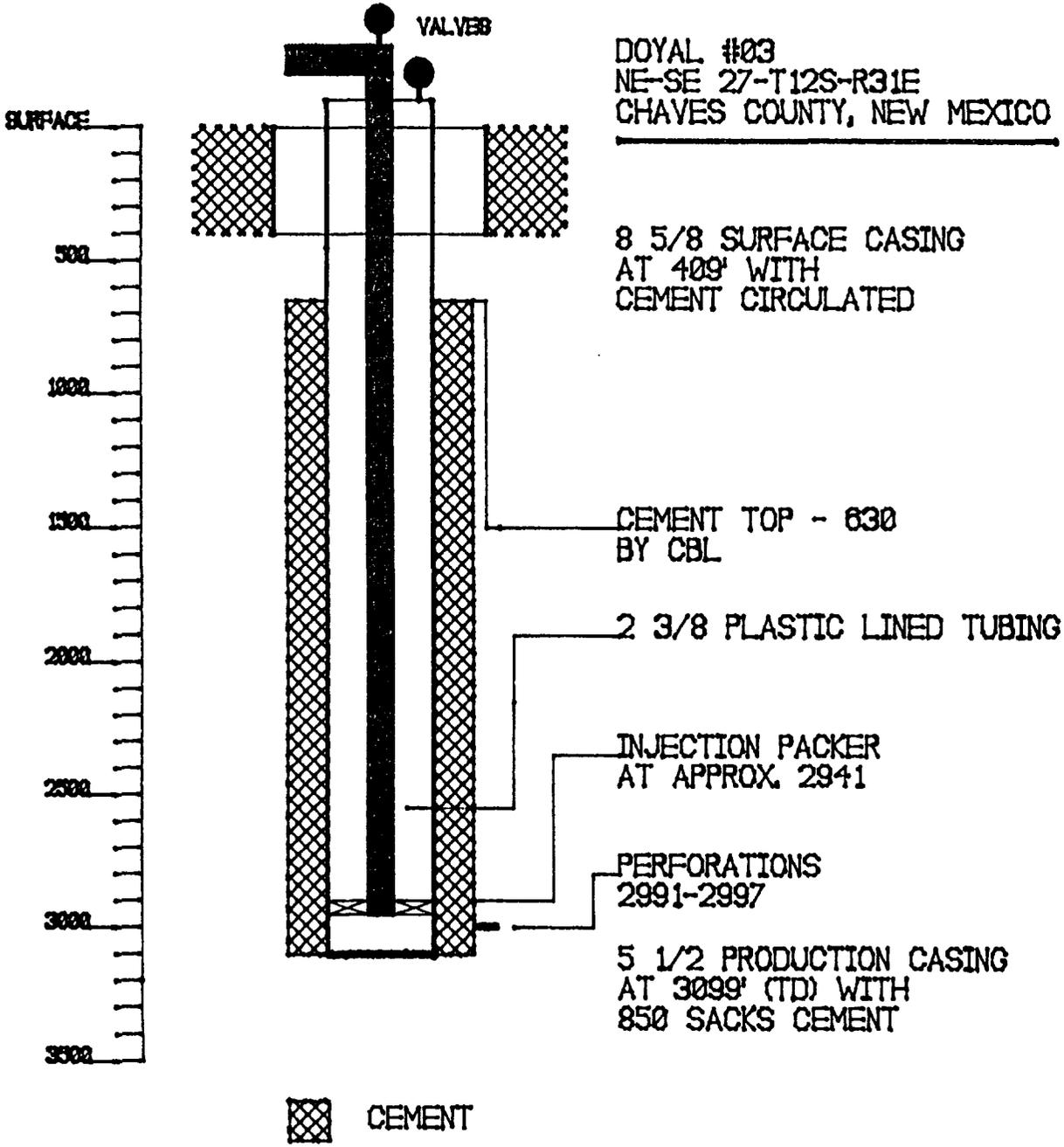
TUBING

TUBING SIZE: 2-3/8" LINED WITH: Plastic SET IN A
Baker AD-1 PACKER AT: 2941' FEET

OTHER DATA

1. NAME OF INJECTION FORMATION: Queen
2. NAME OF FIELD OR POOL (IF APPLICABLE): SE Chaves Queen
3. IS THIS A NEW WELL DRILLED FOR INJECTION? No
IF NO, FOR WHAT PURPOSE WAS THE WELL ORIGINALLY DRILLED?
This well was drilled as a Queen producing well.
This well is temp. aban. due to high water production
4. HAS WELL EVER BEEN PERFORATED IN ANY OTHER ZONE(S)? No
LIST ALL SUCH PERFORATED INTERVALS AND GIVE PLUGGING
DETAILS (SACKS OF CEMENT OR BRIDGE PLUG(S) USED): _____

5. GIVE DEPTH TO AND NAME OF ANY OVERLYING AND/OR
UNDERLYING OIL OR GAS ZONES (POOLS) IN THIS AREA: _____
None known.



INJECTION WELL DATA SHEET

OPERATOR: Yates Drilling Co. LEASE: Doyal

WELL NO.: 4 FOOTAGE: 330' FSL - 330' FWL SEC: 26-T12s-R31e

TUBULAR DATA

SURFACE CASING

SIZE: 8-5/8" 24# CEMENTED WITH: 250 SX.
TOC: Surface FEET DETERMINED BY: Circulation
HOLE SIZE: 12-1/4" SETTING DEPTH: 400

INTERMEDIATE CASING

SIZE: None CEMENTED WITH: _____ SX.
TOC: _____ FEET DETERMINED BY: _____
HOLE SIZE: _____ SETTING DEPTH: _____

LONG STRING

SIZE: 5-1/2" 14# CEMENTED WITH: 975 SX.
TOC: 310' FEET DETERMINED BY: Temp. Survey
HOLE SIZE: 7-7/8" SETTING DEPTH: 3088'
TOTAL DEPTH: 3100'

INJECTION INTERVAL

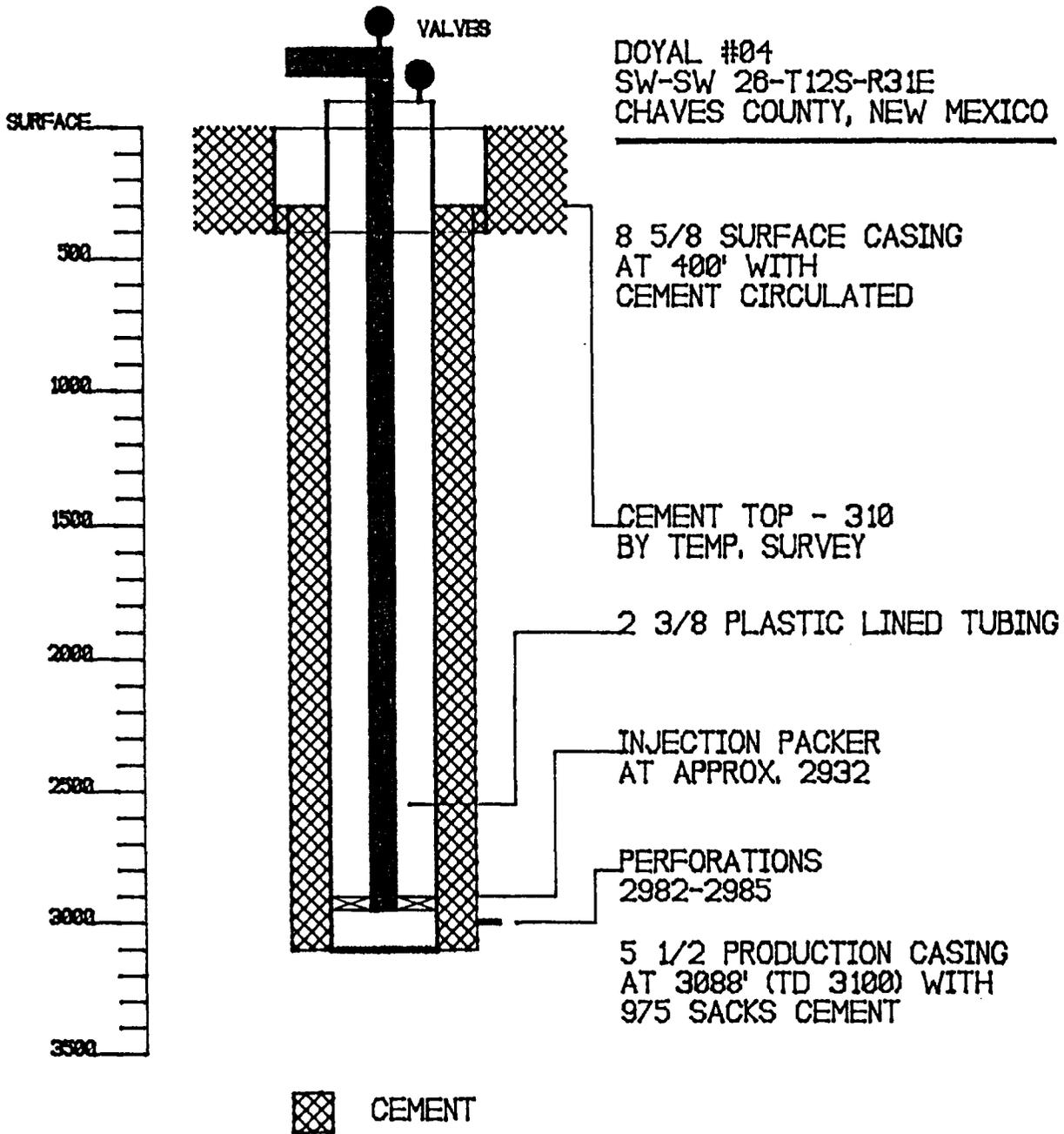
2982' FEET TO 2985' FEET - PERFORATED

TUBING

TUBING SIZE: 2-3/8" LINED WITH: Plastic SET IN A
Baker AD-1 PACKER AT: 2932' FEET

OTHER DATA

1. NAME OF INJECTION FORMATION: Queen
2. NAME OF FIELD OR POOL (IF APPLICABLE): SE Chaves Queen
3. IS THIS A NEW WELL DRILLED FOR INJECTION? No
IF NO, FOR WHAT PURPOSE WAS THE WELL ORIGINALLY DRILLED?
This well was drilled as a Queen producing well.
4. HAS WELL EVER BEEN PERFORATED IN ANY OTHER ZONE(S)? No
LIST ALL SUCH PERFORATED INTERVALS AND GIVE PLUGGING
DETAILS (SACKS OF CEMENT OR BRIDGE PLUG(S) USED): _____
5. GIVE DEPTH TO AND NAME OF ANY OVERLYING AND/OR
UNDERLYING OIL OR GAS ZONES (POOLS) IN THIS AREA: _____
None known.



INJECTION WELL DATA SHEET

OPERATOR: Yates Drilling Co. LEASE: Garner Federal

WELL NO.: 7 FOOTAGE: 660'FSL-1980'FEL SEC: 27-T12s-R31e

TUBULAR DATA

SURFACE CASING

SIZE: 8-5/8" 24# CEMENTED WITH: 250 SX.
TOC: Surface FEET DETERMINED BY: Circulation
HOLE SIZE: 12-1/4" SETTING DEPTH: 424

INTERMEDIATE CASING

SIZE: None CEMENTED WITH: _____ SX.
TOC: _____ FEET DETERMINED BY: _____
HOLE SIZE: _____ SETTING DEPTH: _____

LONG STRING

SIZE: 5-1/2" 14# CEMENTED WITH: 270 SX.
TOC: 1900' FEET DETERMINED BY: Temp. Survey
HOLE SIZE: 7-7/8" SETTING DEPTH: 3098.54'
TOTAL DEPTH: 3100'

INJECTION INTERVAL

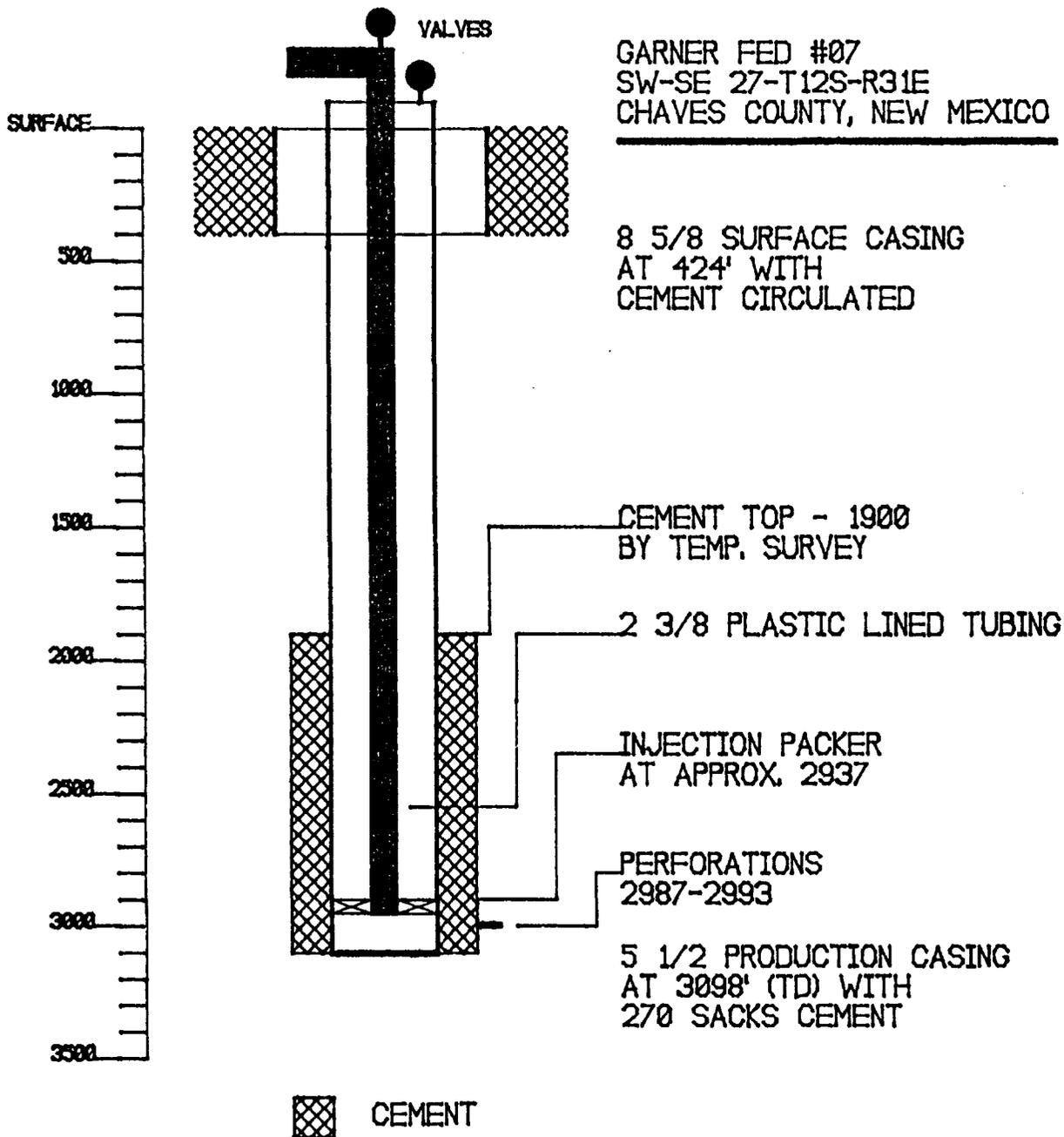
2987' FEET TO 2993' FEET - PERFORATED

TUBING

TUBING SIZE: 2-3/8" LINED WITH: Plastic SET IN A
Baker AD-1 PACKER AT: 2937' FEET

OTHER DATA

1. NAME OF INJECTION FORMATION: Queen
2. NAME OF FIELD OR POOL (IF APPLICABLE): SE Chaves Queen
3. IS THIS A NEW WELL DRILLED FOR INJECTION? No
IF NO, FOR WHAT PURPOSE WAS THE WELL ORIGINALLY DRILLED?
This well was drilled as a Queen producing well.
4. HAS WELL EVER BEEN PERFORATED IN ANY OTHER ZONE(S)? No
LIST ALL SUCH PERFORATED INTERVALS AND GIVE PLUGGING
DETAILS (SACKS OF CEMENT OR BRIDGE PLUG(S) USED): _____
5. GIVE DEPTH TO AND NAME OF ANY OVERLYING AND/OR
UNDERLYING OIL OR GAS ZONES (POOLS) IN THIS AREA: _____
None known.



WELL DATA SHEET

OPERATOR: Yates Drilling Company LEASE: Apache "27" State

WELL NO.: 1 FOOTAGE: 330' FSL-2310' FWL SEC: 27-T12s-R31e

TUBULAR DATA

SURFACE CASING

SIZE: 8-5/8" CEMENTED WITH: _____ SX.
TOC: Surface FEET DETERMINED BY: Circulation
HOLE SIZE: 12-1/4" SETTING DEPTH: 422'

INTERMEDIATE CASING

SIZE: None CEMENTED WITH: _____ SX.
TOC: _____ FEET DETERMINED BY: _____
HOLE SIZE: _____ SETTING DEPTH: _____

LONG STRING

SIZE: 4-1/2" CEMENTED WITH: _____ SX.
TOC: 210' FEET DETERMINED BY: _____
HOLE SIZE: 7-7/8" SETTING DEPTH: 3150'
TOTAL DEPTH: 3150'

PRODUCING INTERVAL

FORMATION: Queen POOL OR FIELD: SE Chaves Queen
SPUD DATE: 5-9-85 COMPLETION DATE: 6-27-85
PERFORATED: 2984 FEET TO 2991 FEET

STIMULATION: 100 gals. 15% HCl acid, 12000 gals. gel water
4000 gals. CO2, 10500# 20/40 sand, 10000# 12/20 sand

OTHER PERFORATED ZONES: None

CURRENT STATUS

WHAT IS CURRENT STATUS OF WELL? Pumping oil well

IF P&A, LIST PLUGGING DETAILS: _____

WELL DATA SHEET

OPERATOR: Yates Drilling Company LEASE: Apache "27" State

WELL NO.: 2 FOOTAGE: 1650' FSL-2310' FEL SEC: 27-T12s-R31e

TUBULAR DATA

SURFACE CASING

SIZE: 8-5/8" CEMENTED WITH: _____ SX.
TOC: Surface FEET DETERMINED BY: Circulation
HOLE SIZE: 12-1/4" SETTING DEPTH: 454'

INTERMEDIATE CASING

SIZE: None CEMENTED WITH: _____ SX.
TOC: _____ FEET DETERMINED BY: _____
HOLE SIZE: _____ SETTING DEPTH: _____

LONG STRING

SIZE: 4-1/2" CEMENTED WITH: _____ SX.
TOC: Surface FEET DETERMINED BY: Circulation
HOLE SIZE: 7-7/8" SETTING DEPTH: 3150'
TOTAL DEPTH: 3150'

PRODUCING INTERVAL

FORMATION: Queen POOL OR FIELD: SE Chaves Queen
SPUD DATE: 7-29-85 COMPLETION DATE: 8-23-85
PERFORATED: 2996 FEET TO 3000 FEET

STIMULATION: 850 gals. 15% HCl acid, 16000 gals. gel water
25% CO2, 10500# 20/40 sand, 10000# 12/20 sand

OTHER PERFORATED ZONES: None

CURRENT STATUS

WHAT IS CURRENT STATUS OF WELL? Pumping oil well

IF P&A, LIST PLUGGING DETAILS: _____

WELL DATA SHEET

OPERATOR: Yates Drilling Co. LEASE: Burkitt Federal

WELL NO.: 1 FOOTAGE: 2310' FNL-1980' FEL SEC: 34-T12s-R31e

TUBULAR DATA

SURFACE CASING

SIZE: 8-5/8" 24# CEMENTED WITH: 300 SX.
TOC: Surface FEET DETERMINED BY: Circulation
HOLE SIZE: 12-1/4" SETTING DEPTH: 450'

INTERMEDIATE CASING

SIZE: None CEMENTED WITH: _____ SX.
TOC: _____ FEET DETERMINED BY: _____
HOLE SIZE: _____ SETTING DEPTH: _____

LONG STRING

SIZE: 5-1/2" 14# CEMENTED WITH: 360 SX.
TOC: 1650' FEET DETERMINED BY: Temp. Survey
HOLE SIZE: 7-7/8" SETTING DEPTH: 3080'
TOTAL DEPTH: 3100'

PRODUCING INTERVAL

FORMATION: Queen POOL OR FIELD: SE Chaves Queen
SPUD DATE: 3-23-84 COMPLETION DATE: 4-7-84
PERFORATED: 2874 FEET TO 2882 FEET

STIMULATION: 750 gals. 15% HCl acid, 20000 gals. 30# gel,
25% CO2, 16500# 20/40 sand, 6000# 12/20 sand

OTHER PERFORATED ZONES: None

CURRENT STATUS

WHAT IS CURRENT STATUS OF WELL? Pumping oil well

IF P&A, LIST PLUGGING DETAILS: _____

WELL DATA SHEET

OPERATOR: Yates Drilling Co. LEASE: Burkitt Federal

WELL NO.: 2 FOOTAGE: 1650' FNL - 990' FWL SEC: 34-T12s-R31e

TUBULAR DATA

SURFACE CASING

SIZE: 8-5/8" 24# CEMENTED WITH: 375 SX.
TOC: Surface FEET DETERMINED BY: Circulation
HOLE SIZE: 12-1/4" SETTING DEPTH: 370'

INTERMEDIATE CASING

SIZE: None CEMENTED WITH: _____ SX.
TOC: _____ FEET DETERMINED BY: _____
HOLE SIZE: _____ SETTING DEPTH: _____

LONG STRING

SIZE: 5-1/2" 14# CEMENTED WITH: 250 SX.
TOC: 1678' FEET DETERMINED BY: Cement Bond Log
HOLE SIZE: 7-7/8" SETTING DEPTH: 2845'
TOTAL DEPTH: 2850'

PRODUCING INTERVAL

FORMATION: Queen POOL OR FIELD: SE Chaves Queen
SPUD DATE: 5-5-84 COMPLETION DATE: 7-10-84
PERFORATED: 2754 FEET TO 2760 FEET

STIMULATION: 750 gals. 15% HCl acid, 15000 gals. 30# gel,
5000 gals CO2, 14500# 20/40 sand, 2500# 12/20 sand

OTHER PERFORATED ZONES: None

CURRENT STATUS

WHAT IS CURRENT STATUS OF WELL? Pumping oil well

IF P&A, LIST PLUGGING DETAILS: _____

WELL DATA SHEET

OPERATOR: Yates Drilling Co. LEASE: Burkitt Federal

WELL NO.: 3 FOOTAGE: 330'FNL-2310'FWL SEC: 34-T12s-R31e

TUBULAR DATA

SURFACE CASING

SIZE: 8-5/8" 24# CEMENTED WITH: 270 SX.
TOC: Surface FEET DETERMINED BY: Circulation
HOLE SIZE: 12-1/4" SETTING DEPTH: 424'

INTERMEDIATE CASING

SIZE: None CEMENTED WITH: _____ SX.
TOC: _____ FEET DETERMINED BY: _____
HOLE SIZE: _____ SETTING DEPTH: _____

LONG STRING

SIZE: 5-1/2" 14# CEMENTED WITH: 260 SX.
TOC: 1640' FEET DETERMINED BY: Temp. Survey
HOLE SIZE: 7-7/8" SETTING DEPTH: 3083'
TOTAL DEPTH: 3100'

PRODUCING INTERVAL

FORMATION: Queen POOL OR FIELD: SE Chaves Queen
SPUD DATE: 8-9-85 COMPLETION DATE: 10-1-85
PERFORATED: 2988 FEET TO 2992 FEET

STIMULATION: 750 gals. 15% HCl acid, 15000 gals. gel water
24 tons CO2, 12000# 20/40 sand, 7000# 12/20 sand

OTHER PERFORATED ZONES: None

CURRENT STATUS

WHAT IS CURRENT STATUS OF WELL? Pumping oil well

IF P&A, LIST PLUGGING DETAILS: _____

WELL DATA SHEET

OPERATOR: Yates Drilling Co. LEASE: DeLuna Federal
WELL NO.: 3 FOOTAGE: 330'FNL-1980'FEL SEC: 34-T12s-R31e

TUBULAR DATA

SURFACE CASING

SIZE: 8-5/8" 24# CEMENTED WITH: 300 SX.
TOC: Surface FEET DETERMINED BY: Circulation
HOLE SIZE: 12-1/4" SETTING DEPTH: 433'

INTERMEDIATE CASING

SIZE: None CEMENTED WITH: _____ SX.
TOC: _____ FEET DETERMINED BY: _____
HOLE SIZE: _____ SETTING DEPTH: _____

LONG STRING

SIZE: 5-1/2" 14# CEMENTED WITH: 410 SX.
TOC: 1900' FEET DETERMINED BY: Cement Bond Log
HOLE SIZE: 7-7/8" SETTING DEPTH: 3094'
TOTAL DEPTH: 3100'

PRODUCING INTERVAL

FORMATION: Queen POOL OR FIELD: SE Chaves Queen
SPUD DATE: 2-11-85 COMPLETION DATE: 3-20-85
PERFORATED: 2987-1/2 FEET TO 2993 FEET

STIMULATION: 750 gals. 15% hcl, 15000 gals. 30# gel, 23-1/2
tons CO2, 13000# 20/40 sand, 10000# 10/20 sand

OTHER PERFORATED ZONES: None

CURRENT STATUS

WHAT IS CURRENT STATUS OF WELL? Pumping oil well

IF P&A, LIST PLUGGING DETAILS:

WELL DATA SHEET

OPERATOR: Yates Drilling Co. LEASE: Doyal

WELL NO.: 1 FOOTAGE: 660'FNL- 990'FEL SEC: 34-T12s-R31e

TUBULAR DATA

SURFACE CASING

SIZE: 8-5/8" 24# CEMENTED WITH: 250 SX.
TOC: Surface FEET DETERMINED BY: Circulation
HOLE SIZE: 12-1/4" SETTING DEPTH: 409.46'

INTERMEDIATE CASING

SIZE: None CEMENTED WITH: _____ SX.
TOC: _____ FEET DETERMINED BY: _____
HOLE SIZE: _____ SETTING DEPTH: _____

LONG STRING

SIZE: 5-1/2" CEMENTED WITH: 250 SX.
TOC: 2200' FEET DETERMINED BY: Temp. Survey
HOLE SIZE: 7-7/8" SETTING DEPTH: 3098'
TOTAL DEPTH: 3100'

PRODUCING INTERVAL

FORMATION: Queen POOL OR FIELD: SE Chaves Queen
SPUD DATE: 7-31-84 COMPLETION DATE: 8-25-84
PERFORATED: 2982' FEET TO 2989' FEET

STIMULATION: 750 gallons of 15 % HCl, 15000 gallons 30# gel
, 5000 SCF N2 per barrel, 10900# 20/40 sand, and 4200# 10/20
sand.

OTHER PERFORATED ZONES: None

CURRENT STATUS

WHAT IS CURRENT STATUS OF WELL? Pumping oil well.

IF P&A, LIST PLUGGING DETAILS: _____

WELL DATA SHEET

OPERATOR: Yates Drilling Co. LEASE: Doyal

WELL NO.: 2 FOOTAGE: 500'FSL- 760'FEL SEC: 27-T12s-R31e

TUBULAR DATA

SURFACE CASING

SIZE: 8-5/8" 24# CEMENTED WITH: 275 SX.
TOC: Surface FEET DETERMINED BY: Circulation
HOLE SIZE: 12-1/4" SETTING DEPTH: 411'

INTERMEDIATE CASING

SIZE: None CEMENTED WITH: _____ SX.
TOC: _____ FEET DETERMINED BY: _____
HOLE SIZE: _____ SETTING DEPTH: _____

LONG STRING

SIZE: 5-1/2" CEMENTED WITH: 250 SX.
TOC: 2200' FEET DETERMINED BY: Temp. Survey
HOLE SIZE: 7-7/8" SETTING DEPTH: 3098'
TOTAL DEPTH: 3100'

PRODUCING INTERVAL

FORMATION: Queen POOL OR FIELD: SE Chaves Queen
SPUD DATE: 9-7-84 COMPLETION DATE: 9-20-84
PERFORATED: 2981' FEET TO 2987' FEET

STIMULATION: 750 gallons of 15 % HCl, 15000 gallons 30# gel
, 25% CO2 12000# 20/40 sand, 10000# 10/20 sand.

OTHER PERFORATED ZONES: None

CURRENT STATUS

WHAT IS CURRENT STATUS OF WELL? Pumping oil well.

IF P&A, LIST PLUGGING DETAILS: _____

WELL DATA SHEET

OPERATOR: Yates Drilling Co. LEASE: Doyal

WELL NO.: 3 FOOTAGE: 1980' FSL- 990' FEL SEC: 27-T12s-R31e

TUBULAR DATA

SURFACE CASING

SIZE: 8-5/8" 24# CEMENTED WITH: 260 SX.
TOC: Surface FEET DETERMINED BY: Circulation
HOLE SIZE: 12-1/4" SETTING DEPTH: 409'

INTERMEDIATE CASING

SIZE: None CEMENTED WITH: _____ SX.
TOC: _____ FEET DETERMINED BY: _____
HOLE SIZE: _____ SETTING DEPTH: _____

LONG STRING

SIZE: 5-1/2" 14# CEMENTED WITH: 850 SX.
TOC: 630' FEET DETERMINED BY: Temp. Survey
HOLE SIZE: 7-7/8" SETTING DEPTH: 3099'
TOTAL DEPTH: 3100'

PRODUCING INTERVAL

FORMATION: Queen POOL OR FIELD: SE Chaves Queen
SPUD DATE: 9-20-84 COMPLETION DATE: NONE
PERFORATED: 2991' FEET TO 2997' FEET

STIMULATION: 750 gallons of 15 % HCl, 15000 gallons 30# gel
, 25% CO2 20000# 20/40 sand, 10000# 10/20 sand.

OTHER PERFORATED ZONES: None

CURRENT STATUS

WHAT IS CURRENT STATUS OF WELL? Temp. Abandoned

IF P&A, LIST PLUGGING DETAILS:

WELL DATA SHEET

OPERATOR: Yates Drilling Co. LEASE: Doyal

WELL NO.: 4 FOOTAGE: 330'ESL- 330'FWL SEC: 26-T12s-R31e

TUBULAR DATA

SURFACE CASING

SIZE: 8-5/8" 24# CEMENTED WITH: 250 SX.
TOC: Surface FEET DETERMINED BY: Circulation
HOLE SIZE: 12-1/4" SETTING DEPTH: 400'

INTERMEDIATE CASING

SIZE: None CEMENTED WITH: _____ SX.
TOC: _____ FEET DETERMINED BY: _____
HOLE SIZE: _____ SETTING DEPTH: _____

LONG STRING

SIZE: 5-1/2" 14# CEMENTED WITH: 975 SX.
TOC: 310' FEET DETERMINED BY: Temp. Survey
HOLE SIZE: 7-7/8" SETTING DEPTH: 3088'
TOTAL DEPTH: 3100'

PRODUCING INTERVAL

FORMATION: Queen POOL OR FIELD: SE Chaves Queen
SPUD DATE: 11-18-84 COMPLETION DATE: 1-24-87
PERFORATED: 2982' FEET TO 2985' FEET

STIMULATION: 750 gallons of 15 % HCl, 15000 gallons 30# gel
, 22 tons CO2, 12000# 20/40 sand, 8500 # 12/20 sand.

OTHER PERFORATED ZONES: None

CURRENT STATUS

WHAT IS CURRENT STATUS OF WELL? Pumping oil well

IF P&A, LIST PLUGGING DETAILS: _____

WELL DATA SHEET

OPERATOR: Yates Drilling Co. LEASE: Gallagher State
WELL NO.: 1 FOOTAGE: 330'FNL- 330'FWL SEC: 35-T12s-R31e

TUBULAR DATA

SURFACE CASING

SIZE: 8-5/8" 24# CEMENTED WITH: 250 SX.
TOC: Surface FEET DETERMINED BY: Circulation
HOLE SIZE: 12-1/4" SETTING DEPTH: 433'

INTERMEDIATE CASING

SIZE: None CEMENTED WITH: _____ SX.
TOC: _____ FEET DETERMINED BY: _____
HOLE SIZE: _____ SETTING DEPTH: _____

LONG STRING

SIZE: 5-1/2" 14# CEMENTED WITH: 900 SX.
TOC: Surface FEET DETERMINED BY: Circulation
HOLE SIZE: 7-7/8" SETTING DEPTH: 3084'
TOTAL DEPTH: 3100'

PRODUCING INTERVAL

FORMATION: Queen POOL OR FIELD: SE Chaves Queen
SPUD DATE: 10-28-84 COMPLETION DATE: 11-9-84
PERFORATED: 2982' FEET TO 2987' FEET

STIMULATION: 650 gallons of 15% HCl, 15000 gallons 30# gel
, 22 tons CO2, 12000# 20/40 sand, 10750# 10/20 sand.

OTHER PERFORATED ZONES: None

CURRENT STATUS

WHAT IS CURRENT STATUS OF WELL? Pumping oil well

IF P&A, LIST PLUGGING DETAILS: _____

WELL DATA SHEET

OPERATOR: Yates Drilling Co. LEASE: Garner Federal

WELL NO.: 2 FOOTAGE: 2310' FSL-2310' FEL SEC: 34-T12s-R31e

TUBULAR DATA

SURFACE CASING

SIZE: 8-5/8" 24# CEMENTED WITH: 250 SX.
TOC: Surface FEET DETERMINED BY: Circulation
HOLE SIZE: 12-1/4" SETTING DEPTH: 410'

INTERMEDIATE CASING

SIZE: None CEMENTED WITH: _____ SX.
TOC: _____ FEET DETERMINED BY: _____
HOLE SIZE: _____ SETTING DEPTH: _____

LONG STRING

SIZE: 5-1/2" 14# CEMENTED WITH: 550 SX.
TOC: 1992' FEET DETERMINED BY: Cement Bond Log
HOLE SIZE: 7-7/8" SETTING DEPTH: 3098'
TOTAL DEPTH: 3100'

PRODUCING INTERVAL

FORMATION: Queen POOL OR FIELD: SE Chaves Queen
SPUD DATE: 4-29-84 COMPLETION DATE: 6-1-84
PERFORATED: 2982 FEET TO 2990 FEET

STIMULATION: 750 gals. 15% HCl acid, 20000 gals. 30# gel,
25% CO2, 16500# 20/40 sand, 1700# 12/20 sand

OTHER PERFORATED ZONES: None

CURRENT STATUS

WHAT IS CURRENT STATUS OF WELL? Pumping oil well

IF P&A, LIST PLUGGING DETAILS: _____

WELL DATA SHEET

OPERATOR: Yates Drilling Co. LEASE: Garner Federal

WELL NO.: 3 FOOTAGE: 1980'FNL-1980'FEL SEC: 34-T12s-R31e

TUBULAR DATA

SURFACE CASING

SIZE: 8-5/8" 24# CEMENTED WITH: 225 SX.
TOC: Surface FEET DETERMINED BY: Circulation
HOLE SIZE: 12-1/4" SETTING DEPTH: 408'

INTERMEDIATE CASING

SIZE: None CEMENTED WITH: _____ SX.
TOC: _____ FEET DETERMINED BY: _____
HOLE SIZE: _____ SETTING DEPTH: _____

LONG STRING

SIZE: 5-1/2" 14# CEMENTED WITH: 250 SX.
TOC: 1810' FEET DETERMINED BY: Temp. Survey
HOLE SIZE: 7-7/8" SETTING DEPTH: 3100'
TOTAL DEPTH: 3100'

PRODUCING INTERVAL

FORMATION: Queen POOL OR FIELD: SE Chaves Queen
SPUD DATE: 7-2-84 COMPLETION DATE: 8-12-84
PERFORATED: 2981 FEET TO 2986 FEET

STIMULATION: 750 gals. 15% HCl acid, 15000 gals. 30# gel,
5000 SCF N2 per barre, 1500# 20/40 sand, 1700# 12/20 sand

OTHER PERFORATED ZONES: None

CURRENT STATUS

WHAT IS CURRENT STATUS OF WELL? Pumping oil well

IF P&A, LIST PLUGGING DETAILS: _____

WELL DATA SHEET

OPERATOR: Yates Drilling Co. LEASE: Garner Federal

WELL NO.: 7 FOOTAGE: 660' FSL-1980' FEL SEC: 27-T12s-R31e

TUBULAR DATA

SURFACE CASING

SIZE: 8-5/8" 24# CEMENTED WITH: 250 SX.
TOC: Surface FEET DETERMINED BY: Circulation
HOLE SIZE: 12-1/4" SETTING DEPTH: 424'

INTERMEDIATE CASING

SIZE: None CEMENTED WITH: _____ SX.
TOC: _____ FEET DETERMINED BY: _____
HOLE SIZE: _____ SETTING DEPTH: _____

LONG STRING

SIZE: 5-1/2" 14# CEMENTED WITH: 270 SX.
TOC: 1900' FEET DETERMINED BY: Temp. Survey
HOLE SIZE: 7-7/8" SETTING DEPTH: 3098.54'
TOTAL DEPTH: 3100'

PRODUCING INTERVAL

FORMATION: Queen POOL OR FIELD: SE Chaves Queen
SPUD DATE: 10-14-84 COMPLETION DATE: 10-30-84
PERFORATED: 2987' FEET TO 2993' FEET

STIMULATION: 750 gallons of 15 % HCl, 15000 gallons 30# gel
, 1000 SCF/BBL CO2 13000# 20/40 sand, 9000# 10/20 sand

OTHER PERFORATED ZONES: None

CURRENT STATUS

WHAT IS CURRENT STATUS OF WELL? Pumping oil well

IF P&A, LIST PLUGGING DETAILS: _____

WELL DATA SHEET

OPERATOR: Yates Drilling Co. LEASE: Garner Federal

WELL NO.: 9 FOOTAGE: 1650' FSL-2310' FEL SEC: 27-T12s-R31e

TUBULAR DATA

SURFACE CASING

SIZE: 8-5/8" 24# CEMENTED WITH: 250 SX.
TOC: Surface FEET DETERMINED BY: Circulation
HOLE SIZE: 12-1/4" SETTING DEPTH: 420'

INTERMEDIATE CASING

SIZE: None CEMENTED WITH: _____ SX.
TOC: _____ FEET DETERMINED BY: _____
HOLE SIZE: _____ SETTING DEPTH: _____

LONG STRING

SIZE: 5-1/2" 14# CEMENTED WITH: 320 SX.
TOC: 1820' FEET DETERMINED BY: Temp. Survey
HOLE SIZE: 7-7/8" SETTING DEPTH: 3098'
TOTAL DEPTH: 3100'

PRODUCING INTERVAL

FORMATION: Queen POOL OR FIELD: SE Chaves Queen
SPUD DATE: 11-11-84 COMPLETION DATE: 11-30-84
PERFORATED: 2985' FEET TO 2995' FEET

STIMULATION: 750 gallons of 15 % HCl, 15000 gallons 30# gel
, 16 tons of CO2, 18000# 20/40 sand, 12500# 10/20 sand

OTHER PERFORATED ZONES: None

CURRENT STATUS

WHAT IS CURRENT STATUS OF WELL? Pumping oil well

IF P&A, LIST PLUGGING DETAILS: _____

WELL DATA SHEET

OPERATOR: Yates Drilling Co. LEASE: Rich Federal
WELL NO.: 1 FOOTAGE: 2310'FNL-2310'FEL SEC: 27-T12s-R31e

TUBULAR DATA

SURFACE CASING

SIZE: 8-5/8" 24# CEMENTED WITH: 250 SX.
TOC: Surface FEET DETERMINED BY: Circulation
HOLE SIZE: 12-1/4" SETTING DEPTH: 412'

INTERMEDIATE CASING

SIZE: None CEMENTED WITH: _____ SX.
TOC: _____ FEET DETERMINED BY: _____
HOLE SIZE: _____ SETTING DEPTH: _____

LONG STRING

SIZE: None CEMENTED WITH: _____ SX.
TOC: _____ FEET DETERMINED BY: _____
HOLE SIZE: 7-7/8" SETTING DEPTH: _____
TOTAL DEPTH: 3100'

PRODUCING INTERVAL

FORMATION: None POOL OR FIELD: SE Chaves Queen
SPUD DATE: 11-30-84 COMPLETION DATE: None
PERFORATED: _____ FEET TO _____ FEET

STIMULATION: None

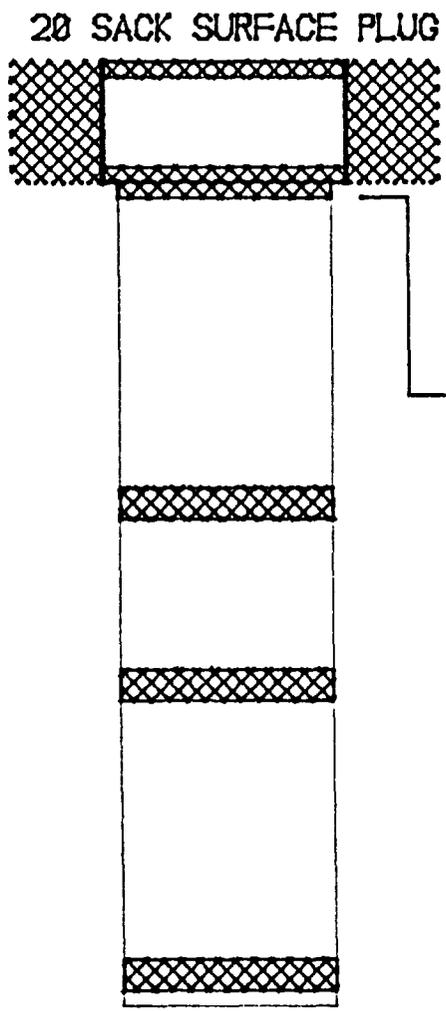
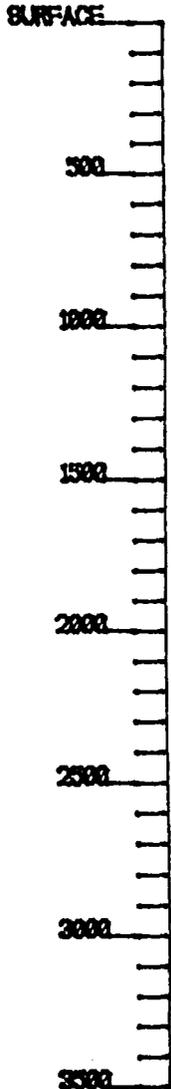
OTHER PERFORATED ZONES: None

CURRENT STATUS

WHAT IS CURRENT STATUS OF WELL? Plugged and Abandoned

IF P&A, LIST PLUGGING DETAILS: P&A 12-12-84
Plug 3040-2940' 35 sx Class "C" neat, Plug 2100-2000' 75 sx
Class "C" w/2% CaCl2, plug 1500-1400' 35 sx Class "C" neat,
Plug 462-362' 50 sx Class "C" w/2% CaCl2, Plug 50-Sur. 20sx
Class "C" neat

RICH FED. #01
SW-NE 27-T12S-R31E
CHAVES COUNTY, NEW MEXICO



8 5/8 SURFACE CASING
AT 412' WITH
CEMENT CIRCULATED

50 SACK PLUG
362-462

35 SACK PLUG
1400-1500

75 SACK PLUG
2000-2100

35 SACK PLUG
2940-3040

 CEMENT

WELL DATA SHEET

OPERATOR: Snow Oil Company LEASE: Toles Federal

WELL NO.: 1 FOOTAGE: 1980' FSL-1650' FWL SEC: 26-T12s-R31e

TUBULAR DATA

SURFACE CASING

SIZE: 8-5/8" CEMENTED WITH: _____ SX.
TOC: Surface FEET DETERMINED BY: Circulation
HOLE SIZE: 12-1/4" SETTING DEPTH: 473'

INTERMEDIATE CASING

SIZE: None CEMENTED WITH: _____ SX.
TOC: _____ FEET DETERMINED BY: _____
HOLE SIZE: _____ SETTING DEPTH: _____

LONG STRING

SIZE: 4-1/2" CEMENTED WITH: _____ SX.
TOC: 900' FEET DETERMINED BY: Estimate
HOLE SIZE: _____ SETTING DEPTH: 3115'
TOTAL DEPTH: 3115'

PRODUCING INTERVAL

FORMATION: Queen POOL OR FIELD: SE Chaves Queen
SPUD DATE: 1-8-85 COMPLETION DATE: None
PERFORATED: 2344 FEET TO 2845 FEET

STIMULATION: _____

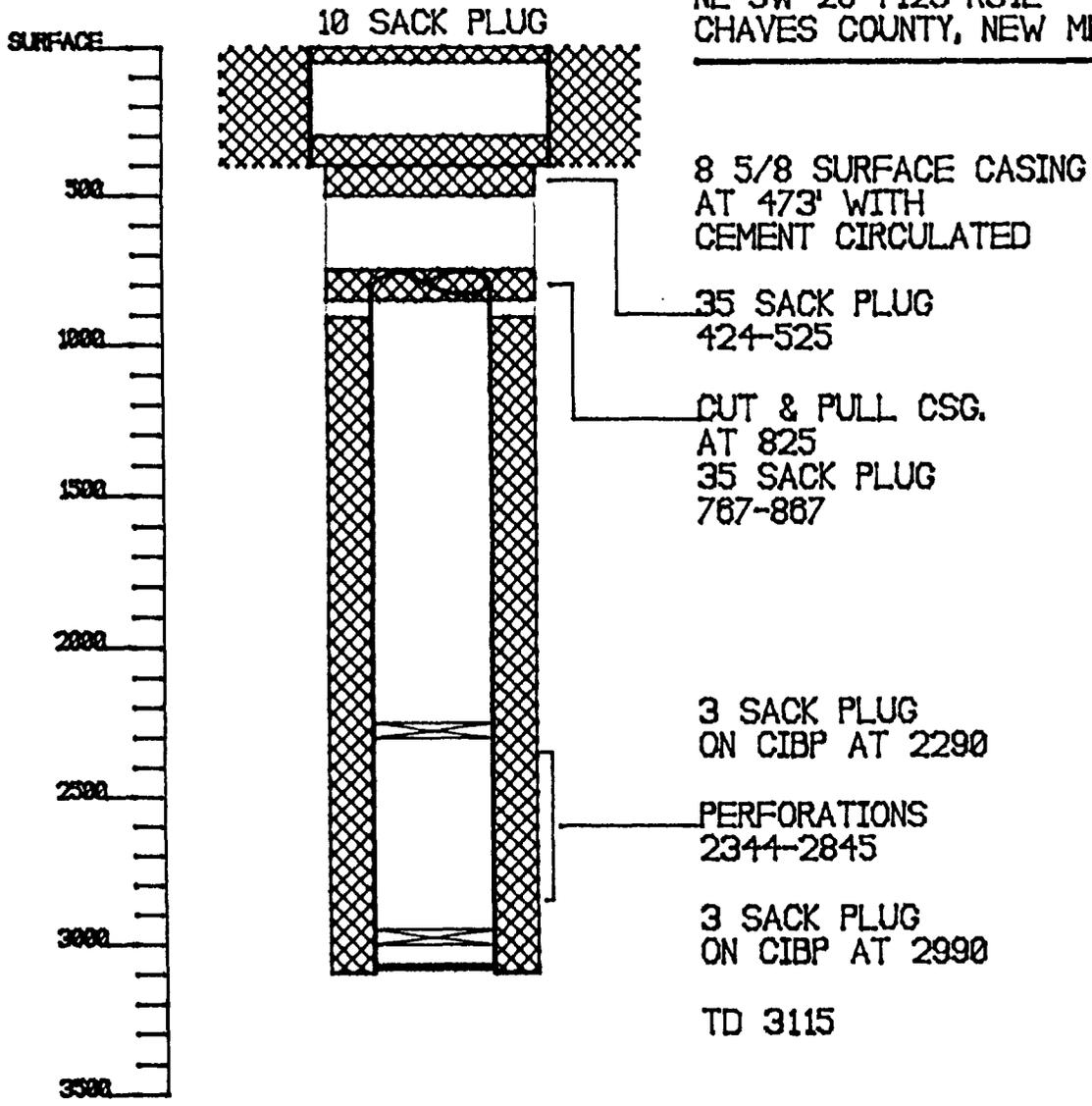
OTHER PERFORATED ZONES: None

CURRENT STATUS

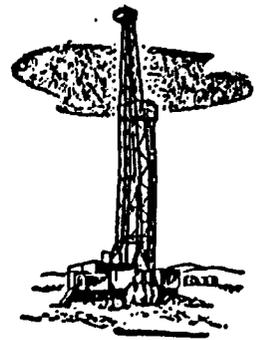
WHAT IS CURRENT STATUS OF WELL? Plugged and Abandoned

IF P&A, LIST PLUGGING DETAILS: 3sx plug on CIBP @ 2990'
3sx plug on CIBP @ 2290', cut and pulled 4-1/2" casing @ 825'
35sx plug @ 867', 35sx plug @ 524', 10sx plug @ surface

TOLES FED. #01
NE-SW 26-T12S-R31E
CHAVES COUNTY, NEW MEXICO



 CEMENT



YATES DRILLING COMPANY

105 SOUTH FOURTH STREET — (505) 746-9889

FAX (505) 746-6480

TELEX 508891 (YPCART)

ARTESIA, NEW MEXICO 88210

May 31, 1989

PEYTON YATES
PRESIDENT

S. P. YATES
VICE PRESIDENT

RANDY G. PATTERSON
SECRETARY

DENNIS G. KINSEY
TREASURER

New Mexico State Engineer
District 2 Office
P.O. Box 1717
Roswell, New Mexico 88202

Attention: Glen Brim, District Supervisor 

Gentlemen:

Yates Drilling Company is proposing to waterflood the Queen formation underlying portions of Township 12 South, Range 31 East and Township 13 South, Range 31 East, Chaves County, New Mexico.

To insure the protection of fresh water aquifers in this area we would like to obtain the location, depth and geological name of the producing formation for any water wells located in either described township. Additionally, the identification of any commercial water wells in the area would be helpful.

Any information that your office can provide concerning this matter will be greatly appreciated.

Sincerely yours,

YATES DRILLING COMPANY

Tobin L. Rhodes
Petroleum Engineer

'89 JUN 1 PM 8 35
STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO

RECEIVED
JUN 12 1989

June 9, 1989

Yates Drilling Company

ATTN: Tobin L. Rhodes, Petroleum Engineer

Enclosed are well locations and some information pertaining to these wells. They were drilled and finished in the Ogallala Formation (TO). Record of other wells finished deeper on other water formations were found north of Township 12 South in Township 11 South, Range 31 East. These wells are finished in the Triassic Formation (TRC), depth of wells are between + 200 feet to 300 feet.



Johnny R. Hernandez

Basin Supervisor

Section 24 Township 12 South Range 31 East

4993 NE 1/4 SW 1/4 Dom. T.D. 140' 5 1/2" casing - Shallow
6649 SE 1/4 SE 1/4 Dom & Stk T.D. 160' 4 1/2" casing - Shallow

Section 26 Township 12 South Range 31 East

-2117 NW 1/4 SW 1/4 Irr.
-6746 SW 1/4 NW 1/4 Dom. & Stk
-6749 SW 1/4 SE 1/4 Comm. & DOM & STK
L-9566 SW 1/4 SE 1/4 COM, Oil & Gas
Well L-9566 is stock well L-6749** Comm.
T.D. 166' Not cased - Shallow
T.D. 178' 6" casing - Shallow
Same

Section 27 Township 12 S Range 31 E.

L-6650 SE 1/4 NE 1/4 Dom & Stk - T.D. 160' 4 1/2" casing - Shallow

Section 35 Township 12 South Range 31 East

L-2932 SE 1/4 OWD
L-4170 NW 1/4 SE 1/4 NW 1/4 Dom. - T.D. 55' casing 8" Shallow
L-4296 NW 1/4 NW 1/4 WF - cancelled
L-4296-X SW 1/4 SW 1/4 WF - cancelled
L-4296-X-2 NE 1/4 NE 1/4 WF - cancelled
L-4296-X-3 SE 1/4 SE 1/4 WF - cancelled
NO wells

Section 23

Township 13 South Range 31 East

L-3914-X-10	SE 1/4 SE 1/4	Ind.
L-3914-X-11	SE 1/4 NW 1/4	Ind.
L-3914-X-12	NE 1/4 NE 1/4	Ind.
L-3914-X-13	SE 1/4 SW 1/4	Ind.
L-3914-X-14	NW 1/4 SE 1/4	Ind.

↑
WELLS NOT DRILLED
↓

Section 24

Township 13 South Range 31 East

L-3914	NE 1/4 SE 1/4 SW 1/4 NE 1/4	Ind.
L-3914-X	NE 1/4 SW 1/4	Ind.
L-3914-X-2	NE 1/4 NW 1/4	Ind.
L-3914-X-3	SW 1/4 SE 1/4	Ind.
L-3914-X-4	SE 1/4 NE 1/4	Ind.
L-3914-X-5	NE 1/4 SE 1/4	Ind.
L-3914-X-6	NW 1/4 NE 1/4	Ind.
L-3914-X-7	NE 1/4 NE 1/4	Ind.
L-3914-X-8	SW 1/4 NW 1/4	Ind.
L-3914-X-9	SE 1/4 NW 1/4	Ind.

T.D. 196' 3 5/8" casing - Shallow
↑
WELLS NOT DRILLED
↓

Section 35

Township 13 South Range 31 East

L-2849	SW 1/4 SE 1/4 NW 1/4	Dom.
--------	----------------------	------

No well record info.

tion 1

Township 13 South Range 31 East

460
461
837
837-X

~~SE 1/4 NE 1/4 SW 1/4~~
~~SE 1/4 SE 1/4 SE 1/4~~
~~SW 1/4 SW 1/4 SW 1/4~~
~~SW 1/4 SW 1/4 SW 1/4~~

WF - T.D. 170' 8 5/8" casing - shallow
WF - T.D. 220' 8 5/8" casing - shallow
Com. & Stock - Rptd TD 165' 6" casing - shallow
Com. & Stock - Rptd TD. 190' 7" casing - shallow

tion 2

Township 13 South Range 31 East

306
333
334
335
295

~~SE 1/4 SE 1/4 SE 1/4~~
~~NE 1/4 NE 1/4 SE 1/4~~
~~SW 1/4 SE 1/4 NE 1/4~~
~~SW 1/4 SE 1/4 NE 1/4~~
SE 1/4 NE 1/4

Stock NO well record info.
Com. With drawn. no well
Dec. - Rptd - TD 165' 6 7/8" casing - shallow
Dec. - Rptd - TD 165' 6 7/8" casing - shallow
WF

3914

NE 1/4 SE 1/4 NE 1/4 SRO - T.D. 194' 8 5/8" casing - shallow

2745

NE 1/4 NE 1/4 SE 1/4 SRO - T.D. 216' 6 7/8" casing - shallow

ection 12

Township 13 South Range 31 East

2934
-3460

NE 1/4
NE 1/4 NE 1/4

OWD NO well record info.
SRO - T.D. 217' - 8 5/8" casing - shallow

ection 13

Township 13 South Range 31 East

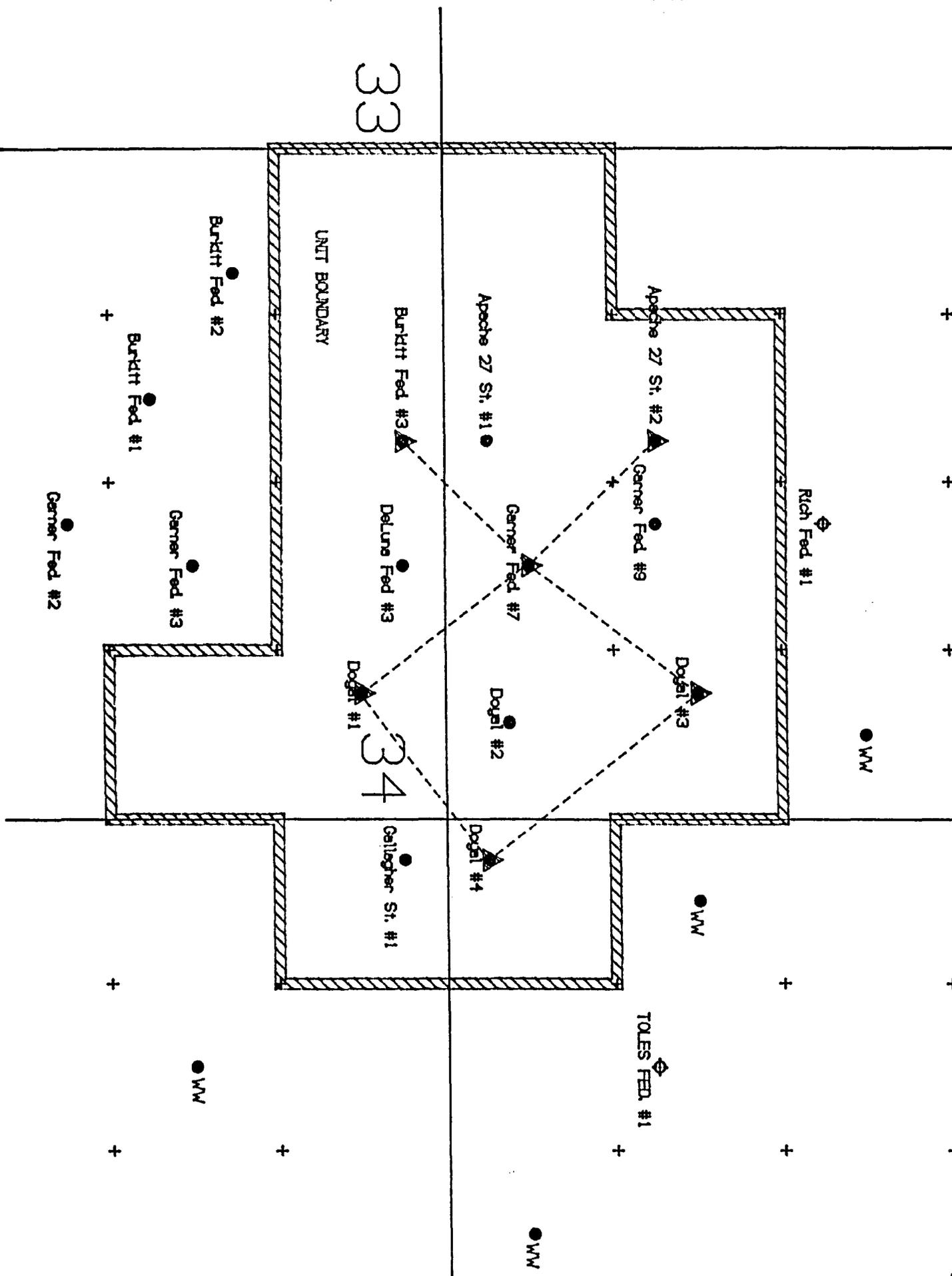
-2933

NE 1/4

OWD NO well record info.

SEC	TWN	RNG	UNIT LTR	QTR OF UNIT	TD	TYPE	#
24	12S	31E	K	?	148	DOM.	L4993
24	12S	31E	P	?	160	DOM.	L6649
26	12S	31E	E	?	166	DOM. & STK	L6746
✓26	12S	31E	L	?	?	IRR.	L2117
✓26	12S	31E	O	?	198	COM. (OIL & GAS)	L9566
✓26	12S	31E	O	?	198	COM., DOM. & STK	L6749
✓27	12S	31E	H	?	160	DOM. & STK	L6650
✓35	12S	31E	F	NW	55	DOM.	L4170
✓35	12S	31E	IJOP	?	?	?	L2932
1	13S	31E	K	SE	190	WF	L3460
1	13S	31E	P	SE	220	WF	L3461
1	13S	31E	M	SW	190	COM. & STK	L3837X
1	13S	31E	M	SW	165	COM. & STK	L3837
2	13S	31E	H	SW	165	DEC.	L3834
2	13S	31E	H	?	?	WF	L4295
2	13S	31E	H	NE	196	SRO	L3914
2	13S	31E	H	SW	165	DEC.	L3835
2	13S	31E	P	SE	?	?	L3806
2	13S	31E	I	NE	216	SRO	L2745
12	13S	31E	A	?	217	SRO	L3460
13	13S	31E	ABCD	?	?	OWD	L2933
24	13S	31E	H	NE	196	IND.	L3914
35	13S	31E	F	SW	?	DOM.	L2849

+ + + + +



33

34

UNIT BOUNDARY

WATER ANALYSIS REPORT

Company Yates Drilling Date Sampled 1-22-88
 Field Caprock County Chavez
 Lease Graham Water Station State NM
 Well _____ Formation _____
 Type of Water Fresh Water, B/D _____
 Sampling Point Water Tanks Sampled By Blackwell

DISSOLVED SOLIDS

CATIONS

	mg/l		meq/l
Sodium, Na+(Calc)	<u>230</u>	÷	<u>10</u>
Calcium, Ca++	<u>120</u>	÷	<u>6</u>
Magnesium, Mg++	<u>24</u>	÷	<u>12.2</u>
Barium, Ba++	<u>neg</u>	÷	<u>68.7</u>
Iron, Fe (Total)	_____		_____
_____	_____		_____
_____	_____		_____

OTHER PROPERTIES

pH 8.2
 Specific Gravity 1.000
 H₂S neg
 Total Dissolved Solids 1144
 Total Hardness 400

ANIONS

Chloride, Cl-	<u>350</u>	÷	<u>35.5</u>	<u>10</u>
Sulfate, So ₄ =	<u>120</u>	÷	<u>48</u>	<u>3</u>
Carbonate, Co ₃ =	<u>0</u>	÷	<u>30</u>	<u>0</u>
Bicarbonate, HCo ₃ -	<u>300</u>	÷	<u>61</u>	<u>5</u>
_____	_____		_____	_____
_____	_____		_____	_____

Remarks and Recommendations _____

WATER ANALYSIS REPORT

Company Yates Drilling Date Sampled 1-22-88
 Field Caprock County Chavez
 Lease Graham Water well (fresh) State NM
 Well North of Lease Formation Blackwell
 Type of Water Fresh Water, B/D _____
 Sampling Point Well head Sampled By _____

DISSOLVED SOLIDS

CATIONS

	mg/l		meq/l
Sodium, Na+(Calc)	<u>115</u>	÷ 23	<u>5</u>
Calcium, Ca++	<u>120</u>	÷ 20	<u>6</u>
Magnesium, Mg++	<u>15</u>	÷ 12.2	<u>1</u>
Barium, Ba++	<u>Neg</u>	÷ 68.7	_____
Iron, Fe (Total)	_____		_____
_____	_____		_____
_____	_____		_____

OTHER PROPERTIES

pH 8.3
 Specific Gravity _____
1.000
 H₂S Neg
 Total Dissolved _____
 Solids 817
 Total Hardness _____
360

ANIONS

Chloride, Cl-	<u>200</u>	÷ 35.5	<u>6</u>
Sulfate, So ₄ =	<u>55</u>	÷ 48	<u>1</u>
Carbonate, Co ₃ =	<u>0</u>	÷ 30	<u>0</u>
Bicarbonate, HCo ₃ -	<u>312</u>	÷ 61	<u>5</u>
_____	_____		_____
_____	_____		_____

Remarks and Recommendations _____

WATER ANALYSIS REPORT

Company Yates Drilling Report Date Sampled 1-22-88
 Field Caprock County Lea
 Lease Williams Ranch State NM
 Well Williams Fresh Water Formation _____
 Type of Water Fresh Water Water, B/D _____
 Sampling Point Well head Sampled By Blackwell

DISSOLVED SOLIDS

<u>CATIONS</u>	mg/l	meq/l
Sodium, Na+(Calc)	<u>70</u> ÷ <u>23</u>	<u>3.0</u>
Calcium, Ca++	<u>80</u> ÷ <u>20</u>	<u>4.0</u>
Magnesium, Mg++	<u>20</u> ÷ <u>12.2</u>	<u>1.6</u>
Barium, Ba++	<u>Neg</u> ÷ <u>68.7</u>	
Iron, Fe (Total)		

OTHER PROPERTIES

pH 8.2
 Specific Gravity 1.000
 H₂S Neg
 Total Dissolved Solids 602
 Total Hardness 271

ANIONS

Chloride, Cl-	<u>100</u> ÷ <u>35.5</u>	<u>2.8</u>
Sulfate, So ₄ =	<u>40</u> ÷ <u>48</u>	<u>0.8</u>
Carbonate, Co ₃ =	<u>0</u> ÷ <u>30</u>	<u>0</u>
Bicarbonate, HCo ₃ -	<u>292</u> ÷ <u>61</u>	<u>4.8</u>

Remarks and Recommendations _____

PERMIAN

Treating Chemicals, Inc.

P. O. BOX 72
LOVINGTON, N.M.
PHONE (505) 396

WATER ANALYSIS REPORT

Company	Yates Drilling	Date Sampled	1-22-88
Field	Caprock	County	Lea
Lease	Gallagher	State	NM
Well	1	Formation	Queens
Type of Water	Produced	Water, B/D	
Sampling Point	Treater	Sampled By	Blackwell

DISSOLVED SOLIDS

OTHER PROPERTIES

CATIONS	mg/l	meq/l	pH
Sodium, Na+(Calc)	98100	23	5.9
Calcium, Ca++	3750	20	Specific Gravity
Magnesium, Mg++	12900	2.2	1.200
Barium, Ba++	neg	0.7	H ₂ S
Iron, Fe (Total)			Neg
			Total Dissolved
			Solids 314,240
			Total Hardness
			62,800

ANIONS

Chloride, Cl-	198000	35.5	5577
Sulfate, So ₄ =	1350	48	28
Carbonate, Co ₃ =	0	0	0
Bicarbonate, HCo ₃ -	140	0.1	2.3

Remarks and Recommendations

PERMIAN
Treating Chemicals, Inc.

P. O. BOX 72
LOVINGTON, NM
PHONE (505) 396

WATER ANALYSIS REPORT

Company	Yates Drilling	Date Sampled	1-22-88
Field	Caprock	County	Lea
Lease	Doyle	State	NM
Well	12 & 4	Formation	Queens
Type of Water	Produced	Water, B/D	
Sampling Point	Treater	Sampled By	Blackwell

DISSOLVED SOLIDS

OTHER PROPERTIES

CATIONS

	mg/l	meq/l
Sodium, Na+(Calc)	97900	23 4257
Calcium, Ca++	3800	20 190
Magnesium, Mg++	13300	2.2 1090
Barium, Ba++	0	0 8.7
Iron, Fe (Total)	58	
_____	_____	_____
_____	_____	_____

pH	5.7
Specific Gravity	1.200
H ₂ S	neg.
Total Dissolved Solids	312,598
Total Hardness	64,900

ANIONS

Chloride, Cl-	196,000	35.5	5521
Sulfate, So ₄ =	1400	48	29
Carbonate, Co ₃ =	0	30	0
Bicarbonate, HCo ₃ -	140	61	2.3
_____	_____	_____	_____

Remarks and Recommendations _____

WATER ANALYSIS REPORT

Company Yates Drilling Date Sampled 1-22-88
 Field Caprock County Lea
 Lease Burkett State NM
 Well _____ Formation Queens
 Type of Water Produced Water, B/D _____
 Sampling Point Treater Sampled By Blackwell

DISSOLVED SOLIDS

CATIONS

	mg/l		meq/l
Sodium, Na+(Calc)	98000	÷ 23	4261
Calcium, Ca++	4100	÷ 20	205
Magnesium, Mg++	12800	÷ 12.2	1049
Barium, Ba++	Neg	÷ 68.7	
Iron, Fe (Total)			

OTHER PROPERTIES

pH 5.9
 Specific Gravity
1.200
 H₂S Neg.
 Total Dissolved
 Solids 313,220
 Total Hardness
6300

ANIONS

	mg/l		meq/l
Chloride, Cl-	197,000	÷ 35.5	5549
Sulfate, So ₄ ⁼	1200	÷ 48	25
Carbonate, Co ₃ ⁼	0	÷ 30	
Bicarbonate, HCo ₃ ⁻	120	÷ 61	2

Remarks and Recommendations _____

ERMIAN

ating Chemicals, Inc.

P.O. Box 748
 10000 C.R. 101 8926
 0-0-0 101, 391-8678

WATER ANALYSIS REPORT

Company Yates Drilling
 Field _____
 Lease Deluna
 Well _____
 Type of Water Produced
 Sampling Point Treater

Date Sampled 1-22-88
 County Lea
 State NM
 Location Queens
 Operator E/B
 Sampled by Blackwell

DISSOLVED SOLID IONS

Sodium, Na⁺ (Calc) 97600
 Calcium, Ca⁺⁺ 3960
 Magnesium, Mg⁺⁺ 12900
 Barium, Ba⁺⁺ 0
 Iron, Fe (Total) 0

mg/l
4243
198
1075

OTHER PROPERTIES

pH 6.0
 Specific Gravity 1.200
 H₂S Neg
 Total Dissolved Solids 135,148
 Total Hardness 63,000

ANIONS

Chloride, Cl⁻ 194,000
 Sulfate, SO₄⁼ 1200
 Carbonate, CO₃⁼ 0
 Bicarbonate, HCO₃⁼ 88

mg/l
5465
25
1.1

Remarks and Recommendations

ERMIAN
 Rating Chemicals, Inc.

PC 104726
 104726
 104726

WATER ANALYSIS

Company Yates Drilling
 Field _____
 Lease Garner
 Well 7
 Type of Water Produced

Date Sampled 1-22-88
 Locality Lea
 State NM
 Population Queens
 Water, W/B _____
 Sampled by Blackwell

DISSOLVED SOLIDS

CATIONS

Sodium, Na (Total)	105,000	4565
Calcium, Ca	4,750	238
Magnesium, Mg	11,900	975
Barium, Ba		
Iron, Fe (Total)		

OTHER PROPERTIES

PH	5.8
Specific Gravity	1.200
H ₂ S	Neg
Total Dissolved Solids	326,955
Total Hardness	60,700

ANIONS

Chloride, Cl-	204,000	5746
Sulfate, SO ₄	1,100	23
Carbonate, CO ₃	0	
Bicarbonate, HCO ₃	205	3.4

Remarks and Special Conditions

HALLIBURTON DIVISION LABORATOR

HALLIBURTON SERVICES

ARTESIA DISTRICT

LABORATORY REPORT

No. W539, W540 & W541-89

TO Yates Drilling
105 South Fourth Street
Artesia, NM 88210

Date October 17, 1989

This report is the property of Halliburton Services and neither it nor any part thereof, nor a copy thereof, is to be published or disclosed without first securing the express written approval of laboratory management. It may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Services

Submitted by Date Rec. October 16, 1989

Well No. Depth Formation

Field County Source

Table with 4 columns: Parameter, SPEAR WW #1, GF #7, DEL. FED. #3. Rows include Resistivity, Specific Gravity, pH, Calcium, Magnesium, Chlorides, Sulfates, Bicarbonates, Soluble Iron.

Remarks:

Eric Jacobson
Respectfully submitted

Analyst: Eric Jacobson - EIT

HALLIBURTON SERVICES

NOTICE:

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HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES

ARTESIA DISTRICT

LABORATORY REPORT

No. W536, W537 & W538-89

TO Yates Drilling
105 South Fourth Street
Artesia, NM 88210

Date October 17, 1989

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Submitted by _____ **Date Rec.** October 16, 1989

Well No. _____ **Depth** _____ **Formation** _____

Field _____ **County** _____ **Source** _____

	<u>BUR FEDERAL #3</u>	<u>GALLAHAN ST. #1</u>	<u>AP STATE #1</u>
Resistivity	<u>0.051 @ 70°</u>	<u>0.051 @ 70°</u>	<u>0.058 @ 70°</u>
Specific Gravity ..	<u>1.1200 @ 70°</u>	<u>1.196 @ 70°</u>	<u>1.137 @ 70°</u>
pH	<u>6.5</u>	<u>6.6</u>	<u>6.8</u>
Calcium	<u>6,070</u>	<u>5,620</u>	<u>6,407</u>
Magnesium	<u>10,912</u>	<u>12,685</u>	<u>6,615</u>
Chlorides	<u>184,000</u>	<u>180,000</u>	<u>122,000</u>
Sulfates	<u>Heavy</u>	<u>Medium</u>	<u>Medium</u>
Bicarbonates	<u>214</u>	<u>183</u>	<u>305</u>
Soluble Iron	<u>10</u>	<u>25</u>	<u>0</u>
-----	-----	-----	-----
-----	-----	-----	-----
-----	-----	-----	-----

Remarks:

Eric Jacobson

 Respectfully submitted

Analyst: Eric Jacobson - EIT

HALLIBURTON SERVICES

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES

ARTESIA DISTRICT

LABORATORY REPORT

No. W542, W543 & W544-89

TO Yates Drilling
105 South Fourth Street
Artesia, NM 88210

Date October 17, 1989

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Submitted by _____ **Date Rec.** October 16, 1989

Well No. _____ **Depth** _____ **Formation** _____

Field _____ **County** _____ **Source** _____

	<u>Graham WW #1</u>	<u>Graham WW #2</u>	<u>Doy #1</u>
Resistivity	<u>0.60 @ 70°</u>	<u>0.91 @ 70°</u>	<u>N.A.</u>
Specific Gravity ..	<u>1.007 @ 70°</u>	<u>1.005 @ 70°</u>	<u>N.A.</u>
pH	<u>6.5</u>	<u>6.7</u>	<u>6.6</u>
Calcium	<u>1,124</u>	<u>1,124</u>	<u>4,946</u>
Magnesium	<u>477</u>	<u>614</u>	<u>14,186</u>
Chlorides	<u>6,000</u>	<u>4,000</u>	<u>198,000</u>
Sulfates	<u>Nil</u>	<u>Nil</u>	<u>Nil</u>
Bicarbonates	<u>214</u>	<u>214</u>	<u>153</u>
Soluble Iron	<u>Nil</u>	<u>Nil</u>	<u>75</u>
-----	-----	-----	-----
-----	-----	-----	-----
-----	-----	-----	-----

Remarks:

Eric Jacobson

 Respectfully submitted

Analyst: Eric Jacobson - EIT

HALLIBURTON SERVICES

**YATES DRILLING COMPANY
PROPOSED CACTUS QUEEN UNIT
CHAVES COUNTY, NEW MEXICO**

MAPS & CROSS SECTIONS

**BEFORE EXAMINER STOGNER
OIL CONSERVATION DIVISION**

YATES _____ **EXHIBIT NO.** 15

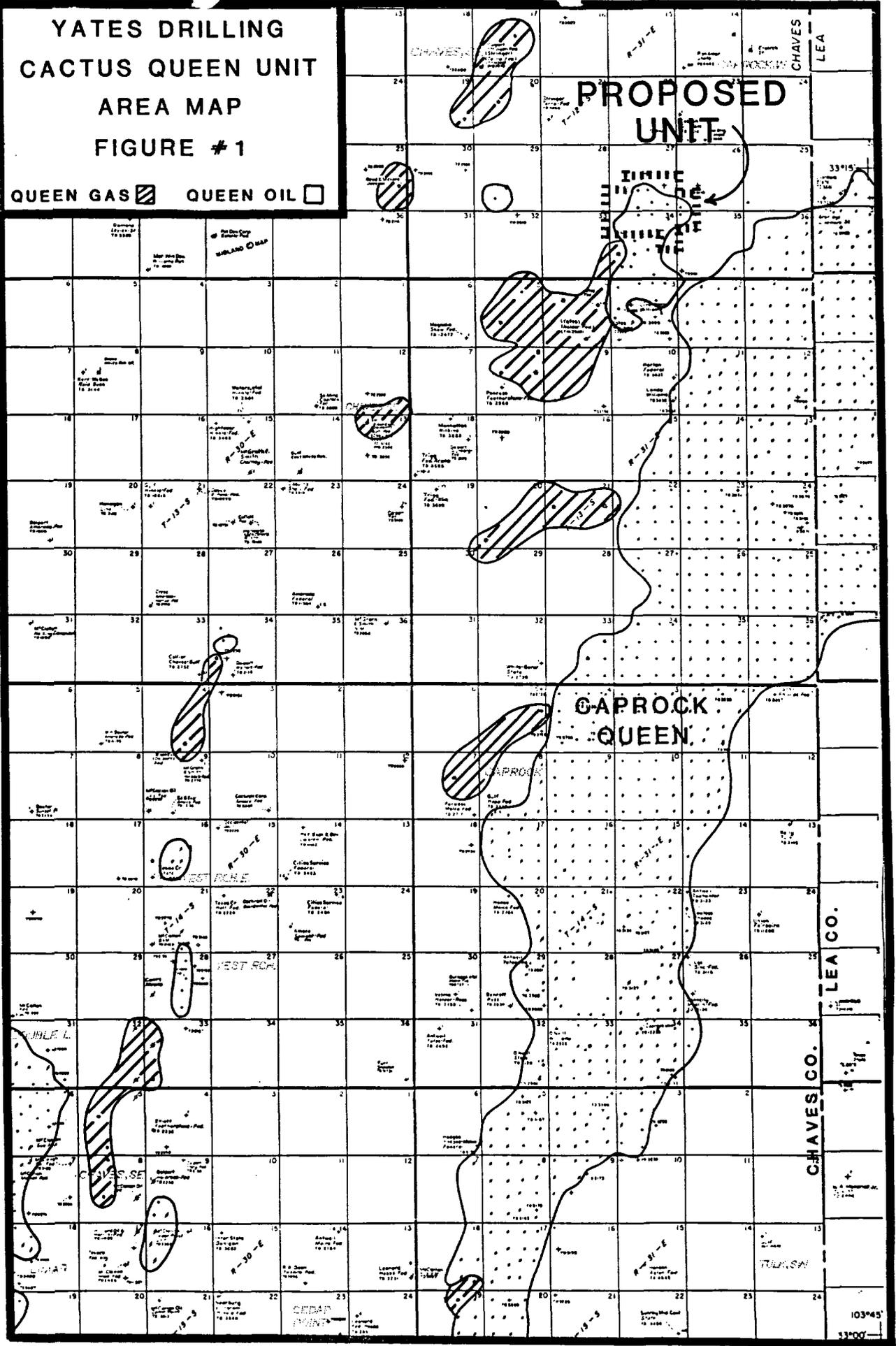
CASE NO. 9809, 9810, 9823

FIGURES

1. Area Map
2. Unit Tract Map
3. Area Queen Structure Map (pocket)
4. Queen Paleo Structure Map
5. Gross Sand Map
6. Net Pay Map
7. Oil Saturated Pore Volume Map
8. Permeability - Porosity Cross Plot
9. Net Capacity Map (Permeability - Feet)
10. Cross Section A-A' (pocket)
11. Cross Section B-B' (pocket)
12. Cumulative Primary Production Map
13. Pressure Map 11/84 - 3/85
14. Pressure Map 9/86 - 10/86
15. Pressure Map 1/89
16. Injection Pattern Map

**YATES DRILLING
CACTUS QUEEN UNIT
AREA MAP
FIGURE # 1**

QUEEN GAS  QUEEN OIL 



28

27 UNIT OUTLINE

ENRON

LH-1648

5a

2

Apache St.

YDC

NM-015807

1a

9

Garner Fed.

YDC

3

8

Doyal

CACTUS QUEEN UNIT

YDC

NM-015807

1

7

Garner Fed.

YDC

2

7

Doyal

YDC

9

4

Doyal

5b

5

1

Apache St.

33

YDC

3

2a

NM-0256521

2

Burkitt Fed.

3

3

YDC

NM-15896

DeLuna Fed.

YDC

1

6

Doyal

YDC

4

1

B-10418

Gallagher St.

34

YDC

NM-015807

1b

Garner Fed.

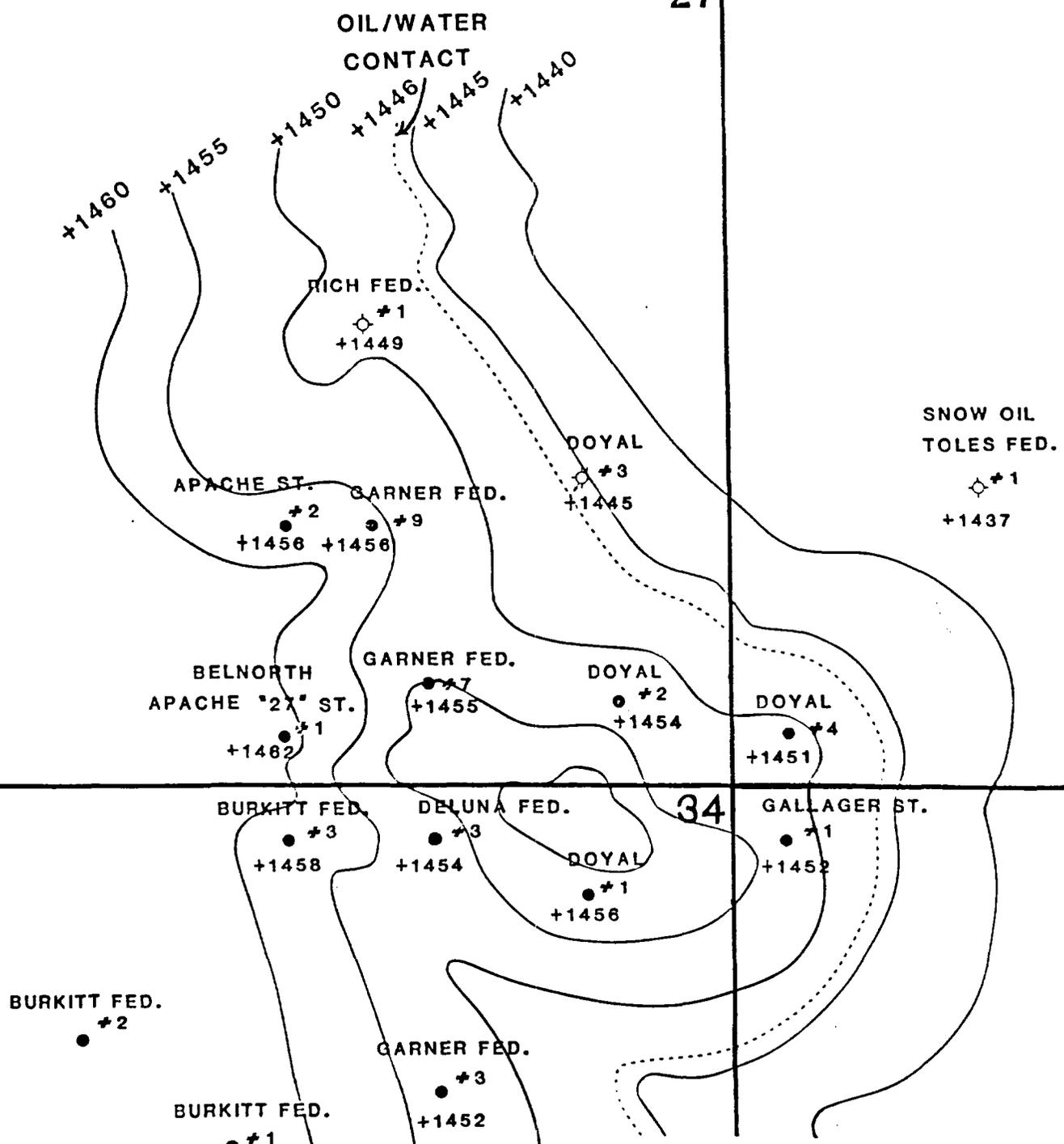
YATES DRILLING
 SE CHAVES QUEEN FIELD
 CACTUS QUEEN UNIT
 T12S-R31E
 CHAVES CO. NM
 FIGURE #2

28

27

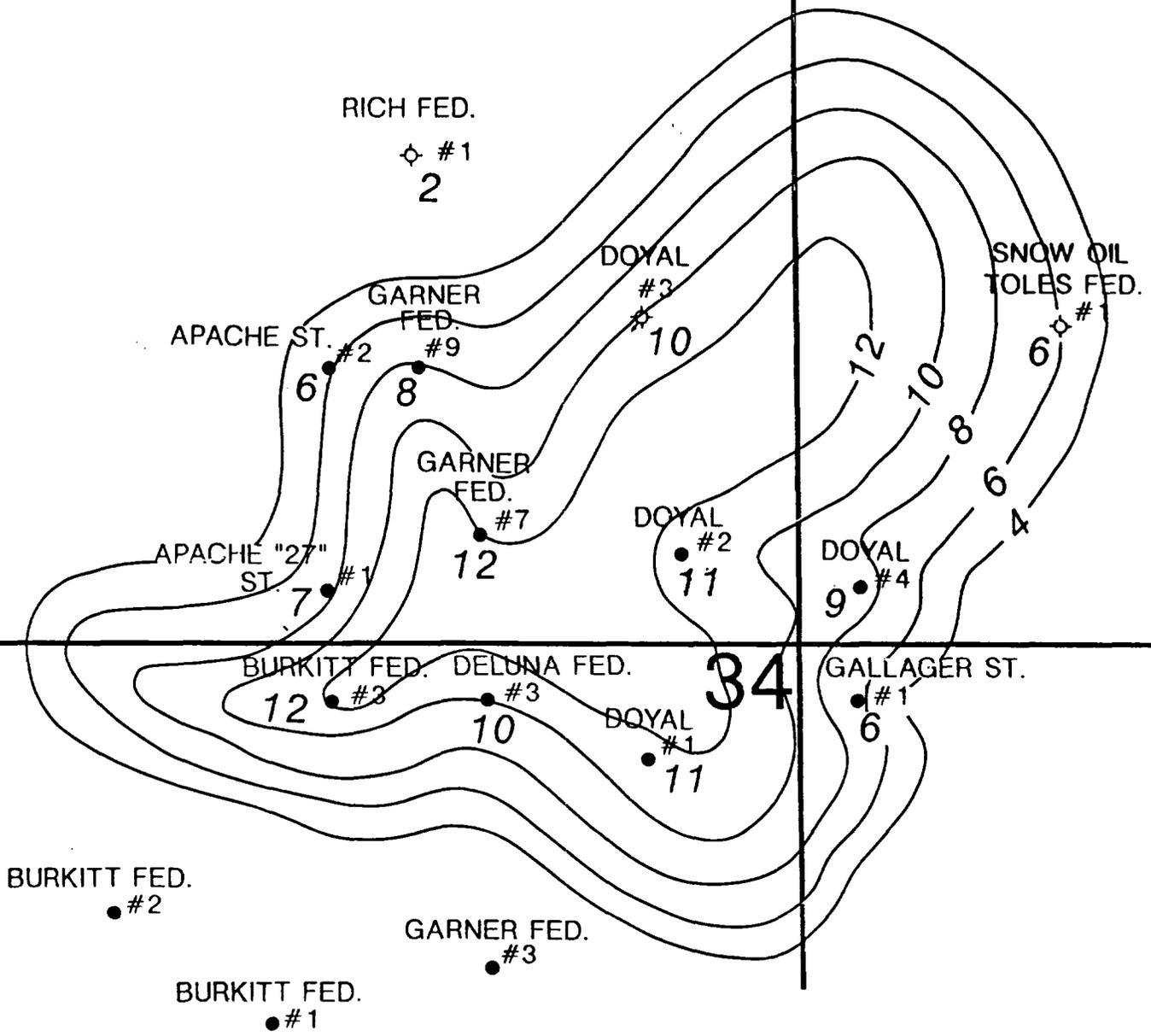
33

34



YATES DRILLING
SE CHAVES QUEEN FIELD
CACTUS QUEEN UNIT
T12S-R31E
CHAVES CO., NM
QUEEN PALEO STRUCTURE
INDICATED BY TILTED OIL/WATER CONTACT
C.I.:5'
FIGURE #4

27



YATES DRILLING

SE CHAVES QUEEN FIELD

CACTUS QUEEN UNIT

CHAVES CO., NM

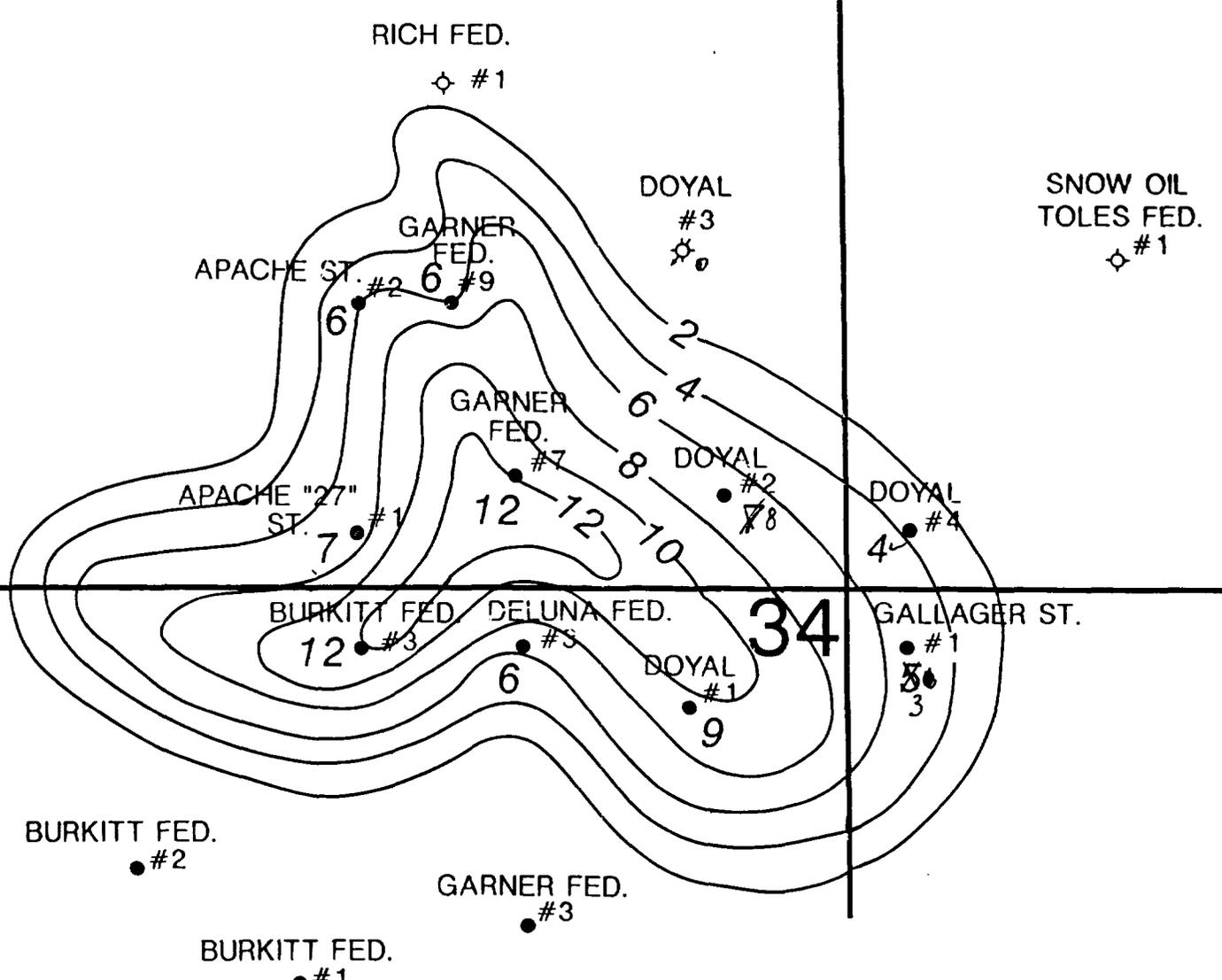
T12S-R31E

GROSS SAND MAP

FT $\emptyset \geq 10\% \emptyset$

C.I. = 2'

FIGURE #5



YATES DRILLING
 SE CHAVES QUEEN FIELD
 CACTUS QUEEN UNIT
 CHAVES CO., NM
 T12S-R31E
 NET PAY
 C.I. = 2'
 FIGURE #6

OIL/WATER CONTACT

RICH FED.

◇ #1

SNOW OIL TOLES FED.

◇ #1

DOYAL

#3

◇ 0

GARNER FED.

#9

APACHE ST.

#2

.51

.58

0.25

0.50

0.75

GARNER FED.

#7

1.42

DOYAL

#2

.86

DOYAL

#4

.53

APACHE "27" ST.

#1

.61

1.00

1.25

BURKITT FED.

#3

1.27

DELUNA FED.

#3

.63

DOYAL

#1

1.25

GALLAGER ST

#1

.59

34

BURKITT FED.

#2

GARNER FED.

#3

BURKITT FED.

#1

YATES DRILLING

SE CHAVES QUEEN FIELD

CACTUS QUEEN UNIT

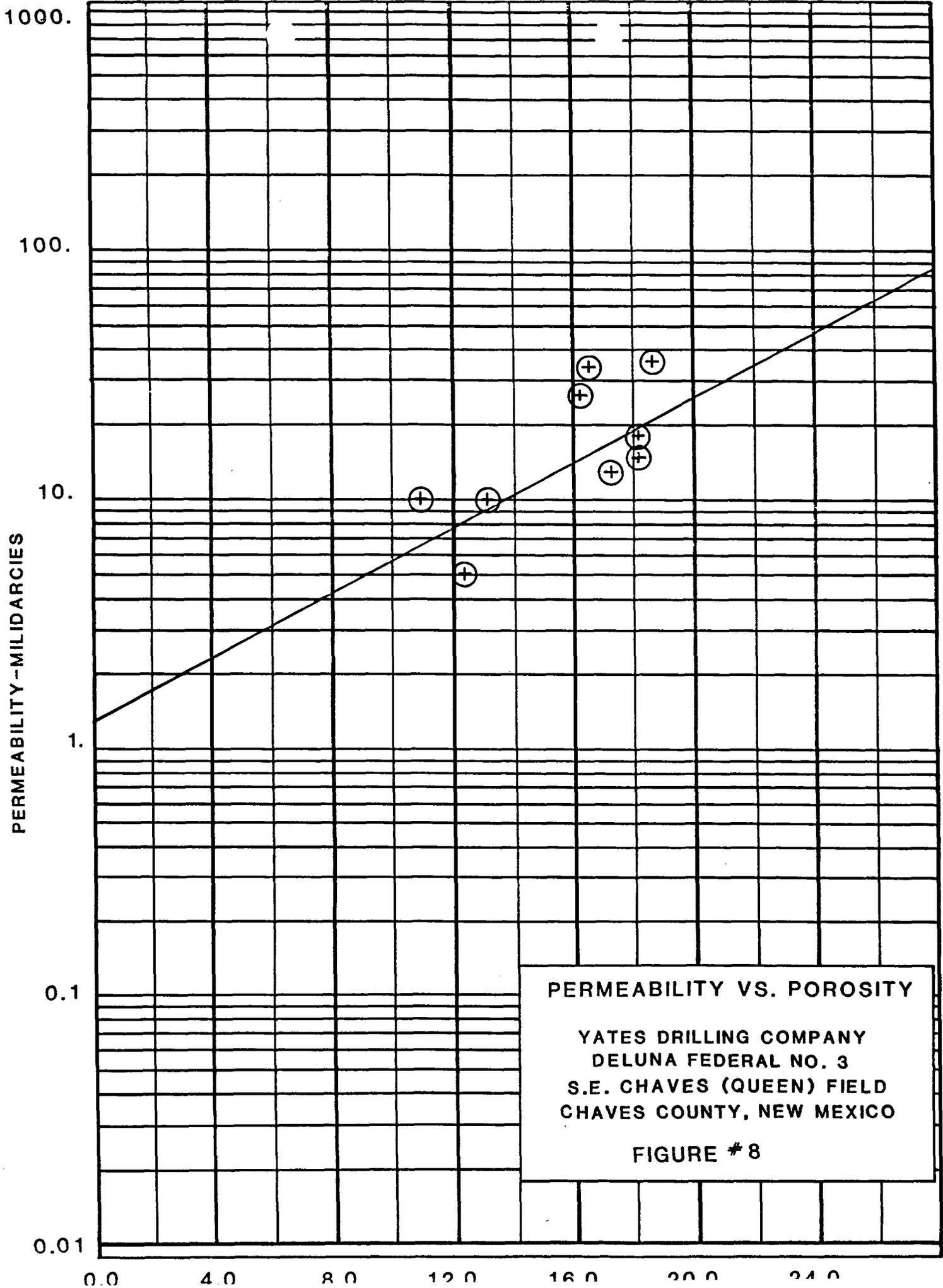
T12S-R31E

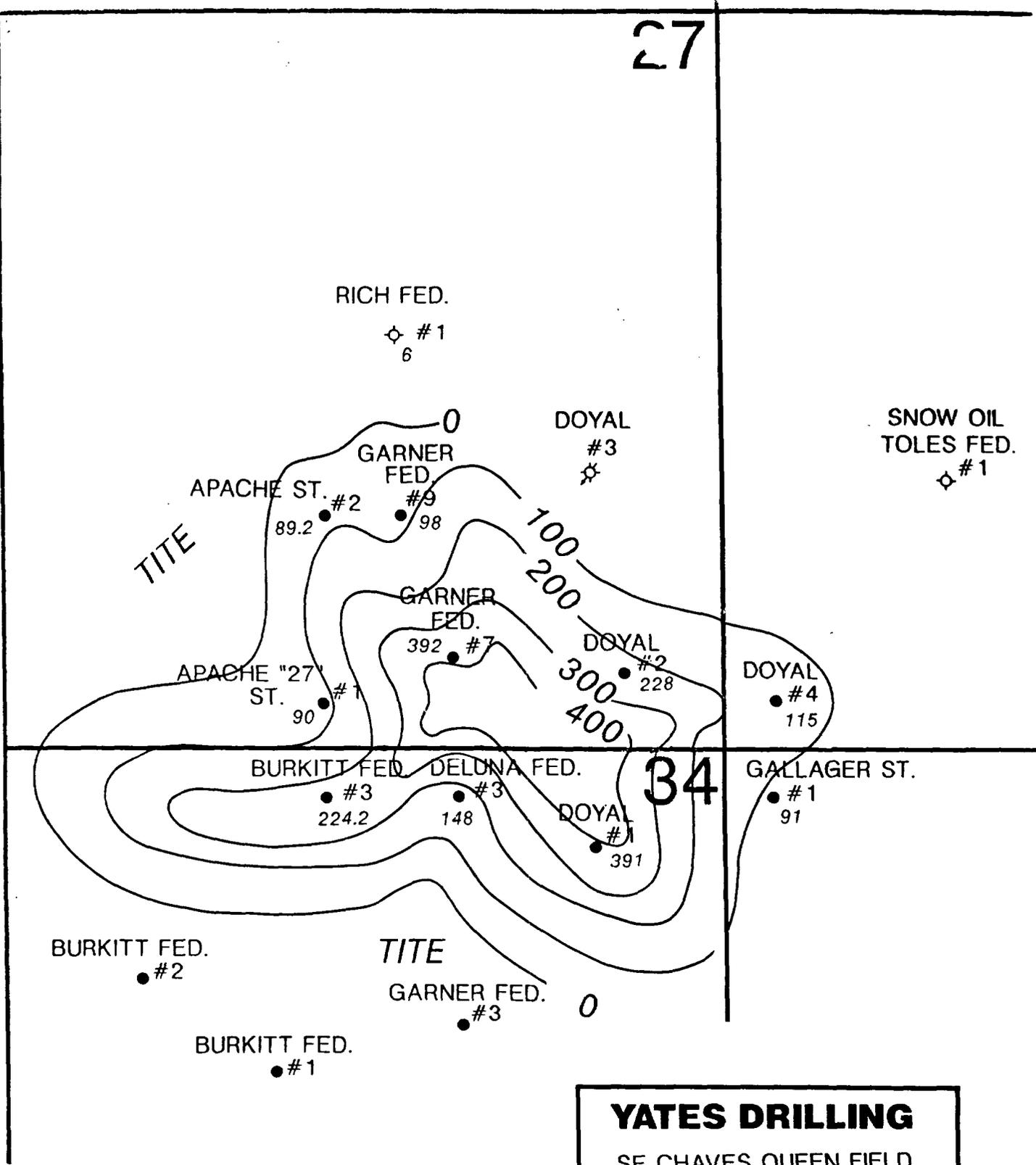
CHAVES CO., NM

(NET PAY)(AVG. Ø)(1-Sw) = HYDROCARBON FT.

C.I. = 0.25

FIGURE #7





YATES DRILLING

SE CHAVES QUEEN FIELD

CACTUS QUEEN UNIT

CHAVES CO., NM

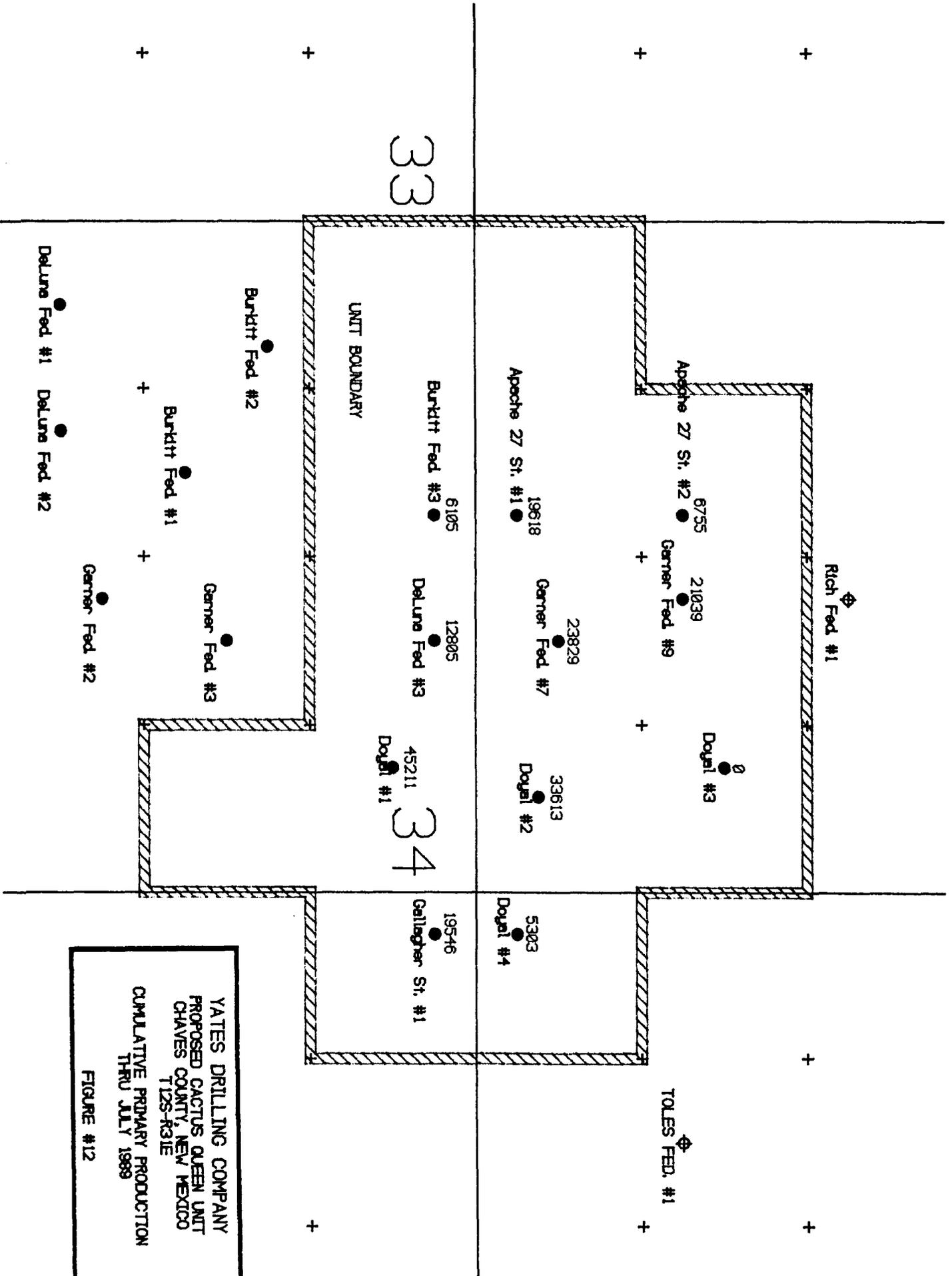
T12S-R31E

PERMEABILITY FEET

AVG K(md) x NET FT = K FT

C.I. = 100'

FIGURE #9



YATES DRILLING COMPANY
 PROPOSED CACTUS QUEEN UNIT
 CHAVES COUNTY, NEW MEXICO
 T12S-R31E
 CUMULATIVE PRIMARY PRODUCTION
 THRU JULY 1989
 FIGURE #12

RICH FED.

⊙ #1

SNOW OIL
TOLES FED.

⊙ #1

APACHE ST.
● #2

GARNER FED.
● #9 930
11/84
41 hr SI

DOYAL
⊙ #3

BELNORTH
APACHE "27" ST.
● #1

GARNER FED.
● #7

DOYAL
● #2

DOYAL 831
● #4 12/84
14 hr SI

BURKITT FED.
● #3

DELUNA FED.
● #3
782
3/85
19 hr SI

34

DOYAL
● #1

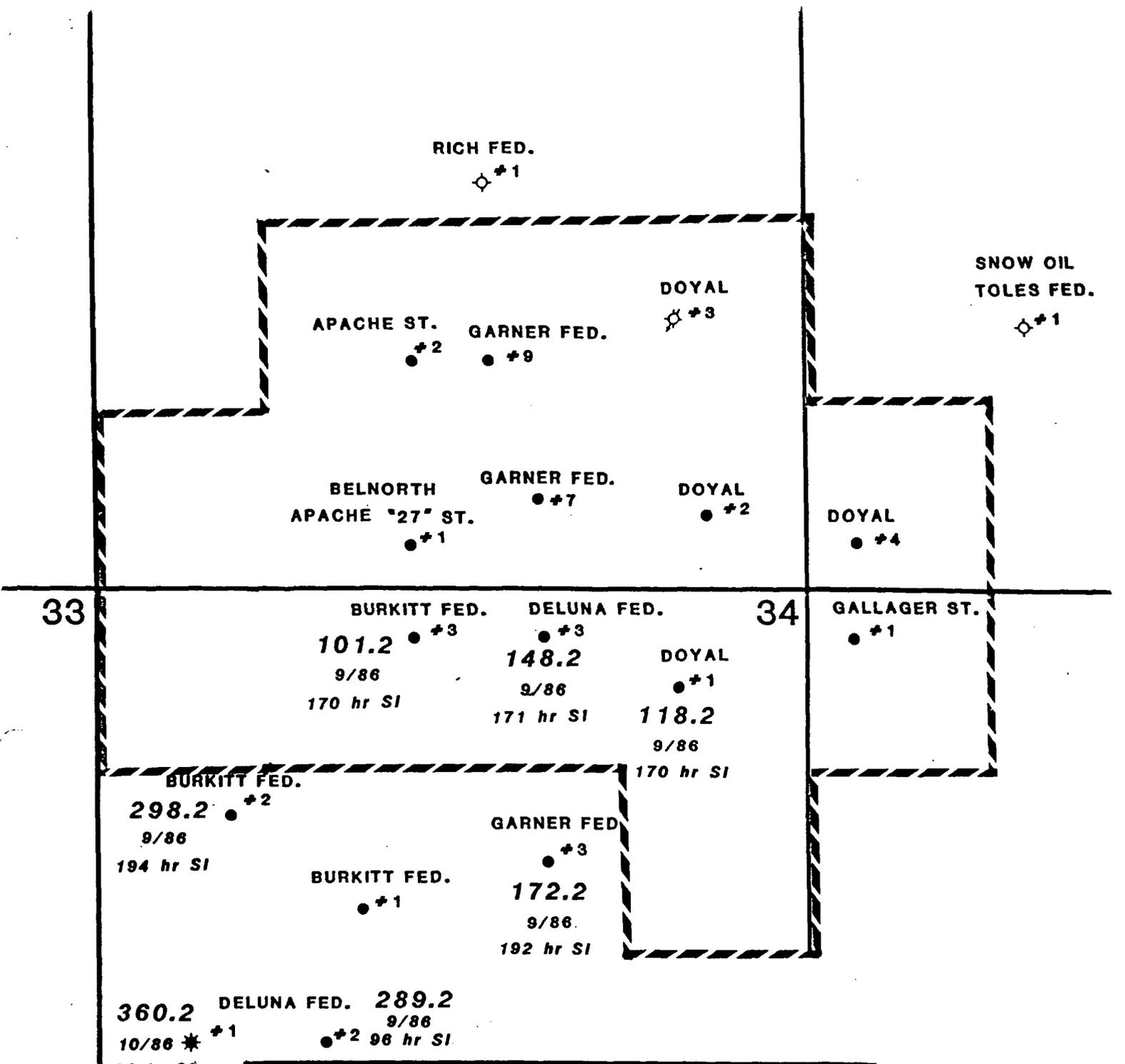
GALLAGER ST.
● #1 873
11/84
14 hr SI

BURKITT FED.
● #2

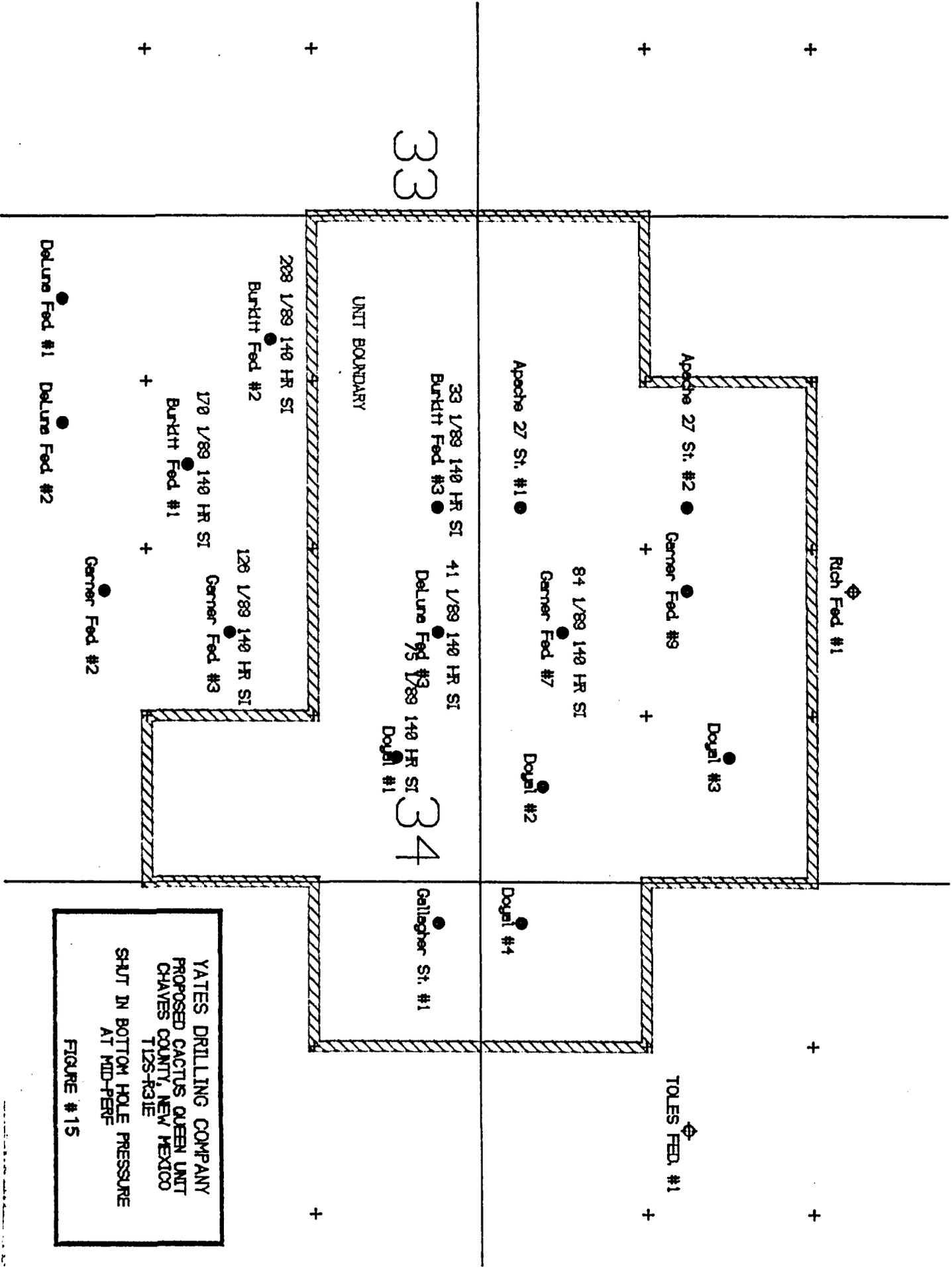
GARNER FED.
● #3 327
BURKITT FED. 1/85
254 ● #1 71 hr SI
1/85
18 hr SI

GARNER FED.
● #2 200
1/85
144 hr SI

YATES DRILLING
SE CHAVES QUEEN FIELD
CACTUS QUEEN UNIT
T12S-R31E
CHAVES CO., NM
BOTTOM HOLE PRESSURE AT MID-PERF
(PSIA)
NOV/84 - MARCH/85
FIGURE #13



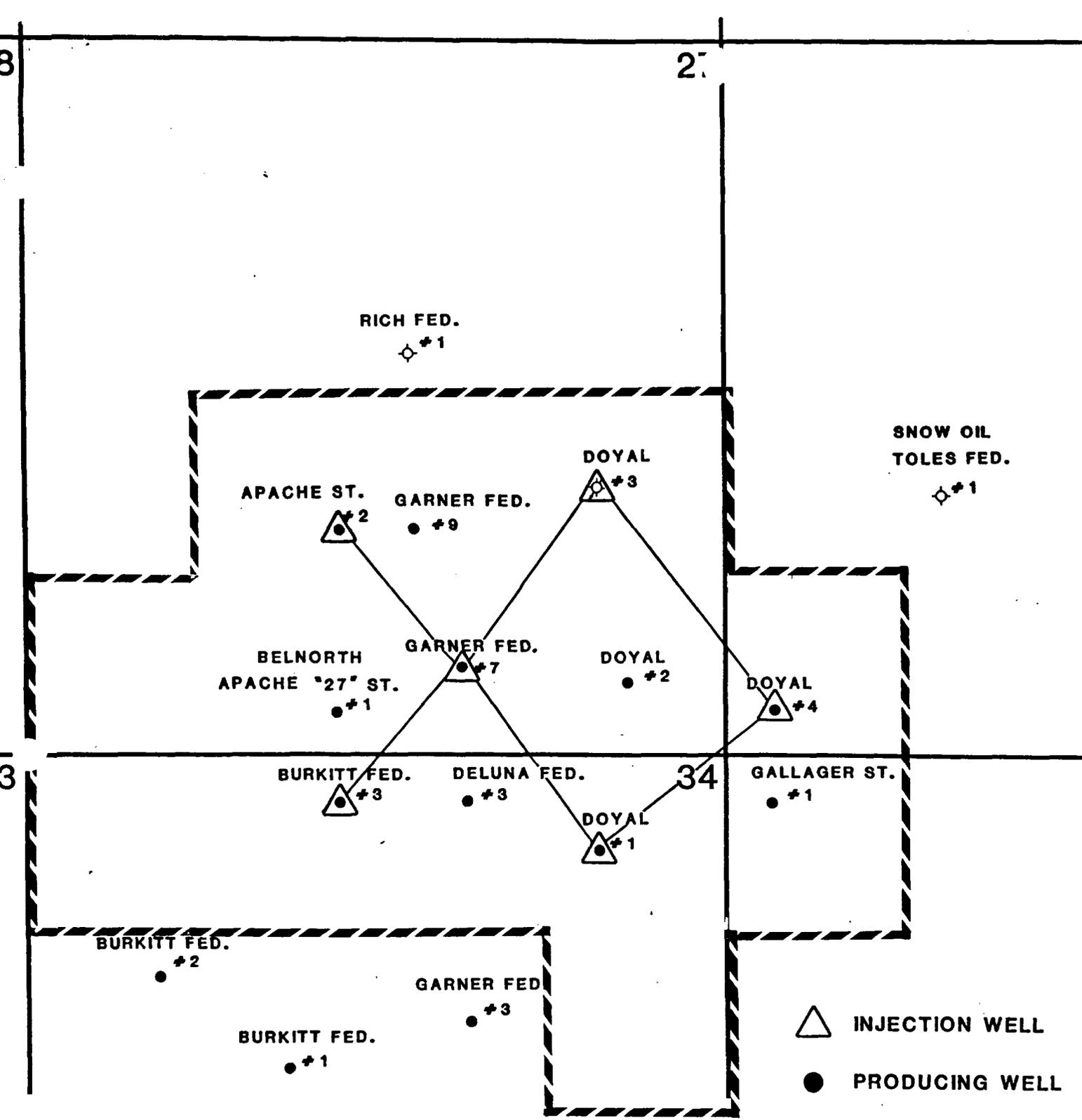
YATES DRILLING
SE CHAVES QUEEN FIELD
CACTUS QUEEN UNIT
T12S-R31E
CHAVES CO., NM
BOTTOM HOLE PRESSURE AT MID-PERF
(PSIA)
SEPT/OCT 1986
FIGURE #14



YATES DRILLING COMPANY
 PROPOSED CACTUS QUEEN UNIT
 CHAVES COUNTY, NEW MEXICO
 T125-K31E

SHUT IN BOTTOM HOLE PRESSURE
 AT MID-DEPTH

FIGURE # 15



YATES DRILLING
 SE CHAVES QUEEN FIELD
 CACTUS QUEEN UNIT
 T12S-R31E
 CHAVES CO., NM
 FIGURE # 16



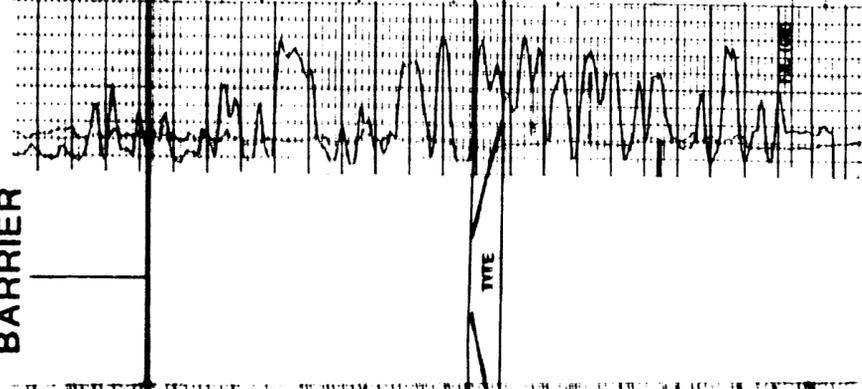
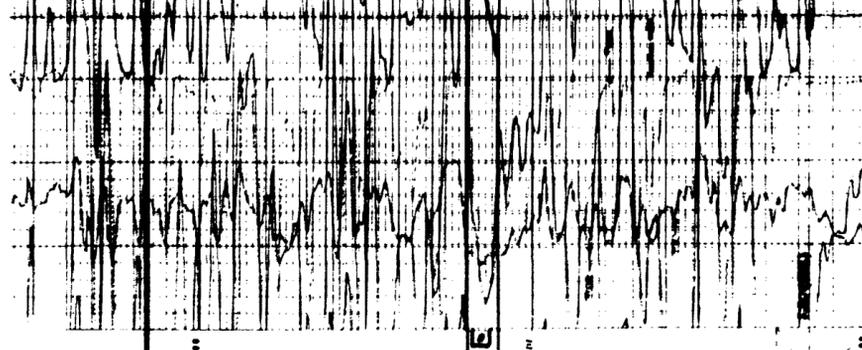
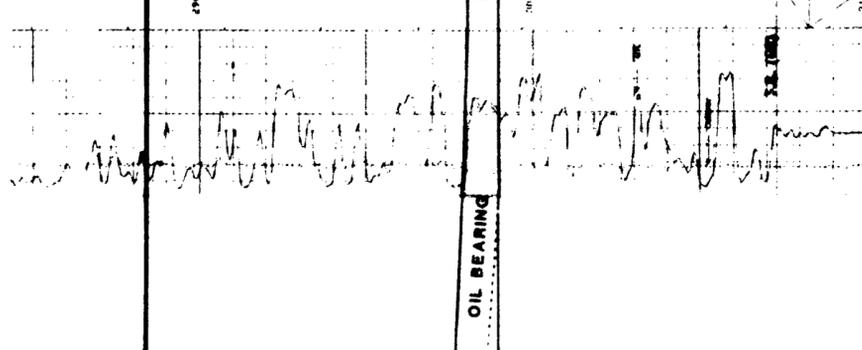
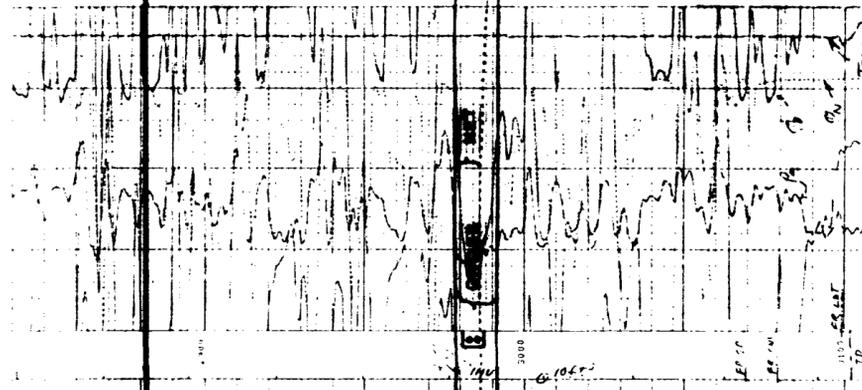
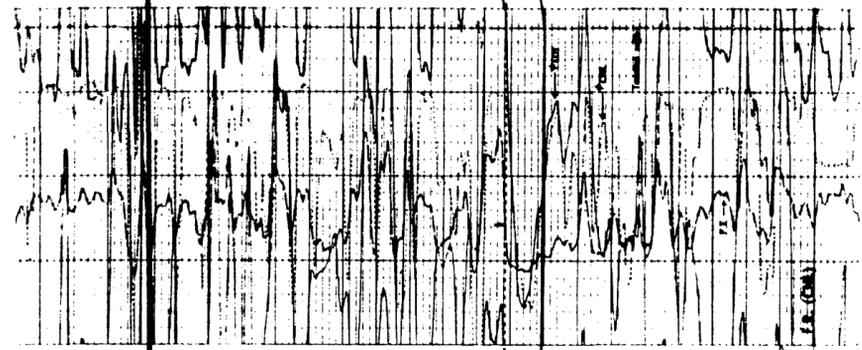
YATES DRILLING
 DOYAL #3
 SEC. 27-12S-31E
 .80' FSL & 990' FEL
 CHAVES CO., NM
 KB 4434'

YATES DRILLING
 DOYAL #2
 SEC. 27-12S-31E
 550' FSL & 660' FEL
 CHAVES CO., NM
 KB 4432'

YATES DRILLING
 DOYAL FED. #1
 SEC. 34-12S-31E
 660' FNL & 990' FEL
 CHAVES CO., NM
 KB 4430'

YATES DRILLING
 GARNER FED. #3
 SEC. 34-12S-31E
 1980' FNL & 1980' FEL
 CHAVES CO., NM
 KB 4432'

A'



Ø & K
 BARRIER

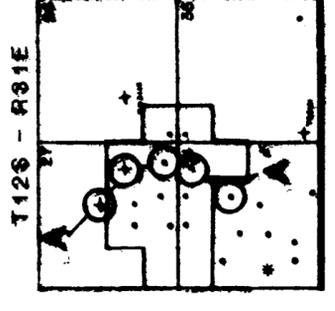
OIL BEARING

TYPE

TOP QUEEN
 UPPER SWISS SANDSTONE

DATUM
 +1550

FIGURE #10





YATES DRILLING
 DOYAL #3
 SEC. 27-12S-31E
 1980' FSL & 990' FEL
 CHAVES CO., NM
 KB 4434'

YATES DRILLING
 DOYAL #2
 SEC. 27-12S-31E
 550' FSL & 660' FEL
 CHAVES CO., NM
 KB 4432'

YATES DRILLING
 DOYAL FED. #1
 SEC. 34-12S-31E
 660' FSL & 990' FEL
 CHAVES CO., NM
 KB 4430'

YATES DRILLING
 GARNER FED. #3
 SEC. 34-12S-31E
 1980' FNL & 1980' FEL
 CHAVES CO., NM
 KB 4432'

A'

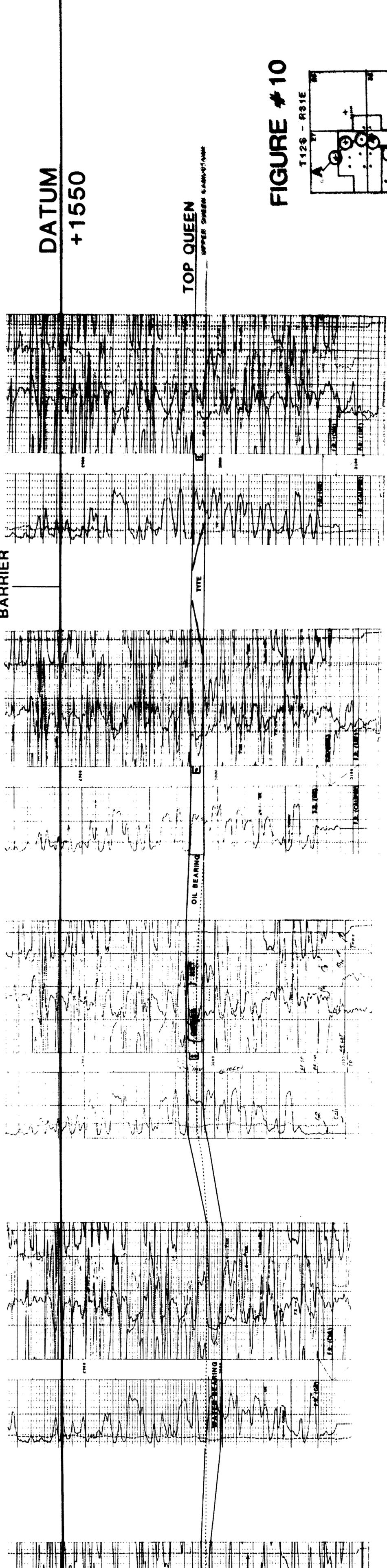


FIGURE #10

