

CASE NO.

6488

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,
ETC.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 6488
Order No. R-5945

APPLICATION OF JOHN H. HENDRIX
CORPORATION FOR COMPULSORY
POOLING, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on March 2, 1979, at Santa Fe, New Mexico, before the Oil Conservation Commission of the State of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 7th day of March, 1979, the Commission, a quorum being present, having considered the testimony, the record, and the exhibits of the hearing, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, John H. Hendrix Corporation, seeks an order pooling all mineral interests in the Wolfcamp, Pennsylvanian and Mississippian formations underlying the E/2 of Section 8, Township 14 South, Range 36 East, NMPM, Austin Mississippian Pool, Lea County, New Mexico.

(3) That the applicant has the right to drill and proposes to drill a well at a standard location in the E/2 of said Section 8.

(4) That Harvey E. Yates Company seeks the pooling and dedication of the S/2 of said Section 8 in Case No. 6483.

(5) That all of said Section 8 can reasonably be presumed to be productive of gas.

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(6) That the evidence indicates that two wells will be required to effectively and efficiently drain said Section 8.

(7) That the evidence indicates that two commercially productive wells can be drilled in the S/2 of said Section 8.

(8) That the evidence indicates that a well drilled in the N/2 of said Section 8 would in all probability not recover gas in commercial quantities.

(9) That by dividing said Section 8 into E/2 and W/2 drilling units, each working interest owner will be better afforded the opportunity to develop its acreage in the section.

(10) That to prevent waste and to better protect correlative rights, said Section 8 should be developed on drilling units comprising the E/2 and the W/2 of the section.

(11) That there are interest owners in the proposed proration unit (the E/2 of said Section 8) who have not agreed to pool their interests.

(12) That to avoid the drilling of unnecessary wells, to protect correlative rights, and to afford to the owner of each interest in said unit the opportunity to recover or receive without unnecessary expense his just and fair share of the gas in said pool, the subject application should be approved by pooling all mineral interests, whatever they may be, within said unit.

(13) That the applicant should be designated the operator of the subject well and unit.

(14) That any non-consenting working interest owner should be afforded the opportunity to pay his share of estimated well costs to the operator in lieu of paying his share of reasonable well costs out of production.

(15) That any non-consenting working interest owner that does not pay his share of estimated well costs should have withheld from production his share of the reasonable well costs plus an additional 100% thereof as a reasonable charge for the risk involved in the drilling of the well.

(16) That any non-consenting interest owner should be afforded the opportunity to object to the actual well costs but that actual well costs should be adopted as the reasonable well costs in the absence of such objection.

(17) That following determination of reasonable well costs, any non-consenting working interest owner that has paid his share of estimated costs should pay to the operator any amount that reasonable well costs exceed estimated well costs and should receive from the operator any amount that paid estimated well costs exceed reasonable well costs.

(18) That \$2500.00 per month while drilling and \$150.00 per month while producing should be fixed as reasonable charges for supervision (combined fixed rates); that the operator should be authorized to withhold from production the proportionate share of such supervision charges attributable to each non-consenting working interest, and in addition thereto, the operator should be authorized to withhold from production the proportionate share of actual expenditures required for operating the subject well, not in excess of what are reasonable, attributable to each non-consenting working interest.

(19) That all proceeds from production from the subject well which are not disbursed for any reason should be placed in escrow to be paid to the true owner thereof upon demand and proof of ownership.

(20) That upon the failure of the operator of said pooled unit to commence drilling of the well to which said unit is dedicated on or before June 15, 1979, the order pooling said unit should become null and void and of no effect whatsoever.

IT IS THEREFORE ORDERED:

(1) That all mineral interests, whatever they may be, in the Wolfcamp, Pennsylvanian and Mississippian formations underlying the E/2 of Section 8, Township 14 South, Range 36 East, NMPM, Austin-Mississippian Gas Pool, Lea County, New Mexico, are hereby pooled to form a standard 320-acre gas spacing and proration unit to be dedicated to a well to be drilled at a standard location thereon.

PROVIDED HOWEVER, that the operator of said unit shall commence the drilling of said well on or before the 15th day of June, 1979, and shall thereafter continue the drilling of said well with due diligence to a depth sufficient to test the Mississippian formation;

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PROVIDED FURTHER, that in the event said operator does not commence the drilling of said well on or before the 15th day of June, 1979, Order (1) of this order shall be null and void and of no effect whatsoever, unless said operator obtains a time extension from the Division for good cause shown.

PROVIDED FURTHER, that should said well not be drilled to completion, or abandonment, within 120 days after commencement thereof, said operator shall appear before the Division Director and show cause why Order (1) of this order should not be rescinded.

(2) That John H. Hendrix Corporation is hereby designated the operator of the subject well and unit.

(3) That after the effective date of this order and within 30 days prior to commencing said well, the operator shall furnish the Division and each known working interest owner in the subject unit an itemized schedule of estimated well costs.

(4) That within 30 days from the date the schedule of estimated well costs is furnished to him, any non-consenting working interest owner shall have the right to pay his share of estimated well costs to the operator in lieu of paying his share of reasonable well costs out of production, and that any such owner who pays his share of estimated well costs as provided above shall remain liable for operating costs but shall not be liable for risk charges.

(5) That the operator shall furnish the Division and each known working interest owner an itemized schedule of actual well costs within 90 days following completion of the well; that if no objection to the actual well costs is received by the Division and the Division has not objected within 45 days following receipt of said schedule, the actual well costs shall be the reasonable well costs; provided however, that if there is an objection to actual well costs within said 45-day period the Division will determine reasonable well costs after public notice and hearing.

(6) That within 60 days following determination of reasonable well costs, any non-consenting working interest owner that has paid his share of estimated costs in advance as provided above shall pay to the operator his pro rata share of the amount that reasonable well costs exceed estimated

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well costs and shall receive from the operator his pro rata share of the amount that estimated well costs exceed reasonable well costs.

(7) That the operator is hereby authorized to withhold the following costs and charges from production:

- (A) The pro rata share of reasonable well costs attributable to each non-consenting working interest owner who has not paid his share of estimated well costs within 30 days from the date the schedule of estimated well costs is furnished to him.
- (B) As a charge for the risk involved in the drilling of the well, 100% of the pro rata share of reasonable well costs attributable to each non-consenting working interest owner who has not paid his share of estimated well costs within 30 days from the date the schedule of estimated well costs is furnished to him.

(8) That the operator shall distribute said costs and charges withheld from production to the parties who advanced the well costs.

(9) That \$2500.00 per month while drilling and \$150.00 per month while producing is hereby fixed as reasonable charges for supervision (combined fixed rates); that the operator is hereby authorized to withhold from production the proportionate share of such supervision charges attributable to each non-consenting working interest, and in addition thereto, the operator is hereby authorized to withhold from production the proportionate share of actual expenditures required for operating such well, not in excess of what are reasonable, attributable to each non-consenting working interest.

(10) That any unsevered mineral interest shall be considered a seven-eighths (7/8) working interest and a one-eighth (1/8) royalty interest for the purpose of allocating costs and charges under the terms of this order.

(11) That any well costs or charges which are to be paid out of production shall be withheld only from the working

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interests share of production, and no costs or charges shall be withheld from production attributable to royalty interests.

(12) That all proceeds from production from the subject well which are not disbursed for any reason shall immediately be placed in escrow in Lea County, New Mexico, to be paid to the true owner thereof upon demand and proof of ownership; that the operator shall notify the Division of the name and address of said escrow agent within 30 days from the date of first deposit with said escrow agent.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

ALEX J. ARMIJO, Member



EMERY C. ARNOLD, Member

JOE D. RAMEY, Member & Secretary

S E A L

dr/

A. T. CARLETON

Geologist

POST OFFICE BOX 293
MIDLAND, TEXAS 79701

March 1, 1979

AUSTIN AREA, LEA COUNTY, NEW MEXICO

OIL & GAS COMMISSION

Case No. 6488 No. 8

Submitted by Hendrix

Hearing Date 3/2/79

The Austin Area appears to be on an anticlinal feature north of and on trend with the Caudill Anticline to the south. Production possibilities are primarily related to closure, although some are highly dependent on stratigraphic conditions. The main prospects are San Andres, Wolfcamp, Permo-Pennsylvanian Lime, upper Pennsylvanian Lime, Strawn Lime oil and Atoka, Morrow, Chester Lime and the Siluro-Devonian oil and/or gas. The Chester Lime and the Siluro-Devonian are the prime prospects here.

The Phillips #1 Austin (M-17-14-36) is the highest well on this feature to have penetrated the Siluro-Devonian. It found the top 140 feet of that section tight, but found good reservoir rock filled with formation water below that point. It was completed from 42 feet of microlog porosity in the Chester Lime for an IP COF 4,925 MCFGPD. It had made 4,023,145 MCFG + 57516 BD to 1-1-78 and was producing at an average rate of 15,000 MCFG + 122 BD per month at that time. Cherry Brothers #1 Austin-State (E-19-14-36) was an attempt to extend this production 3/4 mile to the southwest. This well was 47 feet low on the Siluro-Devonian and found the top 75 feet of that section mainly tight (100' brackish water). On a test of the Chester Lime pay, the packers failed and only the water blanket and 890' Sli GCM were recovered. Final Shut in Pressure was 1448#/45". This well was completed from a thin (10') Wolfcamp Lime zone (now abandoned) for an IPF 250 BOPD. In April 1978, Adobe #1 State "16" (M-16-14-36) was completed from 33 feet of log porosity in the Chester Lime for an IP COF 2,740 MCFGPD. Since that time, the pay section was re-acidized and reportedly was making gas at the rate of 14,000 MCFGPD. It is understood that Adobe has calculated recoverable reserves of 7 BCFG (based on 320 acre spacing) on their well. The Adobe #1 Hannah (H-17-14-36) has been drilled to 13825 feet in the Lower Mississippian Lime. It found 36 feet of log porosity in the upper 100 feet of the Chester Lime. As of this writing, the operators were preparing to production test the Lower Mississippian Lime and perhaps a zone in the lower Chester Lime section. There are several other wells staked, but none are at the stage where they could aid in evaluating this area. The Zapata #1 Danglade (H-3-14-36) appears to have a very porous Chester section (80' approximately, but no detail log) which had no shows and was not tested. The Texas Crude and Sinclair #1 Richardson (M-5-14-36) had 43 feet of sonic log porosity in four zones in the Chester Lime. The top 8 feet of porosity was included in a perforated interval which gave up gas at rates up to 2,100 MCFGPD on initial production tests. After repeated treating and testing, the volume of gas declined and apparently the volume of water increased. Lower and better developed porosity was not tested and is assumed to be water bearing. This well is thought to be very near the gas/water contact (-9375 +/-).

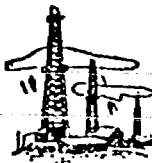
It appears that a band of porosity in the Chester Lime runs in a northeast-southwest direction across the generally north-south aligned Austin Anticline. The south half of section 8, T-14-S, R-36-E appears very well located on the structure, but the north half of that section appears to be dipping off on the north plunging axis of the Austin Anticline. With the exception of the Zapata #1 Danglade (which had additional section in the top of the Chester Lime), the main

Austin Chester Lime porosity occurs within the top 100 feet of that unit. Thus, although all of section 8 is shown to be above the estimated gas water contact of (-) 9375 feet, the entire Chester Lime porosity appears to be above this datum only in the south half of the section.

From the above analysis, it appears obvious that the south half of section 8, T-14-S, R-36-E is better located than the north half of that section. There is a very real possibility that the north half is so low as to be uneconomical to drill. Thus, if North Half and South Half Proration Units are approved, there may be only one well drilled in section 8--and that in the South Half. If Proration Units are designated as East Half and West Half, there could be two wells drilled which would be higher on the structure and both of which should find most of the Chester Lime Austin Pay Porosity above the estimated water table. This would result in more gas being recovered. It could also mean that the State of New Mexico would have all of its approximately 320 acres in this section committed to wells and potentially revenue earning. With only one well drilled in the south half of the section, the State of New Mexico would have only 160 acres committed to production.

DATE: January 26, 1979

AFE



JOHN H. HENDRIX CORPORATION

OIL PRODUCERS
525 MIDLAND TOWER
MIDLAND, TEXAS 79701

OFFICE PHONE 644-4431
RESIDENCE PHONE 644-4412

6488 9
Hendrix
3-2-79

CAL-MON STATE #1

Location: 1980' FSL & 660' FEL Section 8, T-14-S, R-36-E
Lea County, New Mexico

	Completed Well	To Casing Point	Actual
Location and Roads	12,500	12,500	
Damages	2,500	2,500	
Footage Contract 10,500 ft @ \$16.50	173,250	173,250	
Day Work 35 days @ 4100/Day	143,500	143,500	
Cement and Cementing	25,000	10,000	
Float Equipment, etc.	6,000	1,000	
Mud and Chemicals	35,000	35,000	
Log and Testing	40,000	40,000	
Core and Core Analysis			
Water	4,000	4,000	
Trucking	4,000	2,000	
Perforating	5,000		
Treating	50,000		
Completion Unit	6,000		
Labor	5,000		
Bits & Rental Equipment	20,000	15,000	
Overhead and Supervision	10,000	3,000	
Contingencies	20,000	10,000	
Total Intangibles	*561,750	451,750	
Surface Casing 400 ft @ \$17.04	6,816	6,816	
Intermediate Casing 4700 ft @ \$9.77	45,919	45,919	
2nd Intermediate Casing			
Well Head	20,000	10,000	
Oil String 13,900 ft @ \$6.33	87,987		
Tubing 13,900 ft @ \$3.02	41,978		
Rods			
Pumping Unit and Base			
Prime Mover			
Misc. Connections	5,000	1,000	
Total Well Tangibles	*207,700	63,735	
Tanks	10,000		
Treater-Separator	8,500		
Connections, Line Pipe, etc.	4,000		
Total Tank Battery	*22,500		
Total Cost	*791,950	515,485	

Your working interest share of the above estimate is \$

Please accept and approve in the space provided below and return one executed copy to this office.

JOHN H. HENDRIX CORPORATION

WORKING INTEREST OWNER

By _____

APPROVED AND ACCEPTED this _____ Day of 19____.

January 31, 1979

BEFORE THE	
OIL CONSERVATION COMMISSION	
Santa Fe, New Mexico	
Case No.	6488 11
Submitted by	HENDRIX
Hearing Date	3-2-79

Mr. George M. Yates
c/o H. E. Yates Company
P. O. Box 1933
Roswell, New Mexico 88201

Re: Austin-Missippian Field
T-14-S, R-33-E
Lea County, New Mexico

Dear George:

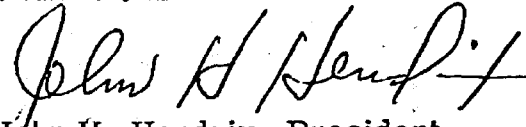
We have not heard from you since your meeting with Robert L. Monaghan and A. T. Carleton in Midland on Tuesday, January 23, 1979, regarding the problems raised with regard to the drilling of a test well in the subject area; therefore we have decided to proceed with the drilling of a well at a location in the SE/4 of Section 8.

We are therefore asking that you join us in the proration unit consisting of the E/2 of Section 8 as was approved by the New Mexico Oil Conservation Commission on January 29, 1979.

As a joint interest owner with Cal-Mon Oil Company in this lease, we will act as Operator if this is satisfactory to you and will be more than happy to furnish you with our AFE and Operating Agreement for your approval.

Yours very truly,

JOHN H. HENDRIX CORPORATION


John H. Hendrix, President

JHH/wh
cc: Cal-Mon Oil Company

OIL COMPANY REGISTRATION
Curtis 6488 10
SALARY \$1000
Holding Date 3/2/79

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A.A.P.L. FORM 610

MODEL FORM OPERATING AGREEMENT-1956
Non-Federal Lands

OPERATING AGREEMENT

DATED

January 26, 1979

FOR UNIT AREA IN TOWNSHIP 14 South, RANGE 36 East

Lea COUNTY, STATE OF New Mexico

Section 8: E/2

AMERICAN ASSOCIATION OF PETROLEUM LANDMEN
APPROVED FORM. A.A.P.L. NO. 610
MAY BE ORDERED DIRECTLY FROM THE PUBLISHER
KRAFTBILT PRODUCTS, BOX 800, TULSA 74101

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OPERATING AGREEMENT

THIS AGREEMENT, entered into this 26th day of January, 1979, between
John H. Hendrix Corporation

hereafter designated as "Operator", and the signatory parties other than Operator.

WITNESSETH, THAT:

WHEREAS, the parties to this agreement are owners of oil and gas leases covering and, if so indicated, unleased mineral interests in the tracts of land described in Exhibit "A", and all parties have reached an agreement to explore and develop these leases and interests for oil and gas to the extent and as hereinafter provided;

NOW, THEREFORE, it is agreed as follows:

1. DEFINITIONS

As used in this agreement, the following words and terms shall have the meanings here ascribed to them.

- (1) The words "party" and "parties" shall always mean a party, or parties, to this agreement.
- (2) The parties to this agreement shall always be referred to as "it" or "they", whether the parties be corporate bodies, partnerships, associations, or persons real.
- (3) The term "oil and gas" shall include oil, gas, casinghead gas, gas condensate, and all other liquid or gaseous hydrocarbons, unless an intent to limit the inclusiveness of this term is specifically stated.
- (4) The term "oil and gas interests" shall mean unleased fee and mineral interests in tracts of land lying within the Unit Area which are owned by parties to this agreement.
- (5) The term "Unit Area" shall refer to and include all of the lands, oil and gas leasehold interests and oil and gas interests intended to be developed and operated for oil and gas purposes under this agreement. Such lands, oil and gas leasehold interests and oil and gas interests are described in Exhibit "A".
- (6) The term "drilling unit" shall mean the area fixed for the drilling of one well by order or rule of any state or federal body having authority. If a drilling unit is not fixed by any such rule or order, a drilling unit shall be the drilling unit as established by the pattern of drilling in the Unit Area or as fixed by express agreement of the parties.
- (7) All exhibits attached to this agreement are made a part of the contract as fully as though copied in full in the contract.
- (8) The words "equipment" and "materials" as used here are synonymous and shall mean and include all oil field supplies and personal property acquired for use in the Unit Area.

2. TITLE EXAMINATION, LOSS OF LEASES AND OIL AND GAS INTERESTS

A. Title Examination:

There shall be no examination of title to leases, or to oil and gas interests, except that title to the lease covering the land upon which the exploratory well is to be drilled in accordance with Section 7, shall be examined on a complete abstract record by Operator's attorney, and the title to both the oil and gas lease and to the fee title of the lessors must be approved by the examining attorney, and accepted by all parties. A copy of the examining attorney's opinion shall be sent to each party immediately after the opinion is written, and, also, each party shall be given, as they are written, a copy of all subsequent supplemental attorney's reports. A good faith effort to satisfy the examining attorney's requirements shall be made by the party owning the lease covering the drillsite.

If title to the proposed drillsite is not approved by the examining attorney or the lease is not acceptable for a material reason, and all the parties do not accept the title, the parties shall select a new drillsite for the first exploratory well; provided, if the parties are unable to agree upon another drillsite, this agreement shall, in that case, come to an end and all parties shall then forfeit their rights and be relieved of obligations hereunder. If a new drillsite is selected, title to the oil and gas lease covering it and to the fee title of the lessor shall be examined, and title shall be approved or accepted or rejected in like manner as provided above concerning the drillsite first selected. If title to the oil and gas lease covering the second choice drillsite is not approved or accepted, other drillsites shall be successively selected and title examined, until a drillsite is chosen

to which title is approved or accepted, or until the parties fail to select another drillsite. As in the case of the drillsite first selected, so also with successive choices if the time comes that the parties have not approved title and are unable to agree upon an alternate drillsite, the contract shall, in that case and at that time, come to an end and all parties shall forfeit their rights and be relieved of obligations under this contract.

No well other than the first test shall be drilled in the Unit Area until after (1) the title to the lease covering the lands upon which such well is to be located has been examined by Operator's attorney, and (2) the title has been approved by the examining attorney and the title has been accepted by all of the parties who are to participate in the drilling of the well.

B. Failure of Title:

Should any oil and gas lease, or interest therein, be lost through failure of title, this agreement shall, nevertheless, continue in force as to all remaining leases and interests, and

- (1) The party whose lease or interest is affected by the title failure shall bear alone the entire loss and it shall not be entitled to recover from Operator or the other parties any development or operating costs which it may have theretofore paid, but there shall be no monetary liability on its part to the other parties hereto by reason of such title failure; and
- (2) There shall be no retroactive adjustment of expenses incurred or revenues received from the operation of the interest which has been lost, but the interests of the parties shall be revised on an acreage basis, as of the time it is determined finally that title failure has occurred, so that the interest of the party whose lease or interest is affected by the title failure will thereafter be reduced in the Unit Area by the amount of the interest lost; and
- (3) If the proportionate interests of the other parties hereto in any producing well theretofore drilled on the Unit Area is increased by reason of the title failure, the party whose title has failed shall receive the proceeds attributable to the increase in such interests (less operating costs attributable thereto) until it has been reimbursed for unrecovered costs paid by it in connection with such well; and
- (4) Should any person not a party to this agreement, who is determined to be the owner of any interest in the title which has failed, pay in any manner any part of the cost of operation, development, or equipment, or equipment previously paid under this agreement, such amount shall be proportionately paid to the party or parties hereto who in the first instance paid the costs which are so refunded; and
- (5) Any liability to account to a third party for prior production of oil and gas which arises by reason of title failure shall be borne by the party or parties whose title failed in the same proportions in which they shared in such prior production.

C. Loss of Leases for Causes Other Than Title Failure:

If any lease or interest subject to this agreement be lost through failure to develop or because express or implied covenants have not been performed, or if any lease be permitted to expire at the end of its primary term and not be renewed or extended, or if any lease or interest therein is lost due to the fact that the production therefrom is shut in by reason of lack of market, the loss shall not be considered a failure of title and all such losses shall be joint losses and shall be borne by all parties in proportion to their interests and there shall be no readjustment of interests in the Unit Area.

3. UNLEASED OIL AND GAS INTERESTS

~~If any party owns an unleased oil and gas interest in the Unit Area, that interest shall be treated for the purpose of this agreement as if it were a leased interest under the form of oil and gas lease attached as "Exhibit B" and for the primary term therein stated. As to such interests, the owner shall receive royalty on production as prescribed in the form of oil and gas lease attached hereto as Exhibit "B". Such party shall, however, be subject to all of the provisions of this agreement relating to lessees, to the extent that it owns the lessee interest.~~

4. INTERESTS OF PARTIES

Exhibit "A" lists all of the parties, and their respective percentage or fractional interests under this agreement. Unless changed by other provisions, all costs and liabilities incurred in operations under this contract shall be borne and paid, and all equipment and material acquired in operations on the Unit Area shall be owned, by the parties as their interests are given in Exhibit "A". All production of oil and gas from the Unit Area, subject to the payment of lessor's royalties, shall also be owned by the parties in the same manner.

If the interest of any party in any oil and gas lease covered by this agreement is subject to an overriding royalty, production payment, or other charge over and above the usual one-eighth ($\frac{1}{8}$) royalty, such party shall assume and alone bear all such excess obligations and shall account for them to the owners thereof out of its share of the working interest production of the Unit Area.

5. OPERATOR OF UNIT

John H. Hendrix Corporation shall be the Operator of the Unit Area, and shall conduct and direct and have full control of all operations on the Unit Area as permitted and required by, and within the limits of, this agreement. It shall conduct all such operations in a good and workmanlike manner, but it shall have no liability as Operator to the other parties for losses sustained, or liabilities incurred, except such as may result from gross negligence or from breach of the provisions of this agreement.

6. EMPLOYEES

The number of employees and their selection, and the hours of labor and the compensation for services performed, shall be determined by Operator. All employees shall be the employees of Operator.

7. TEST WELL

On or before the 29th day of April, 19 79, Operator shall commence the drilling of a well for oil and gas in the following location: 1980 feet from the south line and 660 feet from the east line of Section 8, Township 14 South, Range 36 East, N.M.P.M. Lea County, New Mexico.

and shall thereafter continue the drilling of the well with due diligence to a depth sufficient to test the Mississippian formation or to a depth of 13,900' whichever is the shallower.

unless granite or other practically impenetrable substance is encountered at a lesser depth or unless all parties agree to complete the well at a lesser depth.

Operator shall make reasonable tests of all formations encountered during drilling which give indication of containing oil and gas in quantities sufficient to test, unless this agreement shall be limited in its application to a specific formation or formations, in which event Operator shall be required to test only the formation or formations to which this agreement may apply.

If in Operator's judgment the well will not produce oil or gas in paying quantities, and it wishes to plug and abandon the test as a dry hole, it shall first secure the consent of all parties to the plugging, and the well shall then be plugged and abandoned as promptly as possible.

8. COSTS AND EXPENSES

Except as herein otherwise specifically provided, Operator shall promptly pay and discharge all costs and expenses incurred in the development and operation of the Unit Area pursuant to this agreement and shall charge each of the parties hereto with their respective proportionate shares upon the cost and expense basis provided in the Accounting Procedure attached hereto and marked Exhibit "C". If any provision of Exhibit "C" should be inconsistent with any provision contained in the body of this agreement, the provisions in the body of this agreement shall prevail.

Operator, at its election, shall have the right from time to time to demand and receive from the other parties payment in advance of their respective shares of the estimated amount of the costs to be incurred in operations hereunder during the next succeeding month, which right may be exercised only by submission to each such party of an itemized statement of such estimated costs, together with an invoice for its share thereof. Each such statement and invoice for the payment in advance of estimated costs shall be submitted on or before the 20th day of the next preceding month. Each party shall pay to Operator its proportionate share of such estimate within fifteen (15) days after such estimate and invoice is received. If any party fails to pay its share of said estimate within said time, the amount due shall bear interest at the rate of six percent (6%) per annum until paid. Proper adjustment shall be made monthly between advances and actual cost, to the end that each party shall bear and pay its proportionate share of actual costs incurred, and no more.

9. OPERATOR'S LIEN

Operator is given a first and preferred lien on the interest of each party covered by this contract, and in each party's interest in oil and gas produced and the proceeds thereof, and upon each party's interest in material and equipment, to secure the payment of all sums due from each such party to Operator.

In the event any party fails to pay any amount owing by it to Operator as its share of such costs and expense or such advance estimate within the time limited for payment thereof, Operator, without prejudice to other existing remedies, is authorized, at its election, to collect from the purchaser or purchasers of oil or gas, the proceeds accruing to the working interest or interests in the Unit Area of the delinquent party up to the amount owing by such party, and each purchaser of oil or gas is authorized to rely upon Operator's statement as to the amount owing by such party.

In the event of the neglect or failure of any non-operating party to promptly pay its proportionate part of the cost and expense of development and operation when due, the other non-operating parties and Operator, within thirty (30) days after the rendition of statements therefor by Operator, shall proportionately contribute to the payment of such delinquent indebtedness and the non-operating parties so contributing shall be entitled to the same lien rights as are granted to Operator in this section. Upon the payment by such delinquent or defaulting party to Operator of any amount or amounts on such delinquent indebtedness, or upon any recovery on behalf of the non-operating parties under the lien conferred above, the amount or amounts so paid or recovered shall be distributed and paid by Operator to the other non-operating parties and Operator proportionately in accordance with the contributions theretofore made by them.

10. TERM OF AGREEMENT

This agreement shall remain in full force and effect for as long as any of the oil and gas leases subjected to this agreement remain or are continued in force as to any part of the Unit Area, whether by production, extension, renewal or otherwise; provided, however, that in the event the first well drilled hereunder results in a dry hole and no other well is producing oil or gas in paying quantities from the Unit Area, then at the end of ninety (90) days after abandonment of the first test well, this agreement shall terminate unless one or more of the parties are then engaged in drilling a well or wells pursuant to Section 12 hereof, or all parties have agreed to drill an additional well or wells under this agreement, in which event this agreement shall continue in force until such well or wells shall have been drilled and completed. If production results therefrom this agreement shall continue in force thereafter as if said first test well had been productive in paying quantities, but if production in paying quantities does not result therefrom this agreement shall terminate at the end of ninety (90) days after abandonment of such well or wells. It is agreed, however, that the termination of this agreement shall not relieve any party hereto from any liability which has accrued or attached prior to the date of such termination.

11. LIMITATION ON EXPENDITURES

Without the consent of all parties: (a) No well shall be drilled on the Unit Area except any well expressly provided for in this agreement and except any well drilled pursuant to the provisions of Section 12 of this agreement, it being understood that the consent to the drilling of a well shall include consent to all necessary expenditures in the drilling, testing, completing, and equipping of the well, including necessary tankage; (b) No well shall be reworked, plugged back or deepened except a well reworked, plugged back or deepened pursuant to the provisions of Section 12 of this agreement, it being understood that the consent to the reworking, plugging back or deepening of a well shall include consent to all necessary expenditures in conducting such operations and completing and equipping of said well to produce, including necessary tankage; (c) Operator shall not undertake any single project reasonably estimated to require an expenditure in excess of Ten Thousand Dollars (\$ 10,000.00) except in connection with a well the drilling, reworking, deepening, or plugging back of which has been previously authorized by or pursuant to this agreement; provided, however, that in case of explosion, fire, flood, or other sudden emergency, whether of the same or different nature, Operator may take such steps and incur such expenses as in its opinion are required to deal with the emergency and to safeguard life and property, but Operator shall, as promptly as possible, report the emergency to the other parties. Operator shall, upon request, furnish copies of its "Authority for Expenditures" for any single project costing in excess of \$ 10,000.00.

12. OPERATIONS BY LESS THAN ALL PARTIES

If all the parties cannot mutually agree upon the drilling of any well on the Unit Area other than the test well provided for in Section 7, or upon the reworking, deepening or plugging back of a dry hole drilled at the joint expense of all parties or a well jointly owned by all the parties and not then producing in paying quantities on the Unit Area, any party or parties wishing to drill, rework, deepen or plug back such a well may give the other parties written notice of the proposed operation, specifying the work to be performed, the location, proposed depth, objective formation and the estimated cost of the operation. The parties receiving such a notice shall have thirty (30) days (except as to reworking, plugging back or drilling deeper, where a drilling rig is on location, the period shall be limited to forty-eight (48) hours exclusive of Saturday or Sunday) after receipt of the notice within which to notify the parties wishing to do the work whether they elect to participate in the cost of the proposed operation. Failure of a party receiving such a notice to so reply to it within the period above fixed shall constitute an election by that party not to participate in the cost of the proposed operation.

If any party receiving such a notice elects not to participate in the proposed operation (such party or parties being hereafter referred to as "Non-Consenting Party"), then in order to be entitled to the benefits of this section, the party or parties giving the notice and such other parties as shall elect to participate in the operation (all such parties being hereafter referred to as the "Consenting Parties") shall, within thirty (30) days after the expiration of the notice period of thirty (30) days (or as promptly as possible after the expiration of the 48-hour period where the drilling rig is on location, as the case may be) actually commence work on the proposed operation and complete it with due diligence.

The entire cost and risk of conducting such operations shall be borne by the Consenting Parties in the proportions that their respective interests as shown in Exhibit "A" bear to the total interests of all Consenting Parties. Consenting Parties shall keep the leasehold estates involved in such operations free and clear of all liens and encumbrances of every kind created by or arising from the operations of the Consenting Parties. If such an operation results in a dry hole, the Consenting Parties shall plug and abandon the well at their sole cost, risk and expense. If any well drilled, reworked, deepened or plugged back under the provisions of this section results in a producer of oil and/or gas in paying quantities, the Consenting Parties shall complete and equip the well to produce at their sole cost and risk, and the well shall then be turned over to Operator and shall be operated by it at the expense and for the account of the Consenting Parties. Upon commencement of operations for the drilling, reworking, deepening or plugging back of any such well by Consenting Parties in accordance with the provisions of this section, each Non-Consenting Party shall be deemed to have relinquished to Consenting Parties, and the Consenting Parties shall own and be entitled to receive, in proportion to their respective interests, all of such Non-Consenting Party's interest in the well, its leasehold operating rights, and share of production therefrom until the proceeds or market value thereof (after deducting production taxes, royalty, overriding royalty and other interests payable out of or measured by the production from such well accruing with respect to such interest until it reverts) shall equal the total of the following:

- (A) 100% of each such Non-Consenting Party's share of the cost of any newly acquired surface equipment beyond the wellhead connections (including, but not limited to, stock tanks, separators, treaters, pumping equipment and piping), plus 100% of each such Non-Consenting Party's share of the cost of operation of the well commencing with first production and continuing until each such Non-Consenting Party's relinquished interest shall revert to it under other provisions of this section, it being agreed that each Non-Consenting Party's share of such costs and equipment will be that interest which would have been chargeable to each Non-Consenting Party had it participated in the well from the beginning of the operation; and
- (B) 200% of that portion of the costs and expenses of drilling, reworking, deepening or plugging back, testing and completing, after deducting any cash contributions received under Section 25, and 200% of that portion of the cost of newly acquired equipment in the well (to and including the wellhead connections), which would have been chargeable to such Non-Consenting Party if it had participated therein.

In the case of any reworking, plugging back or deeper drilling operation, the Consenting Parties shall be permitted to use, free of cost, all casing, tubing and other equipment in the well, but the ownership of all such equipment shall remain unchanged; and upon abandonment of a well after such reworking, plugging back or deeper drilling, the Consenting Parties shall account for all such equipment to the owners thereof, with each party receiving its proportionate part in kind or in value.

Within sixty (60) days after the completion of any operation under this section, the party conducting the operations for the Consenting Parties shall furnish each Non-Consenting Party with an inventory of the equipment in and connected to the well, and an itemized statement of the cost of drilling, deepening, plugging back, testing, completing, and equipping the well for production; or, at its option, the operating party, in lieu of an itemized statement of such costs of operation, may submit a detailed statement of monthly billings. Each month thereafter, during the time the Consenting Parties are being reimbursed as provided above, the Consenting Parties shall furnish the Non-Consenting Parties with an itemized statement of all costs and liabilities incurred in the operation of the well, together with a statement of the quantity of oil and gas produced from it and the amount of proceeds realized from the sale of the well's working interest production during the preceding month. Any amount realized from the sale or other disposition of equipment newly acquired in connection with any such operation which would have been owned by a Non-Consenting Party had it participated therein shall be credited against the total unreturned costs of the work done and of the equipment purchased, in determining when the interest of such Non-Consenting Party shall revert to it as above provided; if there is a credit balance it shall be paid to such Non-Consenting Party.

If and when the Consenting Parties recover from a Non-Consenting Party's relinquished interest the amounts provided for above, the relinquished interests of such Non-Consenting Party shall automatically revert to it and from and after such reversion such Non-Consenting Party shall own the same interest in such well, the operating rights and working interest therein, the material and equipment in or pertaining thereto, and the production therefrom as such Non-Consenting Party would have owned had it participated in the drilling, reworking, deepening or plugging back of said well. Thereafter, such Non-Consenting Party shall be charged with and shall pay its proportionate part of the further costs of the operation of said well in accordance with the terms of this agreement and the accounting procedure schedule, Exhibit "C", attached hereto.

Notwithstanding the provisions of this Section 12, it is agreed that without the mutual consent of all parties, no wells shall be completed in or produced from a source of supply from which a well located elsewhere on the Unit Area is producing, unless such well conforms to the then-existing well spacing pattern for such source of supply.

The provisions of this section shall have no application whatsoever to the drilling of the initial test well on the Unit Area, but shall apply to the reworking, deepening, or plugging back of the initial test well after it has been drilled to the depth specified in Section 7, if it is, or thereafter shall prove to be, a dry hole or non-commercial well, and to all other wells drilled, reworked, deepened, or plugged back, or proposed to be drilled, reworked, deepened, or plugged back, upon the Unit Area subsequent to the drilling of the initial test well.

13. RIGHT TO TAKE PRODUCTION IN KIND

Each party shall take in kind or separately dispose of its proportionate share of all oil and gas produced from the Unit Area, exclusive of production which may be used in development and producing operations and in preparing and treating oil for marketing purposes and production unavoidably lost. Each party shall pay or deliver, or cause to be paid or delivered, all royalties, overriding royalties, or other payments due on its share of such production, and shall hold the other parties free from any liability therefor. Any extra expenditure incurred in the taking in kind or separate disposition by any party of its proportionate share of the production shall be borne by such party.

Each party shall execute all division orders and contracts of sale pertaining to its interest in production from the Unit Area, and shall be entitled to receive payment direct from the purchaser or purchasers thereof for its share of all production.

In the event any party shall fail to make the arrangements necessary to take in kind or separately dispose of its proportionate share of the oil and gas produced from the Unit Area, Operator shall have the right, subject to revocation at will by the party owning it, but not the obligation, to purchase such oil and gas or sell it to others for the time being, at not less than the market price prevailing in the area, which shall in no event be less than the price which Operator receives for its portion of the oil and gas produced from the Unit Area. Any such purchase or sale by Operator shall be subject always to the right of the owner of the production to exercise at any time its right to take in kind, or separately dispose of, its share of all oil and gas not previously delivered to a purchaser. Notwithstanding the foregoing, Operator shall not make a sale into interstate commerce of any other party's share of gas production without first giving such other party sixty (60) days notice of such intended sale.

14. ACCESS TO UNIT AREA

Each party shall have access to the Unit Area at all reasonable times, at its sole risk, to inspect or observe operations, and shall have access at reasonable times to information pertaining to the development or operation thereof, including Operator's books and records relating thereto. Operator shall, upon request, furnish each of the other parties with copies of all drilling reports, well logs, tank tables, daily gauge and run tickets and reports of stock on hand at the first of each month, and shall make available samples of any cores or cuttings taken from any well drilled on the Unit Area.

15. DRILLING CONTRACTS

All wells drilled on the Unit Area shall be drilled on a competitive contract basis at the usual rates prevailing in the area. Operator, if it so desires, may employ its own tools and equipment in the drilling of wells, but its charges therefor shall not exceed the prevailing rates in the field, and the rate of such charges shall be agreed upon by the parties in writing before drilling operations are commenced, and such work shall be performed by Operator under the same terms and conditions as shall be customary and usual in the field in contracts of independent contractors who are doing work of a similar nature.

16. ABANDONMENT OF WELLS

No well, other than any well which has been drilled or reworked pursuant to Section 12 hereof for which the Consenting Parties have not been fully reimbursed as therein provided, which has been completed as a producer shall be plugged and abandoned without the consent of all parties; provided, however, if all parties do not agree to the abandonment of any well, those wishing to continue its operation shall tender to each of the other parties its proportionate share of the value of the well's salvable material and equipment, determined in accordance with the provisions of Exhibit "C", less the estimated cost of salvaging and the estimated cost of plugging and abandoning. Each abandoning party shall then assign to the non-abandoning parties, without warranty, express or implied, as to title or as to quantity, quality, or fitness for use of the equipment and material, all of its interest in the well and its equipment, together with its interest in the leasehold estate as to, but only as to, the interval or intervals of the formation or formations then open to production. The assignments so limited shall encompass the "drilling unit" upon which the well is located. The payments by, and the assignments to, the assignees shall be in a ratio based upon the relationship of their respective percentages of participation in the Unit Area to the aggregate of the percentages of participation in the Unit Area of all assignees. There shall be no readjustment of interest in the remaining portion of the Unit Area.

After the assignment, the assignors shall have no further responsibility, liability, or interest in the operation of or production from the well in the interval or intervals then open. Upon request of the assignees, Operator shall continue to operate the assigned well for the account of the non-abandoning parties at the rates and charges contemplated by this agreement, plus any additional cost and charges which may arise as the result of the separate ownership of the assigned well.

17. DELAY RENTALS AND SHUT-IN WELL PAYMENTS

Delay rentals and shut-in well payments which may be required under the terms of any lease shall be paid by the party who has subjected such lease to this agreement, at its own expense. Proof of each payment shall be given to Operator at least ten (10) days prior to the rental or shut-in well payment date. Operator shall furnish similar proof to all other parties concerning payments it makes in connection with its leases. Any party may request, and shall be entitled to receive, proper evidence of all such payments. If, through mistake or oversight, any delay rental or shut-in well payment is not paid or is erroneously paid, and as a result a lease or interest therein terminates, there shall be no monetary liability against the party who failed to make such payment. Unless the party who failed to pay a rental or shut-in well payment secures a new lease covering the same interest within ninety (90) days from the discovery of the failure to make proper payment, the interests of the parties shall be revised on an acreage basis effective as of the date of termination of the lease involved, and the party who failed to make proper payment will no longer be credited with an interest in the Unit Area on account of the ownership of the lease which has terminated. In the event the party who failed to pay the rental or the shut-in well payment shall not have been fully reimbursed, at the time of the loss, from the proceeds of the sale of oil and gas attributable to the lost interest, calculated on an acreage basis, for the development and operating costs theretofore paid on account of such interest, it shall be reimbursed for unrecovered actual costs theretofore paid by it (but not for its share of the cost of any dry hole previously drilled or wells previously abandoned) from so much of the following as is necessary to effect reimbursement:

- (1) Proceeds of oil and gas, less operating expenses, theretofore accrued to the credit of the lost interest, on an acreage basis, up to the amount of unrecovered costs;
- (2) proceeds, less operating expenses thereafter incurred attributable to the lost interest on an acreage basis, of that portion of oil and gas thereafter produced and marketed (excluding production from any wells thereafter drilled) which would, in the absence of such lease termination, be attributable to the lost interest on an acreage basis, up to the amount of unrecovered costs, the proceeds of said portion of the oil and gas to be contributed by the other parties in proportion to their respective interests; and
- (3) any moneys, up to the amount of unrecovered costs, that may be paid by any party who is, or becomes, the owner of the interest lost, for the privilege of participating in the Unit Area or becoming a party to this contract.

Operator shall attempt to notify all parties when a gas well is shut-in or returned to production, but assumes no liability whatsoever for failure to do so.

18. PREFERENTIAL RIGHT TO PURCHASE

~~Should any party desire to sell all or any part of its interests under this contract, or its rights and interests in the Unit Area, it shall promptly give written notice to the other parties, with full information concerning its proposed sale, which shall include the name and address of the prospective purchaser (who must be ready, willing and able to purchase), the purchase price, and all other terms of the offer. The other parties shall then have an optional prior right, for a period of ten (10) days after receipt of the notice, to purchase on the same terms and conditions the interest which the other party proposes to sell; and, if this optional right is exercised, the purchasing parties shall share the purchased interest in the proportions that the interest of each bears to the total interest of all purchasing parties. However, there shall be no preferential right to purchase in those cases where any party wishes to mortgage its interests, or to dispose of its interests by merger, reorganization, consolidation, or sale of all of its assets, or a sale or transfer of its interests to a subsidiary or parent company, or subsidiary of a parent company, or to any company in which any one party owns a majority of the stock.~~

19. SELECTION OF NEW OPERATOR

Should a sale be made by Operator of its rights and interests, the other parties shall have the right within sixty (60) days after the date of such sale, by majority vote in interest, to select a new Operator. If a new Operator is not so selected, the transferee of the present Operator shall assume the duties of and act as Operator. In either case, the retiring Operator shall continue to serve as Operator, and discharge its duties in that capacity under this agreement, until its successor Operator is selected and begins to function, but the present Operator shall not be obligated to continue the performance of its duties for more than 120 days after the sale of its rights and interests has been completed.

20. MAINTENANCE OF UNIT OWNERSHIP

For the purpose of maintaining uniformity of ownership in the oil and gas leasehold interests covered by this contract, and notwithstanding any other provisions to the contrary, no party shall sell, encumber, transfer or make other disposition of its interest in the leases embraced within the Unit Area and in wells, equipment and production unless such disposition covers either:

- (1) the entire interest of the party in all leases and equipment and production; or
- (2) an equal undivided interest in all leases and equipment and production in the Unit Area.

Every such sale, encumbrance, transfer or other disposition made by any party shall be made expressly subject to this agreement, and shall be made without prejudice to the rights of the other parties.

If at any time the interest of any party is divided among and owned by four or more co-owners, Operator may, at its discretion, require such co-owners to appoint a single trustee or agent with full authority to receive notices, approve expenditures, receive billings for and approve and pay such party's share of the joint expenses, and to deal generally with, and with power to bind, the co-owners of such party's interests within the scope of the operations embraced in this contract; however, all such co-owners shall enter into and execute all contracts or agreements for the disposition of their respective shares of the oil and gas produced from the Unit Area and they shall have the right to receive, separately, payment of the sale proceeds thereof.

21. RESIGNATION OF OPERATOR

Operator may resign from its duties and obligations as Operator at any time upon written notice of not less than ninety (90) days given to all other parties. In this case, all parties to this contract shall select by majority vote in interest, not in numbers, a new Operator who shall assume the responsibilities and duties, and have the rights, prescribed for Operator by this agreement. The retiring Operator shall deliver to its successor all records and information necessary to the discharge by the new Operator of its duties and obligations.

22. LIABILITY OF PARTIES

The liability of the parties shall be several, not joint or collective. Each party shall be responsible only for its obligations, and shall be liable only for its proportionate share of the costs of developing and operating the Unit Area. Accordingly, the lien granted by each party to Operator in Section 9 is given to secure only the debts of each severally. It is not the intention of the parties to create, nor shall this agreement be construed as creating, a mining or other partnership or association, or to render them liable as partners.

23. RENEWAL OR EXTENSION OF LEASES

If any party secures a renewal of any oil and gas lease subject to this contract, each and all of the other parties shall be notified promptly, and shall have the right to participate in the ownership of the renewal lease by paying to the party who acquired it their several proper proportionate shares of the acquisition cost, which shall be in proportion to the interests held at that time by the parties in the Unit Area.

If some, but less than all, of the parties elect to participate in the purchase of a renewal lease, it shall be owned by the parties who elect to participate therein, in a ratio based upon the relationship of their respective percentage of participation in the unit area to the aggregate of the percentages of participation in the unit area of all parties participating in the purchase of such renewal lease. Any renewal lease in which less than all the parties elect to participate shall not be subject to this agreement.

Each party who participates in the purchase of a renewal lease shall be given an assignment of its proportionate interest therein by the acquiring party.

The provisions of this section shall apply to renewal leases whether they are for the entire interest covered by the expiring lease or cover only a portion of its area or an interest therein. Any renewal lease taken before the expiration of its predecessor lease, or taken or contracted for within six (6) months after the expiration of the existing lease shall be subject to this provision; but any lease taken or contracted for more than six (6) months after the expiration of an existing lease shall not be deemed a renewal lease and shall not be subject to the provisions of this section.

The provisions in this section shall apply also and in like manner to extensions of oil and gas leases.

24. SURRENDER OF LEASES

The leases covered by this agreement, in so far as they embrace acreage in the Unit Area, shall not be surrendered in whole or in part unless all parties consent.

However, should any party desire to surrender its interest in any lease or in any portion thereof, and other parties not agree or consent, the party desiring to surrender shall assign, without express or implied warranty of title, all of its interest in such lease, or portion thereof, and any well, material and equipment which may be located thereon and any rights in production thereafter secured, to the parties not desiring to surrender it. Upon such assignment, the assigning party shall be relieved from all obligations thereafter accruing, but not theretofore accrued, with respect to the acreage assigned and the operation of any well thereon, and the assigning party shall have no further interest in the lease assigned and its equipment and production. The parties assignee shall pay to the party assignor the reasonable salvage value of the latter's interest in any wells and equipment on the assigned acreage, determined in accordance with the provisions of Exhibit "C", less the estimated cost of salvaging and the estimated cost of plugging and abandoning. If the assignment is in favor of more than one party, the assigned interest shall be shared by the parties assignee in the proportions that the interest of each bears to the interest of all parties assignee.

Any assignment or surrender made under this provision shall not reduce or change the assignors' or surrendering parties' interest, as it was immediately before the assignment, in the balance of the Unit Area; and the acreage assigned or surrendered, and subsequent operations thereon, shall not thereafter be subject to the terms and provisions of this agreement.

25. ACREAGE OR CASH CONTRIBUTIONS

If any party receives while this agreement is in force a contribution of cash toward the drilling of a well or any other operation on the Unit Area, such contribution shall be paid to the party who conducted the drilling or other operation and shall be applied by it against the cost of such drilling or other operation. If the contribution be in the form of acreage, the party to whom the contribution is made shall promptly execute an assignment of the acreage, without warranty of title, to all parties to this agreement in proportion to their interests in the Unit Area at that time, and such acreage shall become a part of the Unit Area and be governed by all the provisions of this contract. Each party shall promptly notify all other parties of all acreage or money contributions it may obtain in support of any well or any other operation on the Unit Area.

26. PROVISION CONCERNING TAXATION

Each of the parties hereto elects, under the authority of Section 761(a) of the Internal Revenue Code of 1954, to be excluded from the application of all of the provisions of Subchapter K of Chapter 1 of Subtitle A of the Internal Revenue Code of 1954. If the income tax laws of the state or states in which the property covered hereby is located contain, or may hereafter contain, provisions similar to those contained in the Subchapter of the Internal Revenue Code of 1954 above referred to under which a similar election is permitted, each of the parties agrees that such election shall be exercised. Each party authorizes and directs the Operator to execute such an election or elections on its behalf and to file the election with the proper governmental office or agency. If requested by the Operator so to do, each party agrees to execute and join in such an election.

Operator shall render for ad valorem taxation all property subject to this agreement which by law should be rendered for such taxes, and it shall pay all such taxes assessed thereon before they become delinquent. Operator shall bill all other parties for their proportionate share of all tax payments in the manner provided in Exhibit "C".

If any tax assessment is considered unreasonable by Operator, it may at its discretion protest such valuation within the time and manner prescribed by law, and prosecute the protest to a final determination, unless all parties agree to abandon the protest prior to final determination. When any such protested valuation shall have been finally determined, Operator shall pay the assessment for the joint account, together with interest and penalty accrued, and the total cost shall then be assessed against the parties, and be paid by them, as provided in Exhibit "C".

27. INSURANCE

At all times while operations are conducted hereunder, Operator shall comply with the Workmen's Compensation Law of the State where the operations are being conducted. Operator shall also carry or provide insurance for the benefit of the joint account of the parties as may be outlined in Exhibit "D" attached to and made a part hereof. Operator shall require all contractors engaged in work on or for the Unit Area to comply with the Workmen's Compensation Law of the State where the operations are being conducted and to maintain such other insurance as Operator may require.

In the event Automobile Public Liability Insurance is specified in said Exhibit "D", or subsequently receives the approval of the parties, no direct charge shall be made by Operator for premiums paid for such insurance for operator's fully owned automotive equipment.

28. CLAIMS AND LAWSUITS

If any party to this contract is sued on an alleged cause of action arising out of operations on the Unit Area, or on an alleged cause of action involving title to any lease or oil and gas interest subjected to this contract, it shall give prompt written notice of the suit to the Operator and all other parties.

The defense of lawsuits shall be under the general direction of a committee of lawyers representing the parties, with Operator's attorney as Chairman. Suits may be settled during litigation only with the joint consent of all parties. No charge shall be made for services performed by the staff attorneys for any of the parties, but otherwise all expenses incurred in the defense of suits, together with the amount paid to discharge any final judgment, shall be considered costs of operation and shall be charged to and paid by all parties in proportion to their then interests in the Unit Area. Attorneys, other than staff attorneys for the parties, shall be employed in lawsuits involving Unit Area operations only with the consent of all parties; if outside counsel is employed, their fees and expenses shall be considered Unit Area expense and shall be paid by Operator and charged to all of the parties in proportion to their then interests in the Unit Area. The provisions of this paragraph shall not be applied in any instance where the loss which may result from the suit is treated as an individual loss rather than a joint loss under prior provisions of this agreement, and all such suits shall be handled by and be the sole responsibility of the party or parties concerned.

Damage claims caused by and arising out of operations on the Unit Area, conducted for the joint account of all parties, shall be handled by Operator and its attorneys, the settlement of claims of this kind shall be within the discretion of Operator so long as the amount paid in settlement of any one claim does not exceed one thousand (\$1000.00) dollars and, if settled, the sums paid in settlement shall be charged as expense to and be paid by all parties in proportion to their then interests in the Unit Area.

29. FORCE MAJEURE

If any party is rendered unable, wholly or in part, by force majeure to carry out its obligations under this agreement, other than the obligation to make money payments, that party shall give to all other parties prompt written notice of the force majeure with reasonably full particulars concerning it; thereupon, the obligations of the party giving the notice, so far as they are affected by the force majeure, shall be suspended during, but no longer than, the continuance of the force majeure. The affected party shall use all possible diligence to remove the force majeure as quickly as possible.

The requirement that any force majeure shall be remedied with all reasonable dispatch shall not require the settlement of strikes, lockouts, or other labor difficulty by the party involved, contrary to its wishes; how all such difficulties shall be handled shall be entirely within the discretion of the party concerned.

The term "force majeure" as here employed shall mean an act of God, strike, lockout, or other industrial disturbance, act of the public enemy, war, blockade, public riot, lightning, fire, storm, flood, explosion, governmental restraint, unavailability of equipment, and any other cause, whether of the kind specifically enumerated above or otherwise, which is not reasonably within the control of the party claiming suspension.

30. NOTICES

All notices authorized or required between the parties, and required by any of the provisions of this agreement, shall, unless otherwise specifically provided, be given in writing by United States mail or Western Union Telegram, postage or charges prepaid, and addressed to the party to whom the notice is given at the

addresses listed on Exhibit "A". The originating notice to be given under any provision hereof shall be deemed given only when received by the party to whom such notice is directed and the time for such party to give any notice in response thereto shall run from the date the originating notice is received. The second or any responsive notice shall be deemed given when deposited in the United States mail or with the Western Union Telegraph Company, with postage or charges prepaid. Each party shall have the right to change its address at any time, and from time to time, by giving written notice thereof to all other parties.

31. OTHER CONDITIONS, IF ANY, ARE:

This agreement may be signed in counterpart, and shall be binding upon the parties and upon their heirs, successors, representatives and assigns.

OPERATOR

ATTEST:

JOHN H. HENDRIX CORPORATION

By: _____

President

Secretary

NON-OPERATORS

ATTEST:

CAL-MON OIL COMPANY

By: _____

ATTEST:

HARVEY E. YATES COMPANY

By: _____

E X H I B I T " A "

Attached to and made a part of Operating Agreement
dated January 26, 1979, between John H. Hendrix Corporation as
Operator and Cal-Mon Oil Company and others as non-operators.

1. Lands Subject to Contract:

Township 14 South, Range 36 East, N.M.P.M.

Section 8: E/2
Lea County, New Mexico

containing 320 Acres more or less.

2. Restrictions as to Formations and Depths:

From the top of the Wolfcamp to deepest depth
drilled in the initial Test Well.

3. Percentage Interests of the Parties to this Agreement:

John H. Hendrix Corporation, Cal-Mon Oil Company et al	37.5%
Harvey E. Yates Company	62.5%
	<u>100.0%</u>

4. Names and Addresses of the Parties hereto for Notice purposes:

John H. Hendrix Corporation
525 Midland Tower
Midland, Texas 79701

Harvey E. Yates Company
P.O. Box 1933
Roswell, New Mexico 88201

Cal-Mon Oil Company
P.O. Box 2066
Midland, Texas 79701

EXHIBIT "C"

Attached to and made a part of Operating Agreement dated
January 26, 1979 between John H. Hendrix Corporation
as operator and Cal-Mon Oil Company and others as
non-operators

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 I. 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%).

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:

- (☒) 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 (☒) 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 \$ 2500.00
Producing Well Rate \$ 150.00

- (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 Basis

(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 9 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 \$ _____:

A. _____ % of total costs if such costs are more than \$ _____ but less than \$ _____; plus

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

C. _____ % 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

- COPIES
- (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 "D"

SCHEDULE OF INSURANCE

Unit Operator shall carry and require its contractor and sub-contractors to carry the following insurance at the expense and for the benefit of the parties hereto covering its operations under the terms of this agreement, to-wit:

1. Workmen's Compensation Insurance as required by the laws of the State of New Mexico.
2. Employer's Liability Insurance with minimum limits as required by the laws of the State of New Mexico
3. Contractor's or Comprehensive General Public Liability Insurance with minimum limits of at least \$100,000.00 for injuries to one person; \$300,000.00 for injury in one accident and \$100,000.00 for property damage in one accident.
4. Automobile - Public Liability and Property Damage Insurance (with an endorsement covering non-owned and hired cars) with minimum limits of at least \$100,000.00 for injuries to one person; \$300,000.00 for injuries in one accident and \$100,000.00 for property damage in any one accident.
5. Insurance coverage on equipment as the operator deems necessary for the protection of the joint account.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
State Land Office Building
Santa Fe, New Mexico
2 March 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of Harvey E. Yates
Company for compulsory pooling,
Lea County, New Mexico;

and

Application of John H. Hendrix
Corporation for compulsory pooling,
Lea County, New Mexico.

CASE

6483

6488

BEFORE: Joe Ramey

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation
Division:

Lynn Teschendorf, Esq.
Legal Counsel for the Division
State Land Office Building
Santa Fe, New Mexico 87503

For the Applicant:

H.A. Losey, Esq.
LOSEY, CARSON & DICKERSON
Attorneys at Law
Artesia, New Mexico

For the John H. Hendrix
Corporation:

Conrad Coffield, Esq.
Harold Hensley, Esq.
HINKLE, COX, EATON, COFFIELD &
HENSLEY
Attorneys at Law
Midland, Texas

Observer:

Richard L. Stamets

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611 Old Santa Fe Trail - Suite 7
Santa Fe, New Mexico 87501

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ANDREW LATTU

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GEORGE YATES

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1 MR. RAMEY: Call Case 6483.

2 MS. TESCHENDORF: Case 6483, Application of
3 Harvey E. Yates Company for compulsory pooling, Lea County,
4 New Mexico.

5 MR. LOSEY: H.A. Losey, Losey, Carson and
6 Dickerson, Artesia, New Mexico, appearing on behalf of the
7 applicant.

8 MR. COFFIELD: Conrad Coffield and Harold
9 Hensley with the Hinkle law firm appearing on behalf of
10 John H. Hendrix Corporation.

11 MR. RAMEY: Mr. Coffield, would you like to
12 have Case 6488 consolidated with this case for the purpose
13 of testimony?

14 MR. COFFIELD: I think that they could very
15 well be consolidated.

16 MR. RAMEY: All right. We will consolidate
17 the cases and call 6488.

18 MS. TESCHENDORF: Case 6488, Application of
19 John H. Hendrix Corporation for compulsory pooling, Lea
20 County, New Mexico.

21 MR. COFFIELD: Conrad Coffield again appearing
22 on behalf of the applicant with Harold Hensley.

23 MR. LOSEY: H.A. Losey, appearing on behalf of
24 the protestant, Harvey Yates Company.

25 MR. RAMEY: Ask that all witnesses stand at

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1 this time and be sworn.

2 (Witnesses sworn.)

3 MR. RAMEY: Mr. Losey, you may proceed.

4 MR. LOSEY: We are marking some exhibits here.

5 Mr. Chairman, would you like me to start the proceedings.

6 MR. RAMEY: Yes, go ahead, Mr. Losey.

7 ANDREW LATTU

8 being called as a witness and having been duly sworn upon
9 his oath, testified as follows, to-wit:

10 DIRECT EXAMINATION

11 BY MR. LOSEY:

12 Q Would you state your name, residence and
13 occupation?

14 A Andrew Lattu, Midland, Texas, I'm a geologist
15 with Harvey E. Yates Company.

16 Q Have you previously testified before the
17 Commission as an expert witness and had your qualifications
18 as a geologist made a part of the record?

19 A Yes, I have and they are.

20 MR. LOSEY: Are Mr. Lattu's qualifications
21 acceptable, Mr. Chairman?

22 MR. RAMEY: They are acceptable.

23 BY MR. LOSEY:

24 Q Would you please turn to what has been
25 marked as Exhibit One and explain what is portrayed by this

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1 exhibit?

2 A This is a land plat in Lea County, New Mexico,
3 Township 14 South Range 36 East. Our company is designated
4 the MacDonald Area and have the proposed location of
5 approximately fourteen thousand foot test. In the southeast
6 of the southwest quarter of Section 8.

7 Q You propose to dedicate what acreage to this
8 well?

9 A South half of Section 8.

10 Q Is this acreage part of a working interest
11 unit comprising not only land in Section 8, but lands in
12 adjoining sections?

13 A Yes, it is.

14 Q Does either Harvey Yates Company or the unit
15 itself have control over the acreage in the South half of
16 Section 8? Are they operator of the acreage?

17 A For most of it.

18 Q Well, which portion are they not operator of?

19 A It would be the Northeast of the Southeast
20 quarter of Section 8, of just the South half. Is that what
21 you mean?

22 Q Yes. So they control two hundred eighty of
23 that three hundred twenty acre tract?

24 A Yes, that's correct.

25 Q What is the objective formation or formations

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1 in this proposed well?

2 A This is a Pennsylvanian Prospect. The well
3 would TD into the Mississippian. The two most prospective
4 zones are the upper and lower Pennsylvanian.

5 Q Now, In the South half of Section 8, how much
6 of that spacing unit is comprised of lands leased from the
7 state of New Mexico?

8 A In the South half approximately 50% or 160
9 acres is state land.

10 Q In the East half of Section 8, how much of
11 that is land leased from the state of New Mexico?

12 A In the East half, it would be approximately
13 three-eighths or 120 acres.

14 Q It would be exactly 120 acres, wouldn't it,
15 Mr. Lattu, not approximately?

16 A Okay.

17 Q Turn to what's been marked Exhibit Two and
18 explain what is reflected on this exhibit.

19 A This is a Pennsylvanian structure map, the
20 contour interval is 50 foot. The scale is one inch equals
21 4,000 feet. This is contoured on the top of the Pennsyl-
22 vanian. The reason I used the top of Pennsylvanian on this
23 particular map is that most of the control in this area is
24 Pennsylvanian. A deeper control horizon than say the base
25 of the Pennsylvanian would only have -- well, from Section

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1 8 North it would only have two control points. That would
2 be the well up in Section 32 of 13 South 36 East and the
3 well over in Section 3 of 14-36. The rest of these wells
4 all TD'd in the Upper Pennsylvanian. The Pennsylvanian in
5 this area is a very good mapping horizon and it reflects a
6 deep structure. The structure in this area consists of
7 a Northeast/Southwest trending anticline, with small build-
8 ups or wrinkles along the top. This is shown both from
9 sub-surface and seismic we have in the area. Recently
10 participated with adobe on a well drilled on the East half
11 of Section 17 of 14-36 and we have a dip meter that was run
12 in the Pennsylvanian down to the Mississippian on that well.
13 This dip meter in the Pennsylvanian interval indicated
14 Northeast dip and, as you see, it's located on the Northeast
15 end of the small nose on the overall anticlinal feature.
16 There is dip from the well in Section 4 of 14-36. You see
17 a high point there of a minus 6535, which then dips to
18 minus 6683 and then dips further to the Southwest in Section
19 9 to a minus 6777. We have Northeast dip established along
20 this feature by the Phillips Well in the Southwest corner
21 of Section 17 with the sub-C of a minus 6646, which dips
22 to the adobe-Hannah Well in Section 17 to a minus 6711. So
23 we have dip going from the Northeast, dipping to the South-
24 west and dip in the Southwest towards the Northeast. This
25 supports this structural low I have contoured in the East

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1 half of Section 8.

2 Q Let's turn to what's been marked as Exhibit
3 Three.

4 A Exhibit Three is a stratographic cross-section.
5 I have a little index map on the side. It's a north-south
6 cross-section. This is a north-south stratographic cross-
7 section hung on the top of the Lower Morrow, also known as
8 the Austin-Mississippian zone. This cross-section, starting
9 at your left, is the Adobe State 16 Well located in the
10 Southwest quarter or Section 16. It then goes to the Adobe-
11 Hannah Well in Section 17. Then comes to the Texas Crude-
12 Richardson, which is Section 5. And finally on the right,
13 or the North end of the cross-section, is the Superior Well
14 in Section 32 of 13-36. The upper top Pennsylvanian is the
15 mapping horizon on the structural map is contoured on. You
16 can see I have indicated an Upper Pennsylvanian bank. This
17 bank is present in the State 16 Well and is approximately
18 150 feet thick. It thickens to about 330 feet of porous
19 dolomite in the Adobe No. 1 Hannah Well and is not present
20 in the Texas Crude-Richardson Well in Section 5. Referring
21 to Exhibit Two, the structure map, you can see that the
22 presence of this bank is closely associated with the struc-
23 ture that the Adobe-Hannah Well, being high to the State 16,
24 has a much thicker section; that the Texas Crude Well
25 located in Section 5, which is lower, the bank is not

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1 present at all. Our proposed location in Section 8 is the
2 most prospective orthodox location for this Upper Pennsyl-
3 vanian bank in Section 8.

4 Q Why do you feel like your location in the
5 Southeast of the Southwest is better than a location in the
6 Northeast of the Southeast, Mr. Lattu?

7 A Well, this bank is -- the development of the
8 bank is very closely associated with structure and our
9 proposed location is structurally the most favorable, both
10 from sub-surface mapping and seismic. I believe as you
11 move over into the East half where the structural low comes
12 in, the bank will either not be present or will be thin and
13 tight. Referring to the next prospective zone, which is
14 the Lower Morrow, as you see in the State 16 we have a
15 fairly good porosity development of this neutron density
16 log. As you move to the Hannah, again we have a section with
17 pretty fair indications of porosity, although this well
18 has not yet been completed. When we come to the Texas
19 Crude-Richardson Well in Section 5, which TD'd in the East
20 Chester, this section is thinned quite a bit. In fact,
21 from the State 16 to the Adobe-Hannah Well, the section has
22 thinned and seems to continue thinning to the North. The
23 Texas Crude-Richardson Well did attempt completion in this
24 zone and were unsuccessful. They perforated and gave it
25 three acid treatments but were never able to establish

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1 commercial production from the zone. So the zone appears
2 to thin and become tight as you move further North in this
3 area along this structural feature. The Superior Well, the
4 section is present and again it is thinner than down in
5 either the Adobe-State 16 or the Adobe-Hannah. And by log
6 analysis appears tight. Our proposed location, trying to
7 stay as close to the South line of Section 8 as possible,
8 therefore is close to crude and porosity and closer to
9 known production in this zone, is also the most favorable
10 orthodox location in Section 8.

11 Q Mr. Lattu, from your Exhibit Two have you
12 held the number of wells that were drilled to the Pennsyl-
13 vanian?

14 A Yes, I have.

15 Q How many wells were drilled?

16 A The wells that I have contoured in this inter-
17 val here, 22 wells reached the Pennsylvanian.

18 Q How many of those wells were completed and
19 will return the cost of drilling and operating expenses up
20 to the date of pay-out?

21 A Three of these wells have. The Adobe State
22 16 has not gone on production yet, though we have every
23 indication that will be a successful well. The wells that
24 have paid-out, made enough hydrocarbons to have paid-out
25 only three. Two of them completed in the Pennsylvanian,

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1 which were oil wells, and the third one is the Phillips
2 Well in Section 16, which was a gas well down in the Austin
3 pay zone.

4 Q So there is only three out of 22 wells that have
5 tested the Pennsylvanian on this map that have paid out?

6 A Yes.

7 MR. RAMEY: Mr. Lattu, did you say the Phillips
8 Well was in 16 or 17?

9 THE WITNESS: 17. The Adobe State 16 is over
10 in 16, but it has not yet been put on line. But is has
11 been completed and treated and certainly appears that it will
12 be a successful well.

13 BY MR. LOSEY:

14 Q Do you have an opinion as to what would be
15 a reasonable risk factor to assess -- for drilling a well
16 at your proposed location?

17 A I feel 500% penalty would be fair.

18 Q Well, if you assume that the authority given
19 to the Commission by the Legislature is 200%, would you say
20 200%, the maximum penalty, would be reasonable?

21 A If that's the maximum penalty, yes.

22 Q Were exhibits One through Three prepared by
23 you?

24 A Yes, they were.

25 MR. LOSEY: I move the introduction of

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1 Exhibits One through Three.

2 MR. RAMEY: Exhibits One through Three will
3 be admitted.

4 BY MR. LOSEY:

5 Q One other question. Do you believe the pooling
6 of interests in the South half of Section 8 will avoid the
7 drilling of unnecessary wells?

8 A Yes, I do.

9 MR. LOSEY: I think it's all on the Direct
10 Examination.

11 MR. RAMEY: Any questions of the witness?

12 MR. HENSLEY: Yes sir.

13 CROSS EXAMINATION

14 BY MR. HENSLEY:

15 Q If the Commission please. In connection with
16 your structure map, Mr. Lattu, I'd like to direct your
17 attention to the contours which you show immediately to the
18 West of your proposed location in the South half of Section
19 8. That contour takes a dip, structured contour into
20 Section 7. What's the basis for that mapping configuration?

21 A Well, in Section 7 I have a control point
22 there of a minus 6745. Is that what you mean?

23 Q Yes. But I believe your direct testimony
24 showed the dip reflected by that control point in the Hannah
25 Well showed a Northeast dip. Yet you mapped the structural

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1 change to Northwest.

2 A No. The Hannah Well is on the Northeast end
3 of the structural nose, and that is directly supported by
4 the dip meter, which shows Northeast dip.

5 Q Now, as I understand your cross-section map
6 here, you have indicated that the proposed location is
7 advisable because of its location regarding the Upper Penn
8 bank which you described on the cross-section, is that right?

9 A Yes.

10 Q Is the Upper Penn bank productive in the
11 immediate area surrounding the proposed location?

12 A No, it is not.

13 Q By the way, in the Hannah Well, which was one
14 of your key wells for your structure map, immediately South
15 in the Northeast quarter of Section 7 did it intersect this
16 Upper Penn bank?

17 A No you mean Northeast quarter of Section 17?

18 Q 17, I am sorry. Yes.

19 A Yes, the bank is present there.

20 Q Was there any production test or drill stem
21 test conducted?

22 A Adobe did not test it.

23 Q Was there any fluid indicated?

24 A Log analysis reveals 30 to 40 percent of water
25 saturation across that interval.

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1 Q You indicated that your examination of the
2 logs of these wells, particularly, I believe, you made
3 reference to the Sinclair-Richardson Well, which is in the
4 Southwest quarter of Section 5, is that correct?

5 A Yes.

6 Q Showed a thinning in this Chester lime, is
7 that correct?

8 A Yes. You mean the Austin Pay interval?

9 Q The Austin Pay interval.

10 A Yes, it is thinner there.

11 Q Do you know how many feet of pay were perfor-
12 ated in that well in that zone?

13 A I believe approximately 20 to 30 feet were.

14 Q If I indicated to you that only eight feet
15 of the upper porosity was penetrated, would that refresh
16 your recollection?

17 MR. RAMEY: Is that penetrated or perforated?

18 BY MR. HENSLEY:

19 Q Perforated.

20 A You mean the interval perforated?

21 Q The upper eight feet of the total porosity
22 section.

23 A There is only approximately eight feet of
24 indicated porosity by log anyway, but they perforated it
25 and treated it with several acid jobs and were never able to

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1 establish more than a few hundred Mcf.

2 Q I believe you indicated in the course of your
3 direct testimony that this was confirmation that supported
4 your opinion that this zone was thinning then to the North
5 and to the East?

6 A It's thinning to the North.

7 Q There is no basis for a statement that there
8 is any thinning at all to the East, is there, Mr. Lattu?

9 A We have no other control points until you get
10 all the way over to Section 3, where this interval is pre-
11 sent.

12 Q Now, in Section 3, I suppose you have reference
13 to the Zapata-Davidson Well, is that correct?

14 A Yes, I do.

15 Q How much net porosity is shown on the log in
16 this section, in the Zapata Well?

17 A The Zapata Well is cut by fault and on the
18 down side, but it has large sections of porosity at least
19 by log. It was never tested.

20 Q There was over 80 feet, wasn't it?

21 A To my recollection, yes.

22 Q Isn't this confirmation, sir, that there is
23 in fact no thinning to the North and to the East?

24 A Well, it thins to the North as shown by this
25 cross-section. This Zapata Well is on the down side of

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1 a fault and on the flank of apparently another feature.

2 Q Off of the access to the East of the access
3 taken the Superior Well and Sinclair-Richardson Well, to
4 the East, the Zapata Richardson Well confirms that there
5 isn't a thinning as you move into easterly direction, isn't
6 that correct?

7 A The Zapata Well is thicker than any other
8 well that penetrated that section.

9 Q Now, you've indicated that a lot of your
10 control in this area, if I understood your response to Mr.
11 Losey's question, was based on the substantial number of
12 wells which had intersected Pennsylvanian formation?

13 A Yes.

14 Q How many of those Pennsylvanian wells shown on
15 your structure plat penetrated the Austin Pay?

16 A Let's see. There's Section 32, Section 3.
17 So there's two. The Hannah Well would be three. Phillips
18 would be four. State 16 would be five. Down in Section 19,
19 which is South of the area Under discussion, would be six,
20 and Section 24 would be seven.

21 Q Seven out of what, approximately 25?

22 A I believe I used 22 as the number of wells
23 that I had points on.

24 Q 22?

25 A Yes. So the density control in the Pennsylvanian

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1 is much more than -- especially when you get North of the
2 Phillips Well.

3 Q Now, you indicated that the Pennsylvanian
4 section was a pretty good indication of structure in your
5 deeper zones, is that correct?

6 A Yes sir. It's a good indication. It varies
7 somewhat, but it's --

8 Q There are certainly exceptions in this area
9 when you consider the possibility of a reef deposition?

10 A Oh, yes.

11 Q What about the anomalies which are indicated
12 to be present in this particular Austin Pay? Are those
13 consistent with reflections on structure in the Pennsylvan-
14 ian?

15 A No. They seem to be not controlled by structure.
16 It's just as you move North is where you find this Austin
17 Pay zone is tight. Phillips Well is unique in that it's
18 the only well with known production from this zone.

19 Q To your knowledge, has this pay been tested
20 in a Hannah's Well, Adobe-Hannah's Well to which you have
21 made reference?

22 A No, it has not been tested. It looks good on
23 the logs. That's all we have at this time, until it's
24 perforated.

25 Q How much net porosity do you have in the

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1 section in the Hannah's Well?

2 A Approximately 60 feet.

3 Q Does it allocate to be productive of hydrocarbon?

4 A Yes, it does.

5 Q Now, if I understood your answer to Mr. Losey's
6 final question, you are suggesting a five hundred percent
7 penalty in this case, Mr. Lattu?

8 A Yes, this is the penalty we have in the unit --
9 the operating unit to the South. And considering fourteen
10 thousand foot well with both structural and stratographical
11 risk, I would consider that fair.

12 Q Are you aware of the fact that the maximum
13 allowable penalty is two hundred percent?

14 A Yes, I have been told that.

15 Q Less than half of what you recommend as
16 reasonable?

17 A Yes.

18 Q If the Commission please, just a couple of
19 clarifying questions on a point which I had asked Mr. Lattu
20 about, but I want to be certain that I understand this
21 question. I want to direct your attention, sir, to the
22 well which is located in the Northeast quarter of Section
23 17, which I believe is the Adobe-Hannah Well, is that
24 correct?

25 A Yes.

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1 Q Now, in your direct testimony you did testify,
2 did you not, that the dip meter indications showed a North-
3 east trending dip?

4 A On the Pennsylvanian interval, yes.

5 Q Will you explain again to the Commission how
6 that justifies the struture mapping to the North and to the
7 West, which you show on your structure map? Is it based on
8 this dip meter reading?

9 A Well, I had actually made this map before I
10 saw the dip meter. The dip meter just came into my office
11 yesterday, and I was pleased to see it did show Northeast
12 rather than Southwest dip.

13 Q Well, if the --

14 A This is on the end of a nose, which the nose
15 is dipping to the North,, Northeast. This second little
16 feature, as I discussed in my testimony earlier, they have
17 a large anticlinal feature here. The Pennsylvanian shows --
18 it's not a regular, just a roll over and back down to the
19 West. But it shows a roll over on the Phillips Well and
20 a second roll over further to the West and that's what that
21 interpreted contour is. It's based on seismic lead or the
22 indication of seismic. There is additional buildup within
23 the Pennsylvanian to the West.

24 Q If the dip meter was not the principle basis
25 for the mapping, since you only got it yesterday, do I

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1 understand that it was this Upper Penn bank which you uti-
2 lized for the interpretive projection?

3 A No, this is just a map on the top of the Penn.
4 There is this bank present here. There could either be this
5 well developed across the nose, but it could be built up.
6 It's not a uniform type thinning in size.

7 Q With the structure thinning to the Northeast,
8 doesn't that change what the indication should be to the
9 North and West of the Hannah's as far as your interpretive
10 structure is concerned? And is shown on your map?

11 A No, I don't believe it would.

12 Q It wouldn't have any affect if the trend was
13 strictly Northeast?

14 A The structural trend of this is Northeast.
15 The dip meter shows Northeast dip. The bank however is
16 probably centered more in Section 17 and possibly over into
17 the East half of Section 18.

18 Q Well, if the dip meter had indicated a
19 North, Northwest trend, that would be a complete confirmation
20 of your structural interpretation, wouldn't it?

21 A I guess it depends on where you're at on the
22 nose.

23 MR. HENSLEY: No further questions.

24 MR. RAMEY: Any other questions of the witness?

25 Mr. Stamets.

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CROSS EXAMINATION

BY MR. STAMETS:

Q Mr. Lattu, in Section 17 and 18 you have drawn two separate highs at the minus 6700 foot contour?

A Yes.

Q What's the basis for that as opposed to drawing one single high zone such as you've got in the North and the East?

A I base that -- we participate in a seismic line that ran East/West through approximately the middle of Section 18, 17, 16, and into 15. The purpose of the seismic line was to more clearly identify the structural feature and locate the fault that I have marked on the East side. This seismic showed in the Pennsylvanian section a double roll over along what was interpreted seismically as the top of the Pennsylvanian. So I took that as a lead to draw two separate small features as opposed to one larger one.

MR. RAMEY: Any other questions?

MR. LOSEY: I think that's all.

MR. RAMEY: Mr. Hensley?

MR. HENSLEY: I'd like one additional question, if I may?

MR. RAMEY: Go ahead.

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RE-CROSS EXAMINATION

BY MR. HENSLEY:

Q On the cross examination by Mr. Stamets with reference to the seismic indications, have you shown any seismic points on the structure map?

A No, I have not.

Q Do you know where the seismic line went, what portion of this section was intersected by the line?

A You mean where the line is located on the map?

Q Yes.

A All right. The seismic line located on the map would be right across the middle section -- it's the East/West line. State at the western boundary of Section 18, would go across the middle of 18, the middle of 17 and the middle of 16 and ended halfway across Section 15, going right along the mid-section line.

Q Do I understand that this seismic reading in the middle of Section 17 and 18 is used for interpretive mapping of structure in Section 7 and 8? Is that reasonable, in your opinion, Mr. Lattu, as a geologist?

A How do you mean in Section 7 and 8?

Q Well, you've got your structure drawn which you indicated was tied into and confirmatory of your seismic indications.

A I have my sub-surface map and I just work the

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1 seismic -- what the seismic indicates into supporting my
2 sub-surface mapping.

3 Q As a geologist, would you feel that a seismic
4 indication in the middle of Section 17, for example, would
5 give any indication as to what the nature of structure was
6 in the South half of Section 8?

7 A Yes.

8 Q You would?

9 A Yes.

10 Q What is the reliability of a seismic reflec-
11 tion from a diameter standpoint, do you know?

12 A What do you mean by diameter?

13 Q How far outlying horizontally?

14 A Seismic indication. It's measure of the
15 velocity of energy that's put into the ground and when it
16 comes back to you. Certain seismic events are associated
17 to be indicative of a geological, both stratigraphy and
18 structure in the area. We're looking here at a Northeast/
19 Southwest trending anticline with a fault on the East side.
20 The seismic will see the fault and the seismic will show
21 irregularities along the surface or the top of this large
22 structural feature. These can be worked in the sub-surface
23 points I have, and what I consider refining my sub-surface
24 contour, although it is an interpretation on my part.

25 Q Considering the structure which you have

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1 mapped in the center of Section 17, the seismic line which
2 runs through the middle from and East/West direction would
3 not be any support for your structure enclosure along the
4 South line of Section 8, would it?

5 A Indirectly, it is, in the fact that it's
6 worked into my sub-surface. I have sub-surface points all
7 the way up to Section 5, which show dips going down this
8 direction. That's on the Northwest flank of this structural
9 feature.

10 Q This enclosure which you reflect between the
11 proposed location in the South half of Section 8 and the
12 Adobe-Hannah Well, is strictly interpretive from sub-surface
13 data?

14 A Yes, it is.

15 MR. HENSLEY: No further questions.

16 MR. RAMEY: Do you have any questions?

17 MR. LOSEY: No further questions.

18 MR. RAMEY: The witness may be excused.

19 GEORGE YATES

20 being called as a witness and having been duly sworn upon
21 his oath, testified as follows, to-wit:

22 DIRECT EXAMINATION

23 BY MR. LOSEY:

24 Q Would you state your name, residence and
25 occupation?

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1 A My name is George Yates. I'm from Roswell,
2 New Mexico. I'm Vice President of Harvey E. Yates Company.

3 Q Mr. Yates, turning back to it, do you have a
4 copy of Exhibit One?

5 A Yes, I do.

6 Q Is Harvey Yates Company a party to a working
7 interest unit that covers, among other lands, a portion of
8 the South half of Section 8?

9 A Yes, that's correct.

10 Q What other area does it cover?

11 A The working interest unit covers the West
12 half of West half of Section 8, the Southeast, Southwest
13 of Section 8, all of Section 7 and the North half of Section
14 18.

15 MR. RAMEY: Would you go over that again,
16 please, Mr. Yates?

17 MR. YATES: The working interest unit covers
18 the West half West half of Section 8, the Southwest, Southeast
19 of Section 8, all of Section 7, the North half of Section
20 18.

21 MR. RAMEY: Thank you.

22 BY MR. LOSEY:

23 Q Who are the parties to that working interest
24 unit?

25 A The largest party with the working interest

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1 in that unit are Yates Petroleum Corporation, National
2 Refineries Cooperative Association, AMOCO and MARALO.

3 Q Now, have any of those parties farmed out for
4 the drilling of the proposed well that is your proposed well
5 in the Southeast, Southwest of Section 8?

6 A Yes, that's correct. We have farmouts from
7 AMOCO Production Company, From National Cooperative Refiner-
8 ies Association, and from MARALO.

9 Q And they are to be units as such?

10 A They are to the unit, that's correct.

11 Q So the unit acreage as far as your South half
12 of spacing unit, covers the West half Southwest and the
13 Southeast, Southwest?

14 A That's correct.

15 Q Now, who owns the rest of the acreage in the
16 South half of Section 8?

17 A The balance of the acreage in the South half
18 of Section 8 is owned by our company, Harvey E. Yates Com-
19 pany, with the exception of 40 acres in the Northeast of
20 the Southeast, which is owned by various parties in partner-
21 ship with Cal-Mon Oil Company.

22 Q So that from what you say, Harvey Yates Com-
23 pany owns the fee lease that covers the Northeast of the
24 Southwest, the West half of the Southeast, and the Southeast,
25 Southeast of Section 8?

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1 A That's correct.

2 Q Now, when did you determine to drill this well
3 to the proposed location?

4 A We determined to drill this well on the
5 proposed location in consultation with Yates Petroleum and
6 in consultation with some of the other working interest
7 owners in the unit I have described approximately the 20th
8 of January.

9 Q Did you discuss this proposed drilling of the
10 well with any representative of Cal-Mon Oil Company?

11 A On January 22nd or 23rd I gave Bob Monaghan,
12 President of Cal-Mon Oil Company, a telephone call. I was
13 in Midland. I was present in our Midland office. I called
14 him specifically to invite him to join us in drilling a
15 well.

16 Q Did you receive a response from your invitation?

17 A Bob's response was that he had several partners
18 in his lease and to -- and that they all spoke independent-
19 ly so he needed some information in the area to show them.
20 He asked me if we had any information we'd share. I said
21 certainly we did. I invited him over to the office.

22 Q Did he come to the office and discuss this
23 proposed well with you?

24 A Yes, he did.

25 Q Generally, what was the gist of that

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1 conversation?

2 A Andy Lattu and myself met with Bob and Toby
3 Carlson. I repeated our invitation to have Cal-Mon join
4 the South half proposed unit, working interest unit, to
5 participate as a working interest owner to their one-eighth
6 interest. Or alternatively, farm out to us on the same
7 basic terms that we have received farm outs under the unit.

8 Q And what were those terms?

9 A Terms under which the farmouts came to us were
10 one-sixteenth reserved overriding royalty convertible at
11 payout to a 40% working interest. Let me say that those farm-
12 outs were under the acreage I described and were owned by
13 one well. The farm out that I offered Cal-Mon was the same
14 farm out. However, we would be earning under only one
15 proration unit.

16 Q Your farm outs in the unit actually cover all
17 of the acreage of AMOCO, MARALO and National Cooperative
18 Refinery?

19 A That's correct.

20 Q Did you receive an answer at that time?

21 A I did not receive an answer. We discussed the
22 relative position of Cal-Mon versus our company. There was
23 some objection in that conversation to Cal-Mon joining with
24 us without advantage of additional farm out. I at that
25 point offered some alternatives and one thing I said we

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1 could consider would be putting the acreage in all of
2 Section 8 outside of the other existing working unit into
3 another working interest unit to increase their ownership.
4 There was no resolution of the problem at this discussion.
5 However, when the meeting broke up, they were going to their
6 joint interest partners to decide what course they were
7 going to take. Of course, I fully expected an acceptance
8 of a farm out or participation.

9 Q Did they say they would let you know?

10 A That's my recollection.

11 Q Did you receive a response on your invitation
12 to join or to farm out?

13 A Well, I received an indirect response when our
14 staff read in the Midland paper that another location had
15 been staked.

16 Q And that was the John Hendricks Corporation
17 location in the Northeast of the Southeast of Section 8?

18 A That's correct.

19 Q Did you learn at that time that they proposed
20 to dedicate the East half of Section 8 to the well?

21 A Yes, I did.

22 Q When you talked to the Cal-Mon President and
23 geologist, did they have any maps of this area or any plans
24 to drill a well at that time that they told you about?

25 A No, they did not.

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1 Q They did not have any maps?

2 A They did not have any maps.

3 Q Did they say they were proposing to drill a
4 well at that time?

5 A No, they did not.

6 Q On the day you learned that they had or you saw
7 the location in the Midland paper, what action did Harvey
8 Yates Company take?

9 A I instructed Bob Strand of our office to
10 call in application for forced pool under the South half
11 of Section 8.

12 Q And you control or the unit controls seven-
13 eighths of the acreage in the South half of Section 8?

14 A That's correct.

15 Q You control five-eighths of the acreage in the
16 East half of Section 8?

17 A That's correct.

18 Q And John Hendricks Corporation controls three-
19 eighths of it?

20 A That's correct.

21 Q Mr. Yates, Did you furnish to Cal-Mon or John
22 Hendricks Corporation an AFE for drilling this well?

23 A Yes, we did.

24 Q Do you have a copy of it with you?

25 A No, I don't. I do now.

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1 Q Let's mark this as an exhibit. What are the
2 costs shown on that AFE for drilling a dry hole?

3 A Six hundred four thousand dollars.

4 Q What are the costs shown on that AFE for
5 drilling and leading a producer?

6 A Nine hundred thirteen thousand five hundred
7 dollars.

8 Q What zone would that be completed in?

9 A This would be completed in what's referred to
10 as the Austin Pay.

11 Q And that's the zone that has produced about
12 four billion cubic feet in the Phillips Well in Section 17
13 and the zone in which you are presently, Adobe is presently
14 completing the Hannah Well in the Northeast quarter of
15 Section 17?

16 A That's correct.

17 Q Did you submit to Cal-Mon a joint operating
18 agreement?

19 A Yes, we did.

20 Q And were the costs for a drilling well set
21 forth on an accounting procedure attached to that joint
22 operating agreement?

23 A For operating the well?

24 Q Yes.

25 A Yes, sir, that's correct.

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1 Q Are those costs \$270 per well?

2 A Yes, they were.

3 Q And were those costs on a drill well rate
4 \$2700?

5 A Yes.

6 Q And each of those are per month?

7 A Yes, that's correct.

8 Q What is the penalty for a non-consent owner
9 under this working interest unit agreement to which you
10 previously testified?

11 A The non-consent penalty under the working
12 interest unit to the West of the location we have staked
13 is 500%.

14 Q And recognizing that the Commission's authority
15 is 200%, do you feel like the maximum risk is appropriate in
16 this case?

17 A I do. I might point out also that where non-
18 operating working interest owners under a unit directly to
19 the South operated by Adobe. Those non-consent penalties
20 in their operating agreement are 500% also. This is recog-
21 nized as a result of these two units in the area as being a
22 very high risk area.

23 Q Mr. Yates, approximately how many deep wells
24 does Harvey Yates Company operate in Southeastern New
25 Mexico?

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1 A Approximately 30.

2 MR. LOSEY: I believe that's all the direct
3 examination.

4 MR. HENSLEY: If the Commissioner please?

5 MR. RAMEY: Mr. Hensley.

6 MR. HENSLEY: A few questions.

7 MR. RAMEY: Mr. Losey, do you want to offer
8 Exhibit Four?

9 MR. LOSEY: Yes sir. Is this the AFE that you
10 prepared?

11 THE WITNESS: Yes, it is.

12 MR. LOSEY: We offer Exhibit Four.

13 MR. RAMEY: It will be admitted.

14 MR. LOSEY: Thank you, Mr. Chairman.

15 CROSS EXAMINATION

16 BY MR. HENSLEY:

17 Q If the Commission please. Mr. Yates, You
18 inidcated in the course of your direct testimony that Harvey
19 Yates Company was the operator of this working interest
20 unit to the West, is that correct?

21 A No, I didn't. I said we operated that portion
22 of the unit which was in the South half of Section 8.

23 Q I see. Is it not correct, sir, that originally
24 when it was considered by the other working interest owners
25 in your unit, namely Yates Petroleum Company and AMOCO, to

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1 drill a well in this Section 8, that proposal for the
2 drilling unit was in the West half of Section 8?

3 A An independent land man in Midland was
4 attempting to put a unit together which included the West
5 half of Section 8. We had not agreed to go in that unit for
6 one specific reason, because the West half of Section 8,
7 we thought, was an inappropriate initial location.

8 Q Did the fact that you own 120 acres in the
9 West half, 160 acres in the South half have anything to do
10 with your feeling with respect to the viability of that
11 proposed West half unit?

12 A No, it didn't.

13 Q Nothing?

14 A Nothing.

15 Q Isn't it a fact, Mr. Yates, that Yates
16 Petroleum Corporation in fact recommended that the drilling
17 unit comprise the West half?

18 A Not to my knowledge.

19 Q How about AMOCO Production Company?

20 A Not to my knowledge.

21 Q If they had recommended that the drilling unit
22 be a stand up unit comprising the West half would you have
23 been involved in those determinations?

24 A If they had recommended the unit unitize the
25 West half ?

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1 Q Yes.

2 A We would have not been a participant in the
3 well.

4 Q But once you found out that the West half was
5 proposed, you refused to participate, is that correct?

6 A I never understood that AMOCO or any of the
7 other unit owners were recommending the West half. I was
8 informed by a land man in Midland trying to put together a
9 unit that his unit included the West half. I discussed the
10 unit with him and told him we would be unwilling to unitize
11 our acreage in the West half and drill a well.

12 Q You indicated in the course of your negotia-
13 tions with Mr. Monaghan that it didn't appear that they had
14 done any geological studies of this area. Do you know
15 whether or not Yates Petroleum Company has conducted geolo-
16 gical studies of this area?

17 A Yes, they have.

18 Q How about AMOCO Production?

19 A I can't say. I really don't know.

20 Q They have extensive interests in this area,
21 do they not?

22 A They do.

23 Q Now, with regard to this telephone conversa-
24 tion with Mr. Monaghan, Mr. Yates, which I believe you
25 indicated you believed occurred on January 23rd?

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1 MR. LOSEY: I believe he said 22nd or 23rd.

2 BY MR. HENSLEY:

3 Q 22nd or 23rd, correct. I'm sorry. Was the
4 principle discussion at that time whether or not the drilling
5 unit would be the West half of the South half?

6 A No.

7 Q It was not?

8 A No.

9 Q Do you recall that in connection with your
10 proposal for the South half, that Mr. Monaghan suggested that
11 they be allowed to take their proportion at part of all
12 farm out acreage earned as a consequence of drilling a well?

13 A Not in the telephone conversation. In the
14 personal meeting, yes. He did try to make that point.

15 Q Do you recall that in answer to that request,
16 that you said absolutely not and that Monaghan and the
17 other interest owners involved, which owned acreage in the
18 East half, had only three alternatives as far as Harvey
19 E. Yates Company was concerned, is that correct?

20 A You are not quoting me verbatim.

21 Q No, I'm not intending to.

22 A But essentially that is what I said.

23 Q Did you report to --

24 A But however, let me backtrack. I didn't say
25 that they had three alternatives. What in fact I said was

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1 that because we had extensive monies in the area, had spent
2 expensive time, the only way we can reward -- pay back that
3 overhead and expenditure was through earning farm outs. That
4 is, I think it was equitable to share those farm outs. I
5 did not give simply three choices. I also mentioned the
6 choice of perhaps putting a separate working interest in it
7 together to give them a bigger interest in the South half
8 which was I think his objection, or it was what he wanted
9 to do by getting a share of the farm outs. Those were four
10 alternatives.

11 Q Were three of the alternatives that they par-
12 ticipate for one-eighth of the cost, get no benefit from the
13 farm out?

14 A That's correct.

15 Q Farm out for one-sixteenth override until
16 pay out and then convert to a 40% working interest?

17 A That's correct.

18 Q Or that you would force pool them?

19 A In mentioning the force pooling, I had to
20 explain that we had a very short time fuse of our lease.
21 We had to move ahead as quickly as we could. It was not
22 put forward as a threat.

23 Q Well, I didn't intend it to sound that way
24 necessarily. Only the three alternatives were suggested as
25 a course of action which they could follow. Thank you very

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1 much.

2 EXAMINATION

3 BY MR. RAMEY:

4 Q Mr. Yates, I notice this AMOCO acreage has
5 a 3/18/79 expiration date.

6 A Yes, that's right.

7 Q You have to have a well spotted on that day
8 or before?

9 A Yes, that's correct.

10 Q Thank you. So you would need an order then?

11 A Yes sir.

12 Q Previous to that time?

13 A We certainly would.

14 Q If we saw our way clear to grant you an order.

15 MR. RAMEY: Any other questions of the wit-
16 ness?

17 MR. LOSEY: Yes.

18 RE-DIRECT EXAMINATION

19 BY MR. LOSEY:

20 Q I don't know that it's clear, Mr. Yates, but
21 as I understand your testimony on either January 22nd or 23rd
22 you called Mr. Monaghan and invited him to join, and shortly
23 after that he came over to your office with his geologist
24 Mr. Carlson.

25 A That's correct.

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1 Q And that you then had the meeting we're
2 talking about?

3 A That's correct.

4 Q It didn't take place on the phone?

5 A No, it didn't.

6 Q What expenses has the unit and Harvey Yates
7 Company been out in this area in preparing for this well?

8 A We have purchased numerous seismic lines.
9 Of course, we have large acreage holdings. We have tied up
10 weeks of staff time in preparation for this well.

11 Q Do you know what the unit share of seismic
12 work was in dollar numbers approximately?

13 A I would have to go back to give a reasonable
14 guess, but for scientific work we have spent easily in
15 excess of \$50,000. That would be our share.

16 Q One other question. In the spacing unit com-
17 prising the South half of Section 8, does the state of New
18 Mexico have leases covering one half of the acreage in that
19 spacing unit?

20 A That's correct, 160 acres.

21 MR. RAMEY: Mr. Losey, we don't give any
22 preferential treatment to state leases over federal leases
23 or fee leases. So if you're belaboring that point, it's
24 needless.

25 MR. LOSEY: I'm trying to secure the consent

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1 of the other commissioner, enlist his support, Mr. Ramey.
2 I think that's all.

3 MR. HENSLEY: Mr. Ramey, one question if I
4 may of Mr. Yates.

5 RE-CROSS EXAMINATION

6 BY MR. HENSLEY:

7 Q By your drilling of the proposed well, Mr.
8 Yates, in the South half of Section 6, did you require any
9 acreage from Yates Petroleum Company in the South half of
10 Section 7?

11 A We don't propose to drill a well in the South
12 half of Section 6.

13 Q I'm sorry, South half of Section 8.

14 A We're not earning any acreage from the Yates
15 Petroleum.

16 Q One other question. You indicated that you
17 expended some \$50,000 in technical services in connection
18 with this matter. Was all that money relegated and budgeted
19 for a test in the South half of Section 8?

20 A No. That money was expended -- that is a
21 minimum figure which has been expended in the unit area and
22 what we refer to as that MacDonald Area.

23 Q Yes sir. One other question. You indicated
24 that included in the expenditures which you had incurred
25 were monies paid for seismic information?

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1 A That's correct.

2 Q Do you have any seismic information, sir, in
3 closer proximity to the proposed location in Section 8,
4 other than the seismic data which Mr. Lattu referred to
5 running through the center line in Section 17 and 18?

6 A We have bought other lines that were interpre-
7 ted in the interpretation of that -- of those seismic surveys.
8 It was evident in Mr. Lattu's map.

9 Q But are they in closer proximity to that?

10 A No.

11 Q Thank you, sir.

12 A Mr. Lattu corrects me. I stand corrected. We
13 do have North/South seis-line which runs North from the
14 Southeast quarter of Section 17 to the Southwest quarter of
15 Section 16.

16 Q That's further away, is it not, than the
17 location of the seismic line Mr. Lattu earlier discussed?

18 A It ran approximately North to South.

19 MR. RAMEY: Perhaps Mr. Lattu would come and
20 draw that on line.

21 MR. LATTU: It's a North/South seismic line
22 of the data we purchased and a portion of it runs from
23 approximately here South on down to eventually the field to
24 the South.

25 MR. RAMEY: Thank you.

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1 MR. HENSLEY: It's unclear to me, Mr. Ramey,
2 where this line runs. May I ask the witness again, please?

3 MR. RAMEY: He drew it on my map as going --
4 starting at approximately MacDonald on the Section line
5 between 4 and 5 and then proceeding Southward on the section
6 line between 8 and 9 and between 17 and 16 and further South.

7 BY MR. HENSLEY:

8 Q Mr. Yates, are you a geologist sir?

9 A No, I am not.

10 Q As one of the principle owners of the company,
11 were you involved with Mr. Lattu in the technical mapping
12 of the Pennsylvanian structure as indicated in your Exhibit
13 Two?

14 A No, I was not.

15 Q Were you present today in this hearing room
16 when Mr. Lattu indicated that the structure which was mapped
17 and shown on that exhibit was interpretive and not tied to
18 seismic data?

19 A I was present.

20 Q No further questions.

21 A Seismic data I would like to say is also
22 interpretive.

23 Q Interpretive from sub-surface data as opposed
24 to other --

25 A And seismic.

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1 Q With the only seismic line which he indicated
2 to have been considered in connection with this structure
3 projection being that line which runs East and West through
4 the mid-points of Section 17, 18 and 16 to the South of the
5 proposed location?

6 A Would you mind if Andy answered that question?

7 Q No, I'm asking you. Do you remember?

8 A Why don't you re-state the question.

9 Q All right. In discussing this matter with Mr.
10 Lattu, and asking him about seismic information upon which
11 his opinion was predicated, he related to my recollection
12 that there was a seismic line which he considered to be
13 informative of structure and described it as that line inter-
14 secting the mid-points of Sections 16, 17 and 18 to the
15 South of the proposed well?

16 A That's correct.

17 MR. LATTU: In reference to the structural
18 interpretation on the top.

19 MR. RAMEY: Mr. Lattu.

20 BY THE WITNES:

21 A As I understand your question, you are asking
22 me if Andy said that was the only seis-line he used in his
23 interpretation?

24 Q Yes.

25 A And I did not hear him say that was the only

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1 seis-line he used in his interpretation.

2 MR. HENSLEY: Very well. No further questions.

3 MR. RAMEY: Any other questions of the
4 witness? You may be excused.

5 MR. LOSEY: That's all the Applicant's case.

6 MR. RAMEY: Do you have anything further, Mr.
7 Losey?

8 MR. LOSEY: At this time, that's all.

9 MR. RAMEY: Mr. Hensley, do you want to --

10 MR. HENSLEY: My counterpart, Mr. Coffield,
11 will take over.

12 MR. RAMEY: All right. Mr. Coffield.

13 MR. COFFIELD: If the Commission please, we
14 have got some rather large exhibits which probably can best
15 be demonstrated if we go ahead and tape them to the wall.

16 MR. RAMEY: Let's take a five minute recess
17 and tape them to the wall.

18 (Whereupon a brief recess was taken.)

19 A.T. CARLTON

20 being called as a witness and having been duly sworn upon
21 his oath, testified as follows, to-wit:

22 DIRECT EXAMINATION

23 BY MR. COFFIELD:

24 Q Would you please state your name, address,
25 occupation and position relative to the Applicant?

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1 A I am A.T. Carlton. That's Carlton, by the way,
2 not Carlson. I live in Midland, Texas. I'm an independent
3 petroleum geologist and my relationship to the Applicant is
4 I am co-tenant in this lease and a consultant.

5 Q Mr. Carlton, are you familiar with the
6 application of John Hendrix Corporation in this case?

7 A I am.

8 Q Are you familiar with the property and the
9 proposed well location involved in the case?

10 A I am.

11 Q Have you previously testified before the Oil
12 Conservation Division as a geologist?

13 A I have not.

14 Q Would you please state briefly for the benefit
15 of th Commission a brief history of your educational and
16 work experience?

17 A I received my Bachelor's Degree in Geology
18 from the University of Texas in 1951. I received my
19 Master's Degree from the University of Texas in 1952. I went
20 to work in June of 1952 for Ohio Oil Company in Midland,
21 Texas. I served in the capacity of the geologist there for
22 a year. They put me on a seismograph crew for six months,
23 at which time they moved me to Roswell, New Mexico. I lived
24 in Roswell from January, 1954 until June of 1955, at which
25 time I resigned to take a position as chief geologist for

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1 Zapata Petroleum Corporation of Midland. During that time
2 I worked in the permia basin of West Texas and Southeastern
3 New Mexico. I left that position in 1961 and became an
4 independent consulting geologist. In 1964, January of 1964,
5 I formed a geological mapping service, mapping and consulting
6 service by name of Structure Maps Limited. I was the prin-
7 ciple in that company. In 1976, in June of 1976, I resigned--
8 well, I sold my interest in Structure Maps and became an
9 independent petroleum geologist, which I am today.

10 MR. COFFIELD: Mr. Chairman, is the witness
11 considered qualified?

12 MR. RAMEY: Consider him qualfied.

13 BY MR. COFFIELD:

14 Q Mr. Carlton, would you please state what John
15 Hendrix Corporation seeks by its application?

16 A John Hendrix Corporation seeks to pool all the
17 mineral interests in the Mississippi formation underlying
18 the East half of Section 8, Township 14 South range 36 East,
19 Lea County, New Mexico. That's the dedicated to be a well
20 to be drilled to the standard location. Also want to consider
21 the cost of drilling -- completing that well and the alloca-
22 tion of the cost of that well as well as the actual opera-
23 ting costs and charges for supervision. Also, we will con-
24 sider the designation of the applicant as operator of that
25 well and a charge for risk involved in drilling the well.

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1 Q To your knowledge, is 320 acres the standard
2 proration spacing acreage for this area?

3 A It's my understanding it has been recently
4 declared as 320.

5 Q Mr. Carlton, Exhibit One, please refer to that
6 and explain to the Commission, what this reveals?

7 A Exhibit One is merely a land map. I guess I'd
8 better get on this side so the Commissioners can see. Exhi-
9 bit One is merely a land map showing the proposed units and
10 the wells in the area that either have drilled to the Chester
11 Austin Pay or are proposed to be drilled to the Chester
12 Austin Pay. This yellow acreage is the Cal-Mon's group
13 acreage. This by the way, excuse me, is Exhibit One and you
14 have copies thereof. The hachured half of the section is the
15 unit that John Hendrix Corporation has proposed. The South
16 half is the unit that Harvey E. Yates Company has proposed.
17 The dashed purple line here is the outline of the Harvey E.
18 Yates working interest unit as we understand it that they
19 will be earning by drilling of this well. This apparently
20 is an East half working interest unit proration unit that
21 the Adobe No. 1 Hannah is on. It appears that this is -- a
22 west half unit that Harvey Yates has applied for in the West
23 half of Section 20. It's my understanding -- I think we will
24 get into this a little bit more with some later testimony --
25 that the Adobe No. 1 head state is requesting a North half

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1 unit. That's all this map is intended to show, just a sort
2 of location of the land area. This is Exhibit Two. This is
3 a regional geological structure map in the area of interest.
4 It is from a commercial service, Geo Map Company. I show
5 this only to locate the area and to demonstrate that the
6 predominant regional trends in the area are North/South.
7 The predominant structural trends are North/South. This is
8 a map on top of the Yates formation. I don't believe that's
9 Harvey Yates formation. I think that's our Yates formation.
10 Generally, you can see East regional dip, North/South strike,
11 everything lined up nicely in a North/South direction. This
12 is on top of the Pennsylvanian line. The same thing is
13 evident, only a lot more so in the Denton Field, the South
14 Knowles Field, the King Field, the Gladiola Field over to
15 the West, the Badley-Hightower trend, Moore East Cap Rock
16 trend, everything North/South. Everything in this area
17 structurally is lined up North/South.

18 The red square here represents Section 8, which
19 is the section being contested. This map is on top of this
20 Devonian. It shows the same thing, only more decisively,
21 the structures going into the Tatum Basin area in which this
22 is located are faulted down into the basin. But all I'm
23 trying to demonstrate here is that this is North/South
24 structural country.

25 Q Mr. Chairman, we had a problem with respect

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1 to this particular exhibit in its reproduction. Mr. Carlton,
2 would you explain what that is? We only have one copy.

3 A This is a leased service to which I subscribe.
4 Reproduction is prohibited. It's not terribly germane to
5 the question except as to how it shows the North/South line,
6 which I think is universally accepted by geologists who
7 work the area.

8 Q In any event, we are going to tender this
9 exhibit with the understanding that we can and will leave
10 the exhibit here for further study by the Commission and by
11 our opposition, if we can subsequently receive it back.

12 MR. RAMEY: All right. After a decision is
13 made, we will so notify you or mail it back to you, or some-
14 thing.

15 BY MR. COFFIELD:

16 Q Did you have anything more to add on that
17 exhibit, Mr. Carlton.

18 A No, that's the only point I wanted to make,
19 that it's a North/South structural line.

20 Q Are you familiar with -- I think you covered
21 this to a certain degree already, but are you familiar with
22 the acreage dedications which have been made to the other
23 wells in this vicinity?

24 A To the extent that I discussed on the land
25 plat. I am not familiar with what sort of dedications

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1 Adobe has on their State 16. I think there's a North/South
2 arrangement, though, but I'm not sure of that. The rest
3 of it, I think I covered in these other apparent designations.
4 One of them being a West half designation in Section 20 that
5 is, and I understand it, being contested, been applied for
6 by Harvey Yates Company. And then the East half of 17, which
7 as I understand is also a special case, because of the
8 Phillips Austin Well having been drilled previously and a
9 160 acres being committed to it.

10 Q Then let's go to Exhibit Three and please
11 explain what that represents.

12 A Exhibit Three is a structure map on top of
13 the Mississippian line. The lower Mississippian line. It
14 has been constructed on top of the lower Mississippian line
15 because a lot of the wells in that area have not gone to the
16 Solero-Devonian. I have used the lower Mississippian line
17 to utilize all of the deep sub-surface well control that's
18 available in there. This is the deepest that is available.
19 However, this should closely correspond to the Solerian-
20 Devonian because the interval from the top of the lower
21 Mississippian line to the top of the Solero-Devonian is
22 pretty uniform in the area. All I'm trying to show here
23 really is the deep structure and that again, based on strong
24 sub-surface evidence, no seismic leads -- I don't have any --
25 but strong sub-surface evidence, this is a North/South

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1 aligned feature.

2 Q Let's go on to Exhibit Four then, if you
3 please, and explain what that represents?

4 A Exhibit four is a contour map of the top of
5 the Chester Lime Pay. I am sure that -- this is Mr. Lattu's
6 top of the lower Morrow zone. Perhaps it's a question of
7 semantics. At any rate, this is my top of Chester Lime, top
8 of Austin area Pay. It shows very much what the other map
9 showed. There is a little difference. This formation, I
10 think, has an erosional unconformity at the top which affects
11 the structure locally. But at any rate, it does show a
12 North/South line based on good sub-surface evidence. The
13 Adobe-Hannah, which has recently been logged and was dis-
14 cussed earlier, is low to the Adobe State 16 Well, forcing
15 Westward shift in contours. Obviously, although I was not
16 privy to any dip meter logs in there, the dip meter --
17 dipping to the Northeast as it does, thank you, Andy, really
18 helps to confirm in my opinion a structure that I have there.
19 'Cause that's what I'm showing as Northeast dip, the struc-
20 ture leading off in this direction. I think this is a
21 reasonable interpretation of the sub-surface data at hand.
22 I think it would probably be the picture that most geologists
23 would come up with, given the information available in the
24 area. The blue dashed line is what I am calling the top of
25 the gas/water contact. I will come back and try to give

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1 some justification for that at a later date. The red line
2 is the top of -- well, it's the base of the Chester Lime
3 porosity, top of the water contact. Now, the way I came at
4 that was that in all cases, with the exception of the Zapata
5 No. 1 Danglade up here, the porosity in the Austin Pay zone
6 occurs within the top one hundred feet of the section. It
7 doesn't in the Zapata Danglade, only because there is an
8 additional section added at the top. As I say, I think this
9 is an erosional unconformity, so there is a blob at the top
10 that's added over it, which you can correlate the porosity
11 zones all the way up to here.

12 And I'm going to demonstrate that to you in
13 a minute. So sort of a history of the area. In 1957,
14 Phillips drilled their No. 1 Austin. They drilled it into
15 the Devonian. It penetrated 180 feet, as I recall, of tight
16 Devonian and then got a lot of water. So if there is a
17 Devonian structure in there, Devonian oil or gas column,
18 it would have to be in the top 180 feet. It had 40 feet of
19 gamma ray neutron porosity, 42 feet of micro log porosity
20 in the Chester section. It was completed in that section
21 for an IPCOF four million nine hundred twenty-five thousand
22 cubic feet of gas back in 1957 until 1/1/78. It's made a
23 little over four billion cubic feet of gas and over fifty-
24 five thousand barrels of distillate. In an attempt apparent-
25 ly to extend this production, Cherry Brothers and Cabot

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1 Corporation moved off down here and drilled their No. 1
2 Austin State. It was wet in the Solero-Devonian. It had
3 only eight feet of porosity in the Austin Pay, eight feet
4 of log porosity. It tested that porosity and it tested tight.
5 Subsequently, Sinclair moved up here about the same time
6 actually. Sinclair and Texas Crude moved up here and drilled
7 this well, looking for the Chester Austin Pay. Now, in my
8 opinion, this well had 43 feet of sonic log porosity. I'm
9 prepared to defend this. I have got the log with me. Their
10 perforations included only the 8 -- the top eight feet of
11 the porosity. The rest of it, which was better developed by
12 log interpretation, was never perforated. On production
13 tests, this well flowed from this top set of perforations
14 which was thicker than eight feet but included only eight
15 feet of porosity, it flowed to two point one million cubic
16 feet of gas per day. They kept treating it. The gas volume
17 kept going down. It's my understanding it made some water.
18 Whether or not it did, I think the significant point is that
19 there was 35 feet of porosity, most of which was better
20 developed than the upper porosity which was never perforated
21 and surely the operator must have thought it was wet or they
22 would have perforated it. The black wood and nickles in the
23 No. 1 Woodward was drilled actually before any of these
24 wells. It was drilled in 1954. There was not a good poro-
25 sity tool run on the logs. They did run an old EF survey

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1 which shows 40 feet of SP, which is one of our better tools
2 in those days and shows porosity. That's porous. We can't
3 say how porous it is, but we can say it's porous. It was
4 not tested. It had no shows. All right. Another well here,
5 I'd say is close to water. We had a well here I'd say had
6 no shows.

7 MR. RAMEY: Might help the record if you would
8 identify the location of the wells you're testifying.

9 THE WITNESS: I'm sorry. Should I go back and
10 do that at this stage?

11 BY MR. COFFIELD:

12 Q Just start there where you're talking.

13 A The Blackwood and Nickles No. 1 Woodward in
14 Section 24-14-35 encountered the Chester Pay, the Austin
15 Lime Pay, below the water, based on the fact that it had
16 no shows. The Sinclair and Texas Crude No. 1 Richardson in
17 Section 5-14-36 is assumed that at least the bottom 35 feet
18 of porosity is water-bearing, since it was not perforated
19 and not production tested. Therefore, I think that that
20 pins down this water table here pretty well. Okay. The
21 Zapata No. 1 Danglade was drilled in 1957. This is in
22 Section 3, up to the North of Section 3-14-36. It had,
23 according to my calculations, 80 feet of neutron logged
24 porosity. It had no shows. It was not tested. It should
25 have had none. It's below the water table. In April, I

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1 believe, of 1978, Adobe Corporation drilled their No. 1
2 State 16 in Section 16, Township 14 South 36 East, and
3 according to my calculations has 33 feet of sonic log and
4 density log compensated neutron log porosity. It was poten-
5 tial for two point seven four million feet of gas per day.

6 It's my understanding from people I have talked to that the
7 well has been re-acidized and after it was re-acidized it
8 was making gas at the rate of fourteen million cubic feet
9 a day.

10 MR. YATES: That was calculated absolute on
11 that flow. It never flowed fourteen million a day, Toby.

12 THE WITNESS: Okay, thank you. Appreciate
13 that.

14 BY THE WITNESS:

15 A The Adobe No. 1 Hannah in Section 17-14-36 is
16 in the process of being completed. Of course, I'm not as
17 familiar with what's happening now as the Harvey Yates
18 people are, because they are part of the working interest in
19 it and I'm not. However, the well has been drilled to a
20 total depth. In the Mississippian line, it encountered the
21 total for the Chester minus ninety-two fifty feet, log top.
22 According to my calculations, it has 36 feet of porosity
23 in the upper Chester Austin line Pay. It has a good gas
24 separation on the density neutron log. I see no reason why
25 it should not make a good well. It is my understanding that

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1 that they are going to perforate -- excuse me, test, I
2 think. I might get corrected on some of this, but these are
3 my understanding. That they are going to test the permal
4 pen line bank, which was porous on the log and which I
5 think there is a dispute about what the water saturations
6 were from the information I have calculated.

7 Okay. That's basically what has happened in
8 the area. This is the way I see the structure in the area.
9 I think the point on the Adobe-Hannah is critical in that it
10 establishes the Northeast dip I have already referred to. It
11 turns the strike to the Northwest and makes a North/South
12 trending structural feature. This is a cross-section.

13 Q This is Exhibit Five, Mr. Carlton?

14 A I'm sorry. I'm getting ahead of you. This is
15 Exhibit Five. This is a cross-section. A cross-section which
16 is hung on top of the Austin Pay, the Chester Lime. This is
17 the top of the Chester Lime that's hung there. Everything
18 else falls in where it may. This is my top of Morrow. I
19 think it's also Mr. Lattu's top of Morrow. This is his top
20 of Lower Morrow, I believe.

21 Q Mr. Carlton, when you say this, are those on
22 the exhibit? Are those lines sufficiently identified so when
23 the Commission looks at them --

24 A They are identified on the section. The
25 Chester line is this interval from here to here. The Morrow

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1 unit is from here to here. Everything that is in that unit
2 is identified as being in the unit. The geologic unit, excuse
3 me. This is the Phillips No. 1 Austin, the well that kicked
4 it all off. The red colors, this is a gamma ray neutron log.
5 The red colors is the porosity in the Austin Chester line.
6 This is the Adobe No. 1 State 16 in Section 16. Now, this
7 is a sonic log. They don't run the neutron logs any more
8 much, so I'm having to compare it to a neutron log. So the
9 porosity here is better than it would seem by comparing it
10 to the neutron log. But at any rate, they have got basically
11 the same upper porosity zone. But this lower zone here
12 that was included in the Phillips No. 1 Austin completion is
13 not developed in the Adobe No. 1 State 16. I obviously
14 didn't have access to the Adobe No. 1 Hannah so I don't have
15 it on there. But I'll tell you that from a visual inspection
16 it does have this lower zone present. The Zapata No. 1
17 Danglade in Section 3-14-36, which is this well way off up
18 here to the Northeast, has the same porosity zone present.
19 Now, this is a thicker section. As I told you,
20 in my opinion, this is an erosional unconformity and whether
21 it is or not, the section is thicker. You would expect for
22 it to be thinner on structure, because either through non-
23 deposition and/or erosion on top of this structure, the
24 section, if it was eroded, should be eroded more. This is
25 an off-structure well. There is no question about that.

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1 So at any rate, you can correlate. However, this general
2 porosity zone over to here, in my opinion, and here, this
3 lower porosity zone, there is 80 feet of porosity. You do
4 have a more or less continuous porosity zone in that section
5 and that's exactly what this exhibit is meant to suggest.

6 Q Go on. If you're through with five, why don't
7 you go on to Exhibit Six and explain that one, please?

8 A That's a cross-section. It's a structural
9 cross-section and it's hung on an amount of 6,000 foot datum.
10 Here is the Penn lease that Mr. Lattu referred to earlier.
11 Her is the top of the Stromm.

12 Q Mr. Carlton, is the A.A. Prime?

13 A Excuse me. the A.A. Prime.

14 Q On the plat?

15 A Thank you. I forgot to point that out. Here
16 is the line of this section. It's a red line on this map.
17 Actually it goes from here, from the Superior Betenbough in
18 Section 32 -- these are all in 14-36. The Superior Beten-
19 bough in Section 32 -- excuse me, back up. That's in 13-36,
20 the Superior Betenbough. The rest of them are in 14. Okay,
21 back up on that. The Sinclair and Texas Crude No. 1 Richard-
22 son in Section 5-14-36. The Tenneco No. 1 Montieith Hannah
23 in Section 7-14-36. The Phillips Austin, Phillips No. 1
24 Austin, Section 17-14-36. The Cherry Brothers and Cabot
25 Corporation No. 1 Austin State in Section 19-14-36. And

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1 the Blackwood and Nickles No. 1 Woodward in Section 24-14-35.
2 Going from North to South. This is the Superior No. 1
3 Betenbough. The main point that I'm trying to make here is
4 this is the Sinclair and Texas Crude No. 1 Richardson and
5 here is the porosity in this well, sonic log porosity, which
6 occurs mainly below my water table that I have projected
7 here. This is the top of the eroded upper Mississippian
8 Chester section. This is the Pay zone with the porosity in
9 dark red, gas cap in light red in the Phillips No. 1 Austin.
10 This is the Cherry Brothers well. You can see they have had
11 virtually no porosity. No wonder it was not productive.
12 Here is the Blackwood and Nickles No. 1 Woodward. Obvious
13 porosity, can't tell how much in terms of percentage, but
14 40 feet of it. It's barely below the estimated water table.
15 So this is mainly in support of my water table contention.

16 Q We're ready for Exhibit Seven.

17 A All right. This is an isopack map of the
18 next porosity in the Austin Pay zone. This is what occurs
19 in the top roughly hundred feet of the Austin Pay. Here is
20 the Zapata No. 1 Danglade in Section 3 of the well which,
21 as we have already heard, had the thickest section in the
22 area porosity. The producers are the Phillips No. 1 Austin,
23 which is sitting down here in Section 17-14-36. Here is the
24 Adobe State 14, which I give 33 feet of logged porosity
25 and was completed for two point seven million. The Adobe

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1 No. 1 Hannah, which according to my calculations, has 36 feet
2 of porosity. Basically what we're showing here is a generally
3 North, Northeast line bank of porosity in the Austin Pay
4 zone, which intercepts or is intersected by a North/South
5 aligned structure on top of all the mapping surfaces there.

6 I'd like to demonstrate that a little bit
7 more vividly, if I could, by -- I have made an overlay of
8 the porosity isopacks. This is just showing these isopacks
9 here. I think this shows why the field is producing.

10 Q Is this overlay then the same as Exhibit Seven?

11 A It is the same as to the way the isopacks are
12 constructed. It is a tracing of the isopack lines on
13 Exhibit Seven. So, here is the Austin field Pay entrapment
14 as I see it. It is controlled by the water table. The down
15 dip limits of the water table. This bank runs across it in
16 this fashion so that actually going to the Northeast, you
17 should increase the amount of porosity that you have and not
18 decrease it going to the North. I expect that a well in
19 either of these locations will probably have in excess of
20 50 or 60 feet of porosity in the Chester. I think the prob-
21 lem could be if that at this point, according to my inter-
22 pretation, the porosity is starting to go under water so
23 that a well in the South half of this section should have
24 considerably more pay section than one in the North half.

25 Q Anything further to add with respect to this?

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1 A Well, no. Do you want me to go into my
2 conclusions now?

3 Q Yes, we're ready for that. Do you want to refer
4 to the exhibits or not?

5 A Yes. The written part. Yes, I have a written
6 summary with what basically I have said here that is marked
7 as Exhibit Eight, I believe, Conrad, is that right?

8 Q It is Exhibit Eight, that's correct.

9 A Okay. Basically, the way I feel about this is
10 that this is a -- if this is the structural picture, it's
11 very well documented by sub-surface information. We don't
12 really need any seismic because we have such strong sub-
13 surface control. I feel that as you are going North, you
14 are obviously going down the North plunging axis of the
15 anticline. I think even Mr. Lattu's map suggests that. I
16 do not think that there is any reason to suspect that you
17 ought to tighten your contours and bulge it in right here
18 on the East half based on a reasonable interpretation. But
19 I feel like that because the porosity is going under water
20 in the North half of Section Township 14-36, that it might
21 turn out that it would be uneconomical to drill a well in
22 the North half of this section. On the other hand, if we
23 had an East/West alignment, an East half and a West half,
24 then that would accomodate two standard locations in the
25 South half of the section and should result in more

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1 recoverable gas from Section 8 Township 14-36.

2 There is a good possibility the well in the
3 North half would never be drilled.

4 Q Do you want to back down here now, Mr. Carlton?

5 A (The Witness Complies.)

6 Q Mr. Carlton, in connection with your Exhibit
7 Eight, do you have anything further to add with respect to
8 the summary you have made there?

9 A Well, I think a North half and South half
10 proration unit designation could easily wind up with only
11 one well being drilled in Section 8 and although I have
12 already heard earlier that -- whether or not the state had
13 minerals in the area or not, that would just be , if I could
14 just say half of their minerals would be included in a
15 producing well in that event. So I am suggesting that more
16 gas and distillates were recovered by the East half and West
17 half designation as opposed to the North half, South half,
18 because I felt like a well in the North half might very well
19 end up to be uneconomical and might not be drilled.

20 Q Mr. Carlton, from your knowledge of the prospect
21 involved here and general area involved, have you an opinion
22 and recommendation with respect to a penalty factor which
23 should be applied by the Oil Conservation Commission in
24 connection with forced pooling this?

25 A I do.

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1 Q What is that opinion?

2 A One hundred percent penalty.

3 Q One hundred percent?

4 A One hundred percent.

5 Q Would you please explain briefly why you feel
6 this recommendation is justified?

7 A The sub-surface control in this area is not
8 very good. At the time that earlier penalties were applied,
9 this was a rank area with only one producing well. Now we
10 have three producing wells. We have good sub-surface control.
11 We can see that the formation is -- the porosity zone is
12 fairly continuous. We have got well documented structural
13 information. I think the wells that I am suggesting could
14 be drilled in the South half of the section are very low-risk
15 ventures.

16 Q So you don't think it's any riskier than with
17 respect to, for example, a South half configuration such as
18 has been proposed by the Harvey Yates group as compared to
19 the East half?

20 A I think a well in the North half would be
21 riskier, but as to wells in the South half, I can't say that
22 location couldn't be staked which would be -- have very
23 little risk involved.

24 Q Mr. Carlton, were the exhibits presented and
25 discussed by you either prepared by you or under your

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1 supervision?

2 A All of them with the partial exception of one.
3 My section A.A. Prime, which is Exhibit Seven, I believe --
4 no, Six, isn't it?

5 Q Six.

6 A I Six. However, it was prepared by a know-
7 ledgeable geologist who works the area. He was nice enough
8 to let me use it. I have gone over it. I concur in what it
9 says. The oil/water contact and the gas column and the
10 porosity interpretations that I put on the map are my own.

11 Q In your opinion, Mr. Carlton, will approval of
12 this application by John H. Hendrix Corporation prevent
13 drilling of unnecessary wells and otherwise prevent waste?
14 And protect correlative rights?

15 A Yes.

16 MR. COFFIELD: Mr. Chairman, I move the
17 admission of Exhibits One through Eight.

18 MR. RAMEY: With the exception of Three, which
19 we will look at but we won't admit it, okay?

20 THE WITNESS: That's Two, I believe, sir.

21 MR. COFFIELD: Two. It's Two A, B, and C,
22 Mr. Chairman.

23 MR. RAMEY: Okay, we won't admit Exhibit Two
24 then.

25 MR. COFFIELD: I have no further questions of

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1 this witness on direct examination.

2 MR. RAMEY: Let's recess until about 1:30.

3 (Whereupon a recess was taken.)

4 MR. RAMEY: Any questions of the witness, Mr.
5 Losey?

6 MR. LOSEY: Yes sir.

7 CROSS EXAMINATION

8 BY MR. LOSEY:

9 Q Mr. Carlton, you've got a small interest, do
10 you not in this 140 acres?

11 A I do.

12 Q Or in this 120 acre lease that's in Cal-Mon's
13 name?

14 A I do.

15 Q Were you present or did you go with Mr.
16 Monaghan over to Harvey Yates' Company office on January
17 the 22nd or 23rd?

18 A I did.

19 Q Do you remember which of the two days it was?

20 A I don't know. I don't know that it's germane,
21 but I don't remember, no.

22 Q Was the conversation generally as outlined by
23 Mr. Yates, or summarized?

24 A Surely. I do recall that perhaps our choices
25 were not quite as varied as what he suggested, but I do

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1 remember that it was an either or type of thing and therefore
2 was no reason to negotiate.

3 Q Had you all prepared to drill this well in the
4 Northeast of the Southeast of Section 8 at that time, was
5 that accomplished?

6 A No, no.

7 Q All of these maps prepared after that con-
8 ference?

9 A Yes.

10 Q All prepared sometime in February, were they
11 not?

12 A Yes.

13 Q Did you stake the location in January or file
14 your notice of intent to drill on January 29?

15 A Yes. If we had to do it again, we might
16 goof it based on more recent information that we had.

17 Q Where would you locate it?

18 A I'd go one location West.

19 Q You would drill it in the Northwest of the
20 Southeast?

21 A Yes.

22 Q You heard Mr. Lattu's statement that on his
23 Exhibit Two there were 22 wells that had been drilled to the
24 Pennsylvanian?

25 A Yes.

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- 1 Q And that 3 of those wells would pay out?
- 2 A Yes.
- 3 Q Which I suppose means that 19 will not pay out?
- 4 A Yes.
- 5 Q And these are 14,000 foot tests?
- 6 A No sir, not all of them.
- 7 Q Well, they're 12 to 14,000?
- 8 A Yes sir. But most of them did not go to
- 9 what we're talking about. Most of them did not go to the
- 10 Chester lime Pay.
- 11 Q I realize that. I think he counted seven that
- 12 did I believe.
- 13 A Okay.
- 14 Q Wouldn't you consider those rather the fact
- 15 that that many wells that did get nearly this deep is the pay
- 16 zone were not going to pay out as a rather high risk well?
- 17 A Whether I'm not drilling to the reservoir
- 18 I'm looking for I think it's not at all germane to the ques-
- 19 tion, sir.
- 20 Q Don't you think expense or costs of drilling
- 21 has some factor to it?
- 22 A Well, if I'm looking for Chester Lime and
- 23 drill too strong, I don't think that proves anything as
- 24 to whether the Chester Lime is productive or not.
- 25 Q You don't think any of the possible interme-

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1 diate productive zones for the surface down to what you're
2 drilling to has anything to do with the risk factor?

3 A It doesn't have anything to do whether the
4 Chester Lime produces or not. And that is the main object
5 ive in the area, it's the only one that has produced an
6 appreciable amount of oil -- from hydrocarbons.

7 Q But the others in the Pennsylvanian, are not
8 going to pay out?

9 A I suspect not, but that's not what we're
10 looking for.

11 Q Mr. Carlton, are all of these maps cast in
12 stone so that another well or two in the Austin Pay might
13 not change some of these contours?

14
15 A Mine no more than his.

16 Q I'm really looking at yours.

17 A All right.

18 Q I'm sure it might well change some of his too.

19 A Certainly. As a matter of fact the latest
20 well changed it. Changed my interpretations of it.

21 Q I notice -- I notice in your -- I think this
22 is Exhibit Three, you have this large fault area towards
23 the Northeast corner of your map. You're aware of Mr.
24 Lattu's high structure in here on the top of the Penn.
25 Mapped on these wells that are produced or tested.

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1 A Yes, his is farther East than mine.

2 Q Don't you think that suggests these high wells
3 on the top of the Penn would lead to a suggestion that the
4 deeper horizons might also have a high in there?

5 A Not necessarily. I prefer to deal with the
6 formation that I'm contouring on. I think it could be, but
7 even if it is, it hardly changes my interpretations. Even
8 if those wells are high, you're dealing with a lime build
9 up in the Pennsylvanian, and quite often those lime build-ups
10 in the Pennsylvanian are even East/West in a line.

11 Q But your statement is there could be a high
12 in this Lower Mississippian, right in here?

13 A I'm showing one, yes sir.

14 Q And actually higher than this, as you do?

15 A I doubt it. That it would be.

16 Q So that you would say Mr. Lattu's mapping of
17 his suggests that the top of the Penn is also a guide to
18 the Lower Mississippian, or is in error?

19 A No, it's a guide. I think you have to take into
20 consideration there are several things, and from pieces of
21 information that you have as a guide. I think the North/
22 South alignment as proven by the geological -- recent geolo-
23 gy in the area points strongly to a North/South line for the
24 pre-Pennsylvanian bids.

25 Q Now, really isn't the alignment on your map

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1 somewhat Northeast, as matter of fact, on your Exhibits
2 Three, Four and Seven?

3 A When I say North/South, I don't mean pointing
4 to the North Pole necessarily, I mean in a general way North/
5 South, yes.

6 Q It actually, if you lay it across your map
7 to extend up Northeast would it not?

8 A A little bit, a little bit.

9 Q From looking at your structure on Exhibit
10 Four -- I'll go up here and point it out -- would you tell
11 me whether or not locations would be structurally as good
12 in the North half as they are at your proposed location.
13 For example, an orthodox location in the Southeast to the
14 Northeast, one in the Southwest to the Northwest, wouldn't
15 they be structurally as good?

16 A On that interpretation they would. However,
17 you would be moving farther into the unknown and your
18 risk factor would be increased.

19 Q But if your structure map is correct, those
20 locations would be just as good from a structural standpoint,
21 would they not?

22 A If my map is carved in stone, yes sir.

23 Q Looking at your Exhibit, is this Seven, your
24 porosities on pac?

25 A Yes sir.

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1 Q Actually, as far as porosity is concerned,
2 a location further to the North would be better than your
3 proposed location such as the Southeast to the Northeast,
4 Southwest to the Northeast, both of which are North half of
5 orthodox locations.

6 A If they're under water it wouldn't do much
7 good.

8 Q But as far as the porosity --

9 A Yes.

10 Q -- map is concerned, they'd be a better loca-
11 tion than your present location?

12 A So far as the Danglede.

13 Q Now, as I understand, the basis for your gas/
14 water contact shown on your Exhibit Four and your concern
15 about water in the North half of the section was the Sinclair
16 and Texas Crude-Richardson well?

17 A That was one of them, yes sir.

18 Q What other wells, are the basis?

19 A The Blackwood and Nickles No. 1 Woodward in
20 Section 24, I believe.

21 Q Did they encounter water?

22 A They encountered no-shows which was indicative
23 of water.

24 Q Well, now did they recover any water when
25 they tested the well?

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1 A It wasn't tested. There wasn't anything to
2 test.

3 Q But all you're essentially saying is that there
4 wasn't any water out here, but you don't know that the water
5 is there?

6 A Well --

7 Q You go to the next contour in.

8 A What I'm saying is above that, the water table
9 is above the datum of the top of the Chester Lime that the
10 Blackwood Nickles No. 1 Woodward.

11 Q Where did you encounter water inside of your
12 gas/water contact, in which of these wells?

13 A I don't believe any wells encountered them.
14 I don't think any wells tested it that didn't have shows.

15 Q Well, why do you think it's here rather than
16 further in.

17 A Because the Sinclair and Richardson made gas
18 at rates up to two million cubic feet a day on production
19 tests slightly above where I'm putting the water table.

20 Q And they didn't test down where you're putting
21 the water table?

22 A They did not run production tests down below
23 there.

24 Q Do you know why they didn't?

25 A I think the inference is clear that the thought

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1 it was water bearing. The porosity is much better than what
2 they perforated.

3 Q So that you made an assumption that the opera-
4 tor thought that was water bearing?

5 A I made that assumption. I think it's a
6 sound geological assumption that a lot of people would come
7 to.

8 Q Mr. Carlton, is there anything else that shows
9 up on a sonic log that looks like porosity?

10 A Well, yes. But that was porosity in my opinion.
11 And in the event that you're making a case for it not being
12 porosity, I would say it would be easier to prove that it
13 is than it isn't.

14 Q What else shows up as porosity on a sonic log?

15 A Chert does sometimes.

16 Q Isn't chert rather common in the Mississippian
17 line?

18 A Chert is common in the Lower Mississippian
19 line sir, it's not common in the Upper Mississippian Chester
20 section and in fact, as Mr. Lattu maintains in the Morrow
21 it's not at all common.

22 Q Well, do you think it's Morrow or Mississipp-
23 ian?

24 A No sir. I think its Upper Mississippian line,
25 and I believe characterized by eualites (sic) and not chert.

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1 Q But I believe your statement is that chert
2 on that sonic log would look like porosity. And the opera-
3 tor might have seen chert in the samples which would have
4 been a reason for not testing the Mississippian?

5 A I would say that that is a very very rank
6 possibility.

7 Q But it's that well that you used as the basis
8 for establishing gas/water content?

9 A No sir. There are two wells.

10 Q Well, all this well did, it didn't encounter
11 any water.

12 A It encountered a lack of shows and porosity.
13 If it didn't have hydrocarbons in it sir, what did it have?

14 Q Well, did they test water?

15 A No sir. But it was there. Generally when
16 you don't have a show you don't bother to test.

17 Q But it's on the basis of those two wells and
18 those two logs that you have drawn this gas/water content?

19 A That should be enough, yes sir.

20 Q I take it it's your testimony that this is a
21 water dry reservoir?

22 A It would be my assumption, yes sir.

23 Q Is that an assumption?

24 A At this state I don't think that there is
25 really that much history on the reservoir with only one

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1 well that has produced over a period of time. These two new
2 wells haven't given us enough history.

3 Q Well, if it's not a water dry reservoir?

4 A I didn't say it wasn't.

5 Q Well I'm taking the other side of the coin
6 if that's all right Mr. Carlton.

7 A Okay.

8 Q If it's not a water dry reservoir and as you
9 just pointed out your Exhibits Four and Five show that struc-
10 turally you can get as good or better location in the North
11 half and you can get better porosity in the North half
12 than your proposed location in the Northeast to the South-
13 east, why do you still propose to drill it down there?

14 A The risk factor. I think there is a definite
15 possibility that, as you say, I hate to coin your phrase
16 again but it was yours, carved in stone, if a well is
17 drilled in the location, the Harvey Yates location that
18 proves to be much lower than what it is now, then that could
19 materially affect the interpretation as the Adobe-Hannah
20 well did. When I first made this map that was before I had
21 the access to the log on the Adobe-Hannah, and it materially
22 changed my interpretation. I felt that the North half of
23 the section was as high or perhaps higher than the West
24 half, or that the East half was. But that changed my inter-
25 pretation. If another well was drilled in there surely I

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1 won't hit it right on the dot.

2 Q Well, is the risk increased by going into the
3 North half that it's going to be under water, or is the risk
4 that your porosity and structure map is wrong?

5 A The risk is that you're on the North plunging
6 axis of the Austin anticline, you don't know at what rate
7 it's dipping and the risk is that you're going to find
8 your porosity under water or more of your -- excuse me,
9 let me qualify that, more of your porosity under water.

10 Q So that water is your real concern in going
11 north?

12 A It is mine, yes sir.

13 Q Well, is this a water dry reservoir then?

14 A In my opinion, yes.

15 Q This Phillips Well in the Southeast quarter of
16 Section Seven has been on production since the 50's. Has
17 it produced any water?

18 A I really can't answer that.

19 Q Do you know whether or not the well still
20 produces?

21 A Yes it is.

22 Q Did you have any production figures on it?

23 A Well the last I checked, it was producing at
24 the rate of about fifteen million cubic feet per month and
25 122 barrels of distillates per month.

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1 Q When was that?

2 A That was as of 1/1/78, which was the last New
3 Mexico Conservation Commission yearbook.

4 Q So that was what, fourteen months ago?

5 A Whatever. That was as of that date.

6 Q So you don't know whether it's producing that
7 or not?

8 A No, I don't. I don't have any reason to
9 suspect that it is not.

10 Q Now, that New Mexico Conservation yearbook
11 also shows water production. Did you see any water produc-
12 tion for the well?

13 A I don't recall.

14 Q According to your numbers, it was down to a
15 half million then. If it was a water dry reservoir would
16 some water not be showing up with the production then?

17 A Well, not necessarily. It might be moving up
18 slowly. I don't know. It's obviously starting to deplete.
19 It's also far enough above the water table and has really not
20 yet produced the seven or eight billion cubic feet of gas
21 that it's supposed to. It's a fairly tight reservoir. I'm
22 not sure you'd expect water at this state.

23 Q Now, you said it was supposed to produce seven
24 or eight billion cubic feet?

25 A Yes sir.

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1 Q How much has it produced so far?

2 A Four billion.

3 Q You're not a reservoir engineer are you, Mr.
4 Carlton?

5 A No sir.

6 Q Is it the highest well of the wells so far
7 completed in the Austin Pay zone?

8 A The highest structurally, yes.

9 Q That water dry reservoir, would that be the
10 last well that you would expect to complete?

11 A Assuming the porosity was homogenous and that
12 it drained the whole reservoir. In this case, they set up
13 320 acre proration units. I am aware of people that wanted
14 a 160 proration units because they didn't think the porosity
15 was giving enough to drain more than 160 acres.

16 Q Did I get an answer to my question?

17 A Would you repeat your question?

18 Q My question was that if this is the highest
19 well in the field, wouldn't you assume -- and it was a water
20 dry reservoir, it would be the last well to deplete in the
21 reservoir?

22 A Well, I thought I answered that actually.

23 Q Okay. I didn't catch your answer then. Would
24 you explain it again?

25 A All right. I'm saying if the reservoir was

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1 homogenous, if it was completely permeable throughout,
2 if you had free movement of hydrocarbons in the reservoir,
3 then yes, that might be the case. But when you have a
4 tighter reservoir, where you're perhaps draining only a
5 hundred and sixty acres then that might not necessarily be
6 the case. Longevity should have a lot to do with it. Or
7 the volume that is produced.

8 Q Mr. Carlton, would your concern about or your
9 assumption that the field is a water dry be altered if I
10 were to explain to you that it is my understanding that the
11 Phillips Well has not had any production since 1978, and
12 that it's bottom hole pressure is eight or nine hundred
13 pounds, and that it has produced not water at this point?

14 A Well, I would say that in that event that
15 it's drained its 160 acres that some people think all it's
16 going to drain anyway.

17 Q Water wasn't the effective dry source in the
18 water reservoir?

19 A I think it probably is if you have porosity in
20 the water.

21 Q And the Phillips Well still would be recovering
22 no water and be at a point of depleting?

23 A I think that's possible, yes sir.

24 MR. COFFIELD: That's all.

25 MR. RAMEY: Any other questions of the witness.

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1 Mr. Stamets.

2 CROSS EXAMINATION

3 BY MR. STAMETS:

4 Q Mr. Carlton, on your Exhibit Number Four, you
5 show two contact lines, one of them a pink line and the
6 other a blue line. What are those two lines again?

7 A What I'm trying to show is the point at which
8 the base of the Chester Lime porosity goes under water.
9 In other words, that's the contact between the base, the
10 Chester Lime porosity and the top of the water. The
11 Chester Lime porosity concerning primarily in the hundred
12 feet or, excuse me, the Austin Pay porosity concerning pri-
13 marily the top hundred feet of the Austin Pay zone. So all
14 I have done is come down a hundred feet and say this is
15 where the porosity goes under water so that everything out-
16 side of that line will not have the entire porous section
17 above water.

18 Q The pink line represents where the base goes
19 under water?

20 A Yes sir.

21 Q And the blue line represents where the top of
22 the porosity goes under water?

23 A Yes sir.

24 Q So then on Exhibit Four, it would be fair to
25 say that the entire south half -- or North half of the

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1 section would produce some water in the section in question.

2 A I would expect that, yes sir.

3 Q The entire South half would be the better gas
4 productive horizon?

5 A In my opinion, yes sir.

6 Q Would it also be fair to say that a well or w
7 wells located in the South half of that section would drain
8 more gas from the section than a well say in the North
9 half and a well in the South half?

10 A I would think that you would have better
11 drainage, the farther South you got in to the section, yes
12 sir.

13 Q Do you anticipate that two wells located as
14 you have proposed, that they would adequately drain this
15 section before they watered out?

16 A Yes sir. I think so. I personally feel like
17 and Mr.-- the attorney here, I'm sorry, Losey. You mis-
18 pronounced my name, I guess I can forget yours.

19 MR. LOSEY: Sure.

20 BY MR. CARLTON:

21 A I personally feel like Mr. Losey helped me
22 out on this. It's my understanding, and my source on this
23 is George Yates, that the -- they figured that these wells
24 will recover three and a half to four billion cubic feet of
25 gas per hundred and sixty location. Well, that's essentially

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1 that the Phillips-Austin has done. It's made four billion
2 cubic feet of gas, so I think that the two wells drilled in
3 the South part of the section would probably -- plus the
4 wells that will be drilled farther south will probably drain
5 most of the porosity above water.

6 Q Now, in preparing your exhibits, the large
7 map exhibit with structure on them, did you use more
8 points or less points than Mr. Lattu?

9 A Well, I used less points, but I think I
10 used more pertinent points because I'm contouring on top
11 of the producing horizon and the Pennsylvanian as we talked
12 about before, although it generally conforms a little bit
13 it specifically does not. And we have got good strong sub-
14 surface control. You can see in the Bersom up there. The
15 Cisco-Bersom, in that -- see how it comes up and down so
16 you wouldn't expect that a contour horizon on top of the
17 Penn Lease would reflect what's below it, necessarily. In
18 a general way, but not necessarily.

19 MR. STAMETS: That's all.

20 RE-DIRECT EXAMINATION

21 BY MR. COFFIELD:

22 Q Mr. Carlton, you have a location staked in
23 unit I.

24 A Yes sir.

25 Q If the Commission granted you the East half

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1 are you set to drill there or would you move it to use it?

2 A Sir, I would prefer to move it to use it.

3 Q That would be your recommendation?

4 A Yes sir. That was chosen and staked before
5 the information on Adobe No. 1 Hannah well was available
6 and after seeing that, we changed our interpretations and
7 feel like the J location is a better location.

8 MR. COFFIELD: Thank you.

9 MR. RAMEY: Any other questions of the witness?

10 MR. LOSEY: Wait just a moment. That's all
11 Mr. Ramey.

12 MR. RAMEY: Mr. Coffield?

13 MR. COFFIELD: One more question.

14 RE-DIRECT EXAMINATION

15 BY MR. COFFIELD:

16 Q Mr. Carlton, you have indicated I believe to
17 Mr. Losey here that these maps were prepared after the meet-
18 ing with Mr. Yates on the 22nd or 23rd of January, whatever
19 that date was. Was it after that date that you obtained
20 geological information and so forth on the area?

21 A No. We, of course, bought our lease in there
22 based on the fact that there had been a known structural
23 feature in there. I have known about it since 1954 when
24 the Phillips well was drilled. I prepared a set of maps
25 which are working maps. I did not think they were appropriate

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1 to present at this hearing. I have prepared a display to
2 try to show what I was -- try to show the geology as I see
3 it. The working maps I had were hardly appropriate for this,
4 but as far as having prior knowledge of the area, it goes
5 back at least to 1954 and maps prior to the time we bought
6 that lease which I don't remember, we have had it well over
7 a year, about two years I think. I don't remember the date
8 on the lease but certainly I had geological information
9 and interpretations prior to that time or we would not have
10 bought the lease.

11 MR. COFFIELD: No further questions.

12 MR. LOSEY: That precipitates one.

13 MR. RAMEY: Go ahead, Mr. Losey.

14 RE-CROSS EXAMINATION

15 BY MR. LOSEY:

16 Q I understood, if you recall Mr. Yates testi-
17 mony, that he was told by you and Mr. Monaghan that you
18 didn't have any maps for the area. You had not mapped the
19 area.

20 A I did not say that, sir.

21 Q And you did have a map of the area?

22 A I did.

23 Q You didn't show it to Mr. Yates at the time?

24 A He didn't ask for it.

25 MR. LOSEY: Thank you.

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1 MR. RAMEY: No more questions? Mr. Coffield?

2 MR. COFFIELD: No, I have no more.

3 MR. RAMEY: Any other questions? The witness
4 may be excused.

5 MR. COFFIELD: We do have three more Exhibits
6 coming up here which are not going to be posted on the wall.

7 (Whereupon a discussion was had off the record.)

8 JOHN H. HENDRIX

9 being called as a witness and having been duly sworn upon
10 his oath, testified as follows, to-wit:

11 DIRECT EXAMINATION

12 BY MR. COFFIELD:

13 Q Would you please state your name, address,
14 occupation and position that you hold?

15 A My name is John Hendrix, I'm from Midland,
16 Texas. I'm a petroleum engineer and President of the John
17 H. Hendrix Corporation.

18 Q Are you familiar with the application of the
19 John H. Hendrix Corporation in this case?

20 A Yes I am.

21 Q Are you familiar with the property and the
22 proposed well location?

23 A Yes sir.

24 Q Have you previously testified before the Oil
25 Conservation Division as a petroleum engineer?

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1 A Yes sir, I have.

2 Q Were your qualifications accepted and made a
3 matter of record?

4 A Yes sir.

5 MR. COFFIELD: Is the witness considered
6 qualified, Mr. Chairman?

7 MR. RAMEY: Considered qualified.

8 BY MR. COFFIELD:

9 Q Is John H. Hendrix Corporation the owner of
10 the leasehold on the acreage in which the proposed well is
11 located?

12 A The corporation is a part owner or co-tenant
13 in the 120 acre state lease in the East half of the East
14 half of the section.

15 Q Would you explain further then the John H.
16 Hendrix Corporation position in connection with this par-
17 ticular well?

18 A Okay. On January 25th, at a meeting at Bob
19 Monaghan's office, the majority of the owners in the 120
20 acres of lease that we have conducted a meeting and at that
21 meeting, I was selected or drafted or volunteered, one or
22 the other, to be the operator of a proposed unit to consist
23 of the East half of Section 8.

24 Q Mr. Hendrix, would you refer to what has been
25 marked as Exhibit Nine? And explain that please to the

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1 Commissioner?

2 A Exhibit Nine is an AFE, that I prepared re-
3 flecting the estimated cost to drill and equip a well to
4 13,900 feet in the Austin area.

5 Q Would you now go ahead and refer to what has
6 been marked as Exhibit Ten and explain that to the Commission-
7 er?

8 A Okay. Exhibit Ten is a copy of a proposed
9 operating agreement on the form provided by the Petroleum
10 Land Map Association. In that we simply propose some of
11 the customary provisions that are frequently in operating
12 agreements.

13 Q This Exhibit Ten, this joint operating agree-
14 ment being submitted as Exhibit Ten, reflect certain sums
15 as overhead and expenses?

16 A Right. What we have proposed is a \$2,500
17 per month drilling well overhead. And we propose a producing
18 well rate overhead of a \$150 per month.

19 Q In your opinion, and from your own knowledge,
20 are these amounts consistent with charges of the sort com-
21 monly made in the area?

22 A They are consistent with what prudent opera-
23 tors charge. I'll touch on that a moment. I understood
24 George earlier to imply that he would to make a profit on
25 the overhead and we -- our group, that's not our mode.

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1 The reason, the 150 every February, my staff will go through
2 and compute in a very careful manner what our per-well over-
3 head was the previous year for the year 1978, it was slightly
4 over \$149, like \$149.60. So we charge people in our deals
5 precisely what our costs are on average. We operate something
6 over 100 wells in New Mexico and I guess 80 or 90 in Texas.
7 So that was the basis of our recommending \$150 per month.

8 Q Mr. Hendrix, referring now to the -- back to
9 Exhibit Nine, and your AFE. Previously you had been sub-
10 mitted or had seen a copy of the AFE which was submitted by
11 the Harvey Yates Company and, also, I believe, that was
12 submitted as an exhibit in your present case.

13 A Yes, that's correct.

14 Q Would you comment on the differences between the
15 amounts shown on your AFE and the amounts shown on their
16 AFE?

17 A I will do that. Our AFE totaled \$791,950.
18 Their AFE --

19 Q That was for completed work?

20 A That's completed to the tanks. Their AFE
21 for the same -- essentially the same work, I think maybe
22 they show the well a hundred feet deeper, was \$913,500.
23 And there also -- in my mind there are some obvious questions
24 that I can't resolve on their AFE. We're quite prepared to
25 defend ours in a very detailed manner. One question I have

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1 on their AFE, if you all can refer to whatever their's is,
2 they show under intangible drilling costs, a location cost
3 of \$15,000 which is right in line. The part that bothers
4 me on the footage they show a 14,000 foot footage at \$17
5 per foot. Then in addition to that they show a 28 days of
6 day work at \$4,000. I simply don't understand that. We
7 can get contractors who will drill to a depth of ten
8 thousand five hundred feet at a cost of \$16.50 per foot.
9 Thereafter we would be on day work. So it almost appears
10 that they have made their estimates on \$17 a foot to TD,
11 and then tossed in an additional 28 days of day work.
12 That's inconsistent and we simply don't understand it. Addi-
13 tionally, mud costs, they come up with \$50,000. We are told
14 that on the first Adobe well, the actual mud cost was
15 \$34,000. We have used \$35,000 on our AFE. Another differ-
16 ence, we can run four and a half inch casing. They have
17 written seven inch or five and a half here. I don't know
18 what that means. One or the other. Here our tangibles on
19 our AFE are approximately \$50,000 less than the Yates AFE.
20 These numbers I used are mil prices, FOB, Locations on ma-
21 terials. So the end result is that we're talking about
22 in the neighborhood of \$120,000 difference in the cost of the
23 well.

24 Q Mr. Hendrix, what experience have you had in
25 the general area of an operator of oil and gas wells?

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1 A Well, in Lea County, as I mentioned earlier,
2 we operate somewhere in the neighborhood of a hundred wells.
3 I don't know exactly how many. About that. Lesser amount
4 in Texas. We've had and have a very excellent district
5 office at the unit, with good superintendents, drilling
6 foremen, completion foremen et cetera. We started our
7 operations down there in probably 1967. Based on some
8 numbers next oil and gas associates put out for the year
9 1977, John Hendrix individually was the largest individual
10 gas producer in New Mexico at approximately twelve bcf.
11 That was, I don't know, twelve or something out of five
12 hundred producers in the state. We do drill wells to this
13 depth, 6h, in a routine manner.

14 Q Mr. Hendrix, as a consequence of your extensive
15 experience with wells of this sort, do you feel confident
16 that your figures and your AFE are good hard figures?

17 A Yes sir, I do.

18 Q Let's go on to what's been marked as Exhibit
19 Eleven, and explain what this represents?

20 A Exhibit Eleven was a letter that I had mailed
21 to George Yates. On January 31. We were attempting to
22 open some discussion on how to handle the section which we
23 very sincerely wanted to do, still want to do. For whatever
24 reasons the mails or someone's losing this or whatever,
25 we've yet to receive a reply to our efforts outlined in this

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1 letter.

2 Q Mr. Hendrix, passing on to another matter,
3 relative to recoverable reserves in this area, have you
4 studied the proposed East/West alignment of proration
5 spacing areas versus a North/South alignment in your capacity
6 as a drilling engineer?

7 A Yes sir, I have.

8 Q What are your conclusions in that regard?

9 A Based on Mr. Carlton's maps, the isopac maps
10 and the structure maps and assuming we have uniform porosity,
11 and permeability, we have concluded, or I have concluded
12 that the East half of Section 8 should recover in the line
13 of six to eight bcf. The West half of the section should
14 also recover approximately that same amount and this is as-
15 suming that , here again based on the new well Adobes and
16 especially based on this dip meter data which we're not
17 privy to, if the East half is approved, we will be applying
18 to move our location, one location to the West on that
19 assumption, the recovery should be very simply in the East
20 half and the West half.

21 Q Are you saying there would be significantly
22 more production taken from Section 8 if the East half and
23 West half are the proration areas ?

24 A That's correct. Based on what we know now,
25 if the alignment is East/West with the South half dedicated,

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1 there will be one well drilled in that entire section, and
2 you could very well leave reserves that wouldn't be recovered.

3 Q Mr. Hendrix, were these Exhibits Nine, Ten
4 and Eleven prepared by you under your supervision, or are
5 they part of your files to which you have access?

6 A Yes sir, that's correct.

7 Q In your opinion, will the approval of the
8 application of the John H. Hendrix Corporation prevent the
9 drilling of unnecessary wells and otherwise prevent waste
10 and protect correlative rights?

11 A Yes, I believe that firmly.

12 MR. COFFIELD: Mr. Chairman, move the admission
13 of Exhibits Nine, Ten and Eleven.

14 MR. RAMEY: The Exhibits Nine, Ten and Eleven
15 will be admitted. Any questions of the witness?

16 MR. LOSEY: Yes sir.

17 CROSS EXAMINATION

18 BY MR. LOSEY:

19 Q Mr. Hendrix, you and your other working inter-
20 ests met on January the 25th. As I understand it, in this
21 120 acre lease. What was the purpose of your meeting?

22 A Well, to review the -- to review our investment
23 in the lease.

24 Q Wasn't the real purpose to review the proposal
25 submitted by George Yates to Mr. Monaghan and Mr. Carlton?

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- 1 A That was one of the purposes.
- 2 Q That had been made to you on about January the
- 3 22nd?
- 4 A I don't know about that.
- 5 Q Do you know if you ever responded to his pro-
- 6 posals?
- 7 A I have never had the proposal.
- 8 Q Do you know if Mr. Monaghan has ever responded
- 9 to his proposal?
- 10 A I fell sure that he has. I know that for a
- 11 fact.
- 12 Q Do you know when and how?
- 13 A No. I would think on the phone, probably.
- 14 Q But the first indication you made to Mr. Yates
- 15 to join in drilling the well on the East half was your
- 16 letter of January 31?
- 17 A That was the first I made, yes, it was.
- 18 Q Hadn't you already filed your notice of in-
- 19 tention to drill on January 29 and had it approved by the
- 20 Hobbs district office?
- 21 A Yes sir. We probably filed it before the 29th.
- 22 I think it was probably approved the 29th.
- 23 Q And that really was your response to Mr. Yates'
- 24 proposal?
- 25 A That's not correct.

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1 Q Did you submit your AFE or joint opera-
2 ting agreement to Mr. Yates?

3 A Let me refer you here to my letter. Exhibit
4 Eleven. As a joint interest owner with Cal-Mon Oil Company
5 in this lease, we would like this operator if this is satis-
6 factory to you we'd be more than happy to furnish you with
7 our AFE and operating agreement for your approval. I can't
8 be any more explicit or direct than to make that communi-
9 cation and to date I have had zero response to that communi-
10 cation.

11 Q In answer to my question, though, --

12 A That was an answer to your question.

13 Q You have not submitted the AFE and operating
14 agreement to him until the specifications today?

15 A That's correct.

16 Q Mr. Hendrix, are you aware that the Commission
17 orders on forced pooling provide that a non-consenting
18 working interest only is obligated to pay reasonable well
19 costs regardless of what is in the AFE?

20 A I'm sure the Commission has some reasonable
21 rulings on the matter.

22 Q And that that's an expressed order of the
23 Commission in enforced pooling?

24 A Well, without getting greatly off the track here,
25 we have drilled lots of wells. For a lot of drilling

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1 contractors. When I see an AFE that has something like this
2 that is so far out of line, I have a lot of questions, and
3 that's something we would very well -- to have a complete
4 understanding of before we were a party to signing an AFE.

5 I'm speaking for my corporation and I suspect
6 my co-tenants would feel in a very similar manner to this.

7 Q I didn't want to get that far off the subject
8 either.

9 A I'm explaining my problem with your AFE.

10 Q My question is are you aware of the fact that
11 whether the Commission orders giving non-consenting parties
12 90 days after completion of the well to determine whether
13 they were charged with reasonable well costs?

14 A I'm aware of that.

15 Q Now, you have given, or said you calculated
16 the recoverable reserves under the East half and the six to
17 eight cubic feet. What was the basis for that calculation?

18 A I don't have my work papers with me. It was
19 assuming -- I'll have to give it from memory, and I can
20 furnish this to you or the Commission. Probably a 35 feet
21 average pay thickness and that was in part -- well, the pay
22 thickness was taken from the aspects maps that's my basis
23 for it.

24 Q And so you assume uniformity of porosity to
25 arrive at your six to eight feet?

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1 A Sure, you have to. There's not enough pressure
2 history to do anything other than that.

3 Q Making that calculation, your porosity -- your
4 uniform porosity extends across the East half and across the
5 West half of the section?

6 A The total acre feet of porosity will be
7 essentially the same on the East half as is on the West
8 half. To set up a standard of uniformity would not be
9 correct.

10 MR. LOSEY: That's all.

11 MR. RAMEY: Any other questions of the witness?

12 RE-DIRECT EXAMINATION

13 BY MR. STAMETS:

14 Q Mr. Hendrix, is the basis of your statement
15 that more gas be produced from this section, the way you
16 propose it as opposed to the way the Yates' proposed to
17 drill, because there will be two wells drilled as opposed
18 to one?

19 A That's in part. You can -- if water is
20 present on the North end as we think it should be without
21 some uniform withdrawal which two wells would give, you're
22 going to get a more uniform withdrawal and that would pre-
23 clude or at least help reduce the possibility of any entrap-
24 ment. By water channeling or coning fuel.

25 Q So you are staying farther away from the

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1 water.

2 A Sure.

3 Q Okay. Do you think you would drill a well
4 in the North half if the South half was dedicated to another
5 well?

6 A Well, it would depend to a large extent on
7 what the first well drilled would indicate. Let me continue
8 there.

9 Q I was going to -- let's go ahead and you
10 finish up. Why don't you do it on the basis that Mr. Carl-
11 ton's maps are perfect.

12 A Okay. If his are perfect I would say a loca-
13 tion in the Northwest of Southeast and in the Northeast of
14 Southwest would be the perfect location for two wells to
15 properly drain section 8.

16 Q If Mr. Carlton's maps are perfect and a well
17 is drilled in the South half, say the Yates application is
18 approved, would you think you could drill a well economically
19 in the North half of the section?

20 A We would take a real close look at it before
21 we would -- I don't know. The risk -- I want to stress the
22 risks are strenuously higher in the North half than the South
23 half purely due to obvious down dip conditions and there
24 could damn well be water somewhere up there.

25 MR. STAMETS: That's all.

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1 MR. RAMEY: Any other questions of the
2 witness? Mr. Losey.

3 RE-CROSS EXAMINATION

4 BY MR. LOSEY:

5 Q Isn't the risk really higher Mr. Hendrix,
6 in the North half because because at this time it would be
7 a further step out from production?

8 A Yes, of course, precisely that's what his
9 maps show.

10 MR. LOSEY: Thank you.

11 MR. RAMEY: Any other questions? The witness
12 may be excused.

13 BOB MONAGHAN

14 being called as a witness and having been duly sworn upon
15 his oath, testified as follows, to-wit:

16 DIRECT EXAMINATION

17 BY MR. COFFIELD:

18 Q Would you please state your name, address,
19 occupation and relationship to the applicant John Hendrix
20 Corporation?

21 A My name is Bob Monaghan, I live in Midland
22 Texas, I'm President of Cal-Mon Oil Company, and the only
23 association I have with the applicant is that we are friends.
24 We are co-tenants, not partners I want to put that in the
25 record, not partners in the lease acquisition and John was

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1 kind enough to have his company act as operator for our
2 interests.

3 Q Have you acted as land man in consulting this?

4 A Basically, I have a degree in petroleum
5 engineering, graduated in 1948 from the University of Texas,
6 Doctor of Jurisprudence in 1951, have been working in
7 Standard Oil Company of Texas land lease department, general
8 manager for Texas Crude Oil Company, Fort Worth, I have
9 been President of Cal-Mon since 19, I believe, 66. I have
10 worked in land, some geological energy evaluations. I do most
11 ly land work and legal work, I try to stay away from the
12 geological engineering because I haven't had the experience
13 in the last 15-20 years as a person who is constantly doing
14 that so I have enough sense to go ask Conrad or Toby.

15 Q Mr. Monaghan, are you familiar with the ap-
16 plication of John Hendrix Corporation in this case?

17 A Yes sir.

18 Q Have you ever previously testified before this
19 Commission?

20 A No sir.

21 MR. COFFIELD: Mr. Chairman, he's already
22 stated his qualifications and background. Are his qualifi-
23 cations acceptable as an expert?

24 MR. RAMEY: Yes, they are acceptable.

25 BY MR. COFFIELD:

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1 Q Mr. Monaghan, are you familiar with the land
2 work which has been done in connection with this tract, and
3 in connection with the general area?

4 A Just the general area? Yes sir. Based on
5 the geology that Mr. Carlton had, purchased that lease, I
6 believe, in February of '77, and the information generally
7 he had he made a detailed study of the areas before the
8 Adobe wells were drilled. It was based on his large and
9 anticlinal features there and essentially it was -- I believe
10 Mr. Carlton prepared all those maps probably when he did
11 structure map and they were stored by Geo Map probably up-
12 dated. Essentially we have that work plus he studied the
13 Phillips Well and the other wells in the area. Mr. Carlton
14 also advised me at that time that he had -- he sat on a couple
15 of wells in the area -- the Zapata Well and the well to the
16 Southwest there, ran samples and checked the well because
17 he was supporting them or he was employed. So we had quite
18 a bit of information available at that time. As far as the
19 history after our purchase of the lease, we had enough infor-
20 mation, I think, to justify the area because we paid Mr.
21 Yates for ~~was~~ our bidder and we outbid him so we had enough
22 geology we thought, it was better than he did. After that,
23 the Adobe Well was announced. It was drilled tight, so we
24 never saw the log. We did not do anything as far away, I
25 got some more development, subsequent to that, Adobe announced

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1 a well just South of our Section 8, there, and we were
2 related. While that was drilling we were approached by
3 two geologists in Midland. They had farm-outs from Marylo,
4 in our CA, and AMOCO had indicated that they had the four
5 farm-outs that had been sold to or made a deal with Yates
6 Petroleum Company to drill a well in there, that there
7 was apparently some conflict between Harvey E. Yates Com-
8 pany and Yates Petroleum Company that was probably several
9 months before this all came about. And that he wanted me
10 to stay loose and not commit my acreage to any one until
11 those problems were resolved.. I assured him that we were
12 not, that we were actually going to see if the Adobe-Hannah
13 Well reached total depth. I guess it was shortly after that
14 a tract just South of the Phillips Well was put up as a
15 state sale. We did not bid on it. We didn't know whether
16 the gas was dedicated or not, or what the problem was going
17 to be we understood for the Phillips there was a possibility
18 it might be dedicated so we stayed away from it for -- but
19 shortly thereafter I believe, it was the Yates Petroleum
20 man in conjunction with Harvey Yates, filed an application
21 for a well in that Northwest quarter using designated West
22 half. So it turned out you have Yates for the West half/
23 East half line in the section 20. You have Adobe-Hannah Well
24 which has Easthalf/Westhalf. We are recommending the East
25 half/West half in Section 8 as opposed to changing the pat-

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1 terns in the South half.

2 Q Mr. Monaghan, would you please give a narrative
3 description of the contract that you had with both Yates
4 Petroleum and Harvey Yates Company in connection with the
5 development of this. Kind of in chronological order. if
6 you would.

7 A I don't know exactly how to say it, but there
8 is testimony here today that conflicts with what I was
9 told. By the two geologists who had a falling out.

10 Q Just state it as you know it.

11 A From information I received from discussion of
12 this matter with Yates Petroleum Company. They indicated
13 that they had asked Harvey Yates to join in the working
14 interest unit with them, and have a West half well, West
15 half of Yates. Mr. Yates flatly refused, it was pointed out.

16 MR. LOSEY: Excuse me. I realize this is
17 hearsay, I'm not going to object, but I would like
18 to know what the two geologists names are.

19 THE WITNESS: Mr. Russel Stipp and Mr. J.H.
20 Moore. They are former district geologists and for Chevron
21 Oil Company. They are independents now and are quite well
22 know by Mr. Yates here and the rest of the people in this
23 room.

24 MR. LOSEY: Russell Stipp and J.H. Moore.

25 THE WITNESS: Yes sir. They took the formats

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1 as I understand it from these companies.

2 MR. LOSEY: Excuse me. Go ahead.

3 BY THE WITNESS:

4 A They indicated that they refused, that the
5 AMOCO lease expired March 18th, that Mr. Yates' lease expired
6 in October, to quote an employee. I asked Yates employ-
7 ee participating in the working unit, and I said how in the
8 world could all this happen, that you all lost control of
9 this. And this, I don't know how to say it, except I'll
10 change the language, he says frankly we were blackmailed.

11 MR. LOSEY: Let me stop again.

12 THE WITNESS: That's Mr. Randy Patterson, sir.

13 MR. LOSEY: All right. If I'm going to listen
14 to hearsay I want to know who it is relating to.

15 THE WITNESS: That was a conversation I had
16 directly with him it's not exactly hearsay. I believe the
17 next I knew I got a call from Mr. George Yates who was in
18 town said we're going to drill a well, why don't you join
19 us. I said, well, what do you want to do in the South half.

20 BY MR. COFFIELD:

21 Q Just a minute here, Mr. Monaghan. Is this
22 telephone call and so forth the one which precipitated the
23 meeting on the 22nd or 23rd.

24 A It was Tuesday, January 23rd when our meeting
25 was, at ten o'clock in the morning. He called and asked

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1 if we'd join the well. I said, well, we'd like to see what
2 you got, what you want to do. I still had not heard back
3 from Yates Petroleum or from Russell Stipp about their deal.
4 And I was pretty committed to wait to see what they did.
5 So I said do you have anything you could show us. We don't
6 have a lot of information. We did not have a copy of the
7 Adobe-Hannah well -- the Adobe 116 Well. We did not have
8 privy to the tests, or core or anything else. So I said
9 may we come over and talk to you, maybe show us some of your
10 geology, we don't have a lot on that.

11 These new developments is what we were referring
12 to. So he said yes, come over. So I called Mr. Carlton and
13 we went over and sat down, while Mr. Yates was on the tele-
14 phone I think Mr. Lattu showed us a couple of his small
15 scribble maps he'd fixed up to show us. I said, well, do
16 you have anything else to help us make a decision that this
17 is what we ought to do. He said, no, we can't show you
18 anything else. I said do you have anything we could show
19 to our partners to help them and us make a decision. I can't
20 answer for everybody else. To our co-tenants in the thing,
21 and he said no. And we were not shown the log on the Adobe-
22 Hannah so we had no idea what it had in it. Not the Hannah
23 116.

24 Mr. Yates came in, they discussed the working
25 interest unit, and I said will we be entitled to pay our way,

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1 and participate in that. He said no. I said we're being
2 asked to pay one-eighth the cost by drilling this well you
3 earn the farm-outs in those sections and half outside of
4 the unit, and you still don't think we're entitled to
5 there. My feeling was if it's dry hole money would he hold
6 the dry hole money and say it's all his because he got it,
7 or would we be allowed to share in that. And I think they
8 are the same thing, that most reasonable and prudent operators
9 with ethics would approve that. Then we kept talking about
10 this, what we could do. He said, well, in no uncertain
11 terms, you can join us and pay your eighth. You will not
12 share in any farm-ins, period. You can't non-consent.
13 You can farm out for a 16th and a 40 percent back in and
14 of course, our thoughts were then the people he's over here
15 forcing for 40 percent back in, when the common deal now is
16 50 percent in most of these areas, were the people with
17 expiring leases. Ours were brand new leases. We paid
18 a hundred and eighty-seven dollars or something like that
19 an acre for it. We were not in jeopardy. There was a
20 well drilling just South of us that would be down quite a
21 while before, and it's been proved since then, you have to
22 start drilling. I thought we were entitled to some decision
23 on that. He said, well, it's do that or I'm going to force-
24 pool you. That's the only choice you got. Then Ken said,
25 have throughout, cash way, he'll, well we might just take

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1 the whole thing and make a whole unit out of it, put a five
2 hundred percent non-consent clause in there. Frankly, I
3 never head of a five hundred percent non-consent clause be-
4 fore, and I just started and set there. Frankly, after that
5 we went outside and I looked at Toby. I said, Toby, I
6 feel like a stepbrother's child. We came over here with
7 our good feelings toward you, and you say that's why we
8 bought the lease, everybody wants to participate in the well
9 that's why we're buying those leases, we bought some 20 or
10 25 thousand acres up there in the last year. I came out
11 like my lease is expired, I was asking a favor, and still
12 try to help cooperate. So we came back, and I was shook, I
13 got on the phone and called John Hendrix, called the Presi-
14 dent of the Tree Oil Corporation, also associate buyers in
15 that thing, called Jack Markham and John Wellburn up in
16 Lubbock. I said, what do you think? This is what he's told
17 us he'll do. All of them were astounded that these people
18 would not offer us a chance to participate at their cost on
19 any farm-outs that were required, that a farm-out would only
20 be a 40 percent and that if we didn't we could go to pot.
21 Because they were assured the could sell enough to force-pool
22 us up here. So they said, well, why don't you talk to your
23 attorney about that. So I called Mr. Coffield up, I had to
24 do it the next day because that was that way, January 24th,
25 talked to him and he told me I have never been to a

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1 Commission Hearing like that, I have no idea what the pro-
2 cedures are. I then got on the phone and talked to everybody
3 again and told them what Mr. Coffield's firm felt that sit-
4 uation was. Needs to be decided what we're doing, what we're
5 going to propose. When we got to the meeting and talked
6 around about the situation, the well drilling and how deep
7 the Hannah Well was, it was pointed out that after Mr.
8 Yates and them got the Northwest quarter of 20, they imme-
9 diately, before Adobe, who's the operator, filed a permit.
10 They filed one to beat them to the punch. And I thought,
11 well, that's kind of scary, because I also know that when
12 Adobe had a meeting with Harvey Yates and the rest of the
13 people in that group about the No. 116, recommending 160
14 acre spacing that everybody seemed to agree and a very short
15 time after that they were advised that Harvey Yates came
16 over here and applied for 320 and didn't even advise Adobe
17 and them that they were doing it. So that kind of scared me.
18 That we might be confiscated or our rights taken away from
19 us without due process. So we recommended that the thing
20 to do to protect ourselves against a full Commission Hearing
21 would be to file a form C-101 on what we like best for our
22 lease and have it adjudicated here before this Commission.
23 You want me to go ahead with the story after that?

24 Q Yes.

25 A The form, I think, was probably filed the

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1 Friday the 25th, I think it was, or 6th. Tuesday was the
2 23rd, it would be the following Friday and then on the fol-
3 lowing Monday, I believe, it was approved. On Tuesday,
4 Mr. Lattu called me and said Bob, what's going on. I said
5 well, what I saw here, I was afraid we were going to be
6 forced into something we didn't want to, we were quite con-
7 cerned over the conditions and we felt like we had been
8 kind of browbeat and everybody was shocked and actually mad.
9 Some of them are still mad. So I said I think -- why don't
10 you talk to George Yates. He said, well, George is in
11 Colorado. I said well, talk to somebody, see if we can't get
12 to gether and talk about this thing because we're headed for
13 a hearing and I -- even know George Yates said the reason
14 he wanted the South half to the West half was that he wants
15 to unitize all those leases over there in the West half. We
16 got a lot more paperwork and time to do this if we're going
17 to have that way, and if we go to court we're going to have
18 a lot more time. So, I believe it was on February the 1st,
19 a Monday I believe it was, following our talk, I guess, with
20 Mr. Lattu, it was on the 30th. Mr. Bob Strand called me and
21 said he'd been advised of this filing of ours and wanted to
22 know what we could do and everything. I told him we had
23 some problems that we'd like to discuss with them, why didn't
24 he have Mr. George Yates and the others all get together and
25 have a meeting and discuss these that we did not want to go

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1 before a hearing, that we thought they could be worked out.

2 He said, well, I feel two things. we could
3 probably go to the West half, we might go the West half,
4 but I'll tell you what, when you get ready to do it your way
5 we will go non-consent and you will carry us for our inter-
6 ests, and you will prove up that, plus you will prove up
7 our leases to the East and Northeast there. We feel that
8 would be a good deal for us, he said. Actually, I can
9 almost assure, I think I know exactly what George Yates will
10 do when he comes back. Which seemed like another -- what
11 we had before. On February the 2nd I was talking with Yates
12 Petroleum regarding their well in 22-23 that we have joined
13 a large unit with them, and said you all are relatives with
14 these people. I don't know what your relations are, other
15 than I've heard rumors, why can't you all work out a deal
16 where we can all meet. He said, what's the big objection.
17 I said, well, we were given those three options and told there
18 was no way we could participate in the farm-ins, which you
19 all took from Stipp and Moore. I said, would you object
20 and they said, no, I don't think we would. I don't see any
21 reason why we would object. Well please talk to them and
22 lets get something going.

23 MR. LOSEY: Mr. Monaghan, I'm going to
24 listen to some more hearsay, but tell me who is relating.

25 THE WITNESS: Randy.

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1 MR. LOSEY: That was Randy Degan?

2 BY THE WITNESS:

3 A Yes. I believe it was on the 7th or 6th I
4 talked to Bud Hebert. On the other thing, about some of
5 the operating leases had been signed and AFE's, and I said,
6 Buddy, did you ever get anything. He said well, I think we
7 kind of got turned down. I said, well, please try it again.
8 He said, I will. Two or three days went by, I didn't hear
9 from him. I talked to Randy Patterson, I said Bud never
10 called me back, we're still waiting here, it's getting
11 closer to filing for a hearing. We haven't had a discussion.
12 He said, well frankly, he's in Washington and I don't know
13 what Yates told. I said, well, would you take it on your-
14 self to have some communication with them so that we can
15 do it. I believe it was on -- it was several days after
16 that, after the 7th. Probably a week, I have the exact
17 date here somewhere, I even typed up the transcript from
18 the conversation I had a Dictaphone cover it. He said I
19 talked to George Yates and George said he's done all the
20 talking he want's to do. He's not going to talk to you all
21 about anything. He'll see you in Santa Fe.

22 Now, I think if there's any indication that
23 we haven't tried to communicate and resolve these differences.
24 I think they are misstated and misrepresented because we
25 have. And they're both working together every day, we

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1 surely they could do it. And I think we made every effort.

2 MR. LOSEY: Mr. Monaghan, who was this last
3 person we talked to?

4 THE WITNESS: Randy Patterson.

5 MR. LOSEY: Okay. That's right.

6 THE WITNESS: I assume Mr. Patterson will
7 probably lose his job after this, but this is the actual
8 truth, I hope you won't vindictive.

9 MR. YATES: He doesn't work for us.

10 THE WITNESS: Yes sir, I know that. Do you
11 have any more questions?

12 BY MR. COFFIELD:

13 Q Do you have anything else?

14 A Just a summation.

15 Q All right.

16 A I think from what you all have seen here,
17 prepared by Mr. Hendrix and Mr. Carlton who are both quali-
18 fied, the predominance of evidence is that two wells can be
19 drilled in that section. That by so doing the state will
20 recover a lot more money, a lot more of it's share of oil
21 and gas than you will from one well 660 feet from the South
22 line and no other wells drilled. Frankly, if Yates' threat
23 is true, I will not go up there and drill a well for a
24 quarter interest with a risk factor like that, for whatever
25 penalties you had, and if it's anywhere what you think it is

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1 I wouldn't go drilling up there anyway, it wouldn't pay my
2 part of it. I think that the basic reason for Mr. Yates'
3 putting the South half which I have been indicating before
4 in testimony that they would have a 120 acres in the West
5 half unit, the South half would have a 160, which gives
6 them a bigger interest in working this unit, and also gets
7 them a little closer to the field. I think the communica-
8 tions have been very serious that from the very start, from
9 the first thing several months ago that they have been
10 browbeating people. Trying to force them to do everything
11 that they wanted to do. And been partially successful.
12 The state will lose 50 percent probably, of the recovery
13 they might get by going along with this attempt, and I think
14 that the intent of High-Co is largely obviously for a selfish
15 interest and does not try to protect higher interests or
16 the state of New Mexico's interests. I think by coming here
17 and filing this petition, that they're attempting to get you
18 gentlemen to lend some shade of respectability to what they're
19 doing. It's not acceptable for what they're doing to most
20 of the people I know and all the people I know are all
21 against this. He's done it to do his two Adobe down there
22 on 160 acres spaces there, he's done it on the West half of
23 Section 20, which are questionable in themselves. We feel
24 the expressed need of the Commission should not be subjected
25 to these requests that they are making. Approval of forced

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1 pooling actions will deprive not only the adjoining land
2 owners who live here, property rights, and protect from
3 drainage but will also protect you.

4 I do not in any way think their request
5 would prevent waste or protect correlative rights of all
6 the parties concerned.

7 Q You think our request would?

8 A Yes sir.

9 MR. COFFIELD: I have no further questions of
10 this witness.

11 MR. RAMEY: Any questions of the witness?

12 MR. LOSEY: Yes sir.

13 MR. RAMEY: Mr. Losey.

14 CROSS EXAMINATION

15 BY MR. LOSEY:

16 Q Mr. Monaghan, what day did you talk to Bob
17 Strand on the telephone?

18 A The date I had on the call slip was February
19 1st. I brought some of those call slips in, in case -- I
20 believe I may have that. Would you like to see that slip
21 if I have it or will you accept it? I can furnish you my
22 telephone records or we can check it or I can find it later,
23 but up to today I wrote it down.

24 Q You wrote February one?

25 A Yes sir.

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1 Q Where did you talk to him?

2 A He called me from somewhere, I presume his
3 office to my office.

4 Q He called you?

5 A Yes sir it was the day after I talked to Andy
6 Lattu, I asked if Andy communicated to them that we would
7 like to have a meeting to the following day if that day was
8 Febraury the 1st or Monday then he returned the call the
9 next day.

10 Q Did he tell you he was Bob Strand?

11 A Yes.

12 Q Did he tell you where he was located?

13 A That he was with Yates Petroleum, no sir.

14 Q He was with Yates?

15 A I'm Harvey Yates Company, and he talked later,
16 too, when he told me what happened, that's the way I under-
17 stand it, that's what I wrote down.

18 Q This is Bob Strand?

19 A I have never seen the gentleman before in my
20 life, I still don't know him. I think I asked Mr. Coffield
21 or somebody do you all know Bob Strand. The guy called and
22 he talked to me and he said this is what we'll do.

23 Q Tell me the gist of his conversation again?

24 A It was very short, he asked if we did it and
25 what were our reasons.

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25 what were our reasons.

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1 Q You did what Mr. Monaghan?

2 A I told him the reason we did it we wanted
3 to protect ourselves and and thought they were being unfair,
4 and we could not participate, that we were afraid we were
5 going to lose our interests that we tried to protect our-
6 selves and we'd like to discuss it with you would you please
7 come over here, and he said well, we may go the West half.
8 I said, well right, that's what we want, that's what Yates
9 Petroleum wants as I understand. He said if we do, you'll
10 have to carry us on any other stuff. I'll tell you what I
11 think George Yates will do soon as he gets back.

12 Q You're satisfied that this man told you he was
13 Bob Strand and talked to you on February 1st?

14 A I've got a scribbly paper here if I can just
15 type it.

16 Q I'm not concerned about the date, Mr. Monaghan,
17 is the fact of the conversation what a man who related said
18 he told you he was Bob Strand.

19 A Well sir, I have never heard of that name
20 before, I have never heard it since. I don't know where I
21 would have gotten it if somebody hadn't called me and said
22 they were Bob Strand.

23 Q Now, you have related all these tactics that
24 you say Harvey Yates Company has done for the Austin-Mississ-
25 ippippiPay. One of which was that Harvey Yates Company asked

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1 for 320 acre spaces for the pool, is that correct?

2 A In the --

3 Q Austin-Mississippi.

4 A Harvey Yates did, no. Adobe did. Adobe went
5 160 and when Yates left them they understood Harvey Yates
6 left the meeting they understood they agreed with them on
7 160, next thing they knew there was a Commission application
8 filed saying 320 and they were caught.

9 Q Who was the application by?

10 A Mr. Yates, I believe is the way I understood.

11 Q That is correct as most of your other hearsay?

12 A Sir, I have come over here and checked the
13 records on it.

14 Q If I were to tell you that I filed the
15 application for Yates Petroleum Company and to have the
16 Austin and Mississippian Pay approved according to procedure,
17 would you tell me I was wrong?

18 A No sir.

19 Q If I were to tell you that Yates Petroleum
20 Corporation was the company that signed the application for
21 the Northwest quarter of Section 20 and not Harvey Yates
22 Company, would you tell me I'm wrong?

23 A The maps show that, but I would assume Harvey
24 Yates are involved in it too, aren't they.

25 Q I can not say that.

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1 A I think I can -- tend that to. Maybe Adobe
2 when they said Yates meant both Yates people. I don't know.

3 Q On January the 23rd, in Harvey Yates Company
4 office you were given the opportunity to join in with the
5 drilling of this well based on the South half of a location
6 in the Southeast of the Southwest, were you not. And pay
7 your one-eighth share of the well?

8 A They did say that I could do that, yes sir.

9 Q Have you ever responded to that offer?

10 A Not in the form of a letter, but it wasn't in
11 the form of a letter that I was asked.

12 Q Did you ever respond by letter or orally?

13 A I did through Mr. Hendrix letter yes, I was
14 previous to writing that and sending it to them yes sir.
15 And I talked to Yates Petroleum people and said could you
16 all not work out something --

17 Q In other words, your response to that offer
18 was your exhibit seven, which invites them to join in the
19 drilling of a well spacing the East half?

20 A Well, it was also through our conversations
21 with their various partners, associates in what they should
22 get, Yates Petroleum Company showed a very amicable relation-
23 ship with -- we were working very closely together.

24 Q But the answer to my question is you never
25 rejected Harvey Yates offer to join?

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1 A I told Mr. Lattu and Mr. Bob Strand we could
2 not join on that type of deal, let's get together and talk
3 about it, yes sir. I don't know that I need to write a
4 letter and say object to it because I want to talk and work
5 out something and compromise and get it done and get on with
6 it.

7 Q Did you offer the meeting on January 23rd to
8 pay for the seismic and geological work that had been done
9 by Harvey Yates Company in that area?

10 A Sir, to my knowledge they have done no seismic
11 work with relation to section 8. This was told to us by some
12 of the people in the working interest unit. They were going
13 to do it. They were not involved in Section 8. To help
14 justify a location in the North half of Section 16 and they
15 were doing it for that reason and that was the sole reason
16 that they were being asked to pay for their share of this
17 seismic. So I think that's a bunch of, of -- you want to
18 address me about Section 8.

19 Q Did you offer to pay for your share?

20 A No sir. I wasn't asked to.

21 Q Thank you, you answered a question.

22 A No one has told me how much it was since --
23 never showed me.

24 Q Mr. Monaghan.

25 A Yes.

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1 Q Do I understand you to say that Harvey Yates
2 Company wouldn't let you have their maps to go over with your
3 partner.

4 A We said do you have anything we could take with
5 you that would help something with what we've got to show
6 them. Spend a lot more time, do a lot more detail work,
7 to come up with, and we do not have Adobe Wells, and we were
8 refused.

9 Q Do I understand you to say you were refused the
10 right to take the maps?

11 A Take anything. Mr. Carlton was allowed to put
12 some points down there and write his own little schedule there.

13 Q He took the points off Mr. Lattu's map?

14 A He took some points, I couldn't see across the
15 table, I didn't have my glasses on, I wasn't looking too
16 particularly.

17 Q In that meeting, did you all discuss the drill-
18 ing of a well in the North half of Section 8?

19 A We told him that if there's a well drilled there
20 that we didn't think the North half would ever be drilled,
21 it would be very risky and our lease was going to be just
22 sitting out there and we would get nothing for it, it would
23 never be drained.

24 Q Doesn't Harvey Yates Company have as much
25 acreage or more acreage in the North half of the Section than

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1 you people do?

2 A Approximately the same.

3 Q I think they have a 160 acres in the North
4 half.

5 A They've got 160 in the South half, sir.

6 Q They've got 160 acres don't they, on the West
7 half of the Northeast and the East half of the Northwest?

8 A The West half, Oh, okay. 160. That's what
9 I said, 160, I believe in the North half they own 160 in
10 the South half.

11 Q So they own really, more acreage than you do
12 in the North half, also?

13 A I thought you said they own more acreage,
14 period. Yes, they own more than we do, yes.

15 MR. LOSEY: I think that's all.

16 MR. RAMEY: Any other questions of the witness?
17 He may be excused.

18 THE WITNESS: Thank you, sir.

19 MR. RAMEY: Do you have anything further, Mr.
20 Coffield?

21 MR. COFFIELD: No sir.

22 MR. RAMEY: Mr. Losey?

23 MR. LOSEY: I'd like to take about two or
24 three minutes before seeing about the re-direct, Mr. Ramey,
25

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1 If I might talk to my people.

2 MR. RAMEY: Let's take about fifteen.

3 (Whereupon a discussion was had off the record.)

4 MR. RAMEY: The hearing will come to order,
5 please. Mr. Losey, I assume you have something further.

6 MR. LOSEY: Yes sir. I have some re-direct.

7 RE-DIRECT EXAMINATION

8 BY MR. LOSEY:

9 Q You are the Andy Lattu that testified on
10 Direct Examination?

11 A Yes, I am.

12 Q Do you have an opinion as to whether or not
13 the Austin-Mississippi Pay zone or Austin Pay zone is a
14 water dry?

15 A Yes, I do.

16 Q What is that opinion?

17 A It is not a water dry. There has been no-show
18 formation water in any that has penetrated the zone. The
19 Phillips Well, which is the highest well on the field is
20 apparently at or near depletion. It's my understanding that
21 the Phillips has been an attempt to plug and abandon that
22 well in the Austin Pay zone. It has made no water. If it
23 were a water dry reservoir I would anticipate the Phillips
24 Well to be one of the last wells to be depleted. If the
25 reservoir did not have a continuous permeability or porosity

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1 throughout it, then it would not be a water dry reservoir,
2 and this is what I think the case is. I think it would be
3 a gas depletion reservoir.

4 MR. HENSLEY: Mr. Commissioner, may I void dire
5 the witness as to his qualifications as a reservoir engin-
6 eer?

7 THE WITNESS: I'm not a reservoir engineer.
8 There is, as I said, at the beginning of my statement, that
9 has not been a single show of formation for water in any
10 well that has penetrated.

11 MR. HENSLEY: I didn't understand that you were,
12 that's why I questioned that information.

13 MR. LOSEY: We'll so note, Mr. Hensley, that
14 we know Mr. Lattu's a geologist. I think that's all.

15 FURTHER RE-CROSS EXAMINATION

16 BY MR. HENSLEY:

17 Q Mr. Lattu, is it your opinion that if this was
18 a water dry reservoir, that the depletion of this Phillips-
19 Austin Well in Section 17, would it ultimately result in
20 the production of produced water in conjunction with hydro-
21 carbons?

22 A You mean would it make water before being
23 depleted?

24 Q Right.

25 A Yes, I feel that that would be an assumption.

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1 Q Is that your opinion regardless of the distance
2 the verticle distance between the porosity band and the gas/
3 water contact?

4 A That's my opinion of this reservoir, yes.

5 Q Is permeability a function of whether or not
6 water -- produced water would be produced in conjunction with
7 a gas reservoir like this?

8 A Well, water dry reservoir requires good perme-
9 ability.

10 Q If permeability was strictly horizontal perme-
11 ability, and not vertical into the water producing zone,
12 would you expect to ever encounter any water?

13 A I believe the -- this is a rilitic (sic) type
14 carbonate, I believe the porosity and permeability are
15 probably equal both vertical and horizontal. And I feel
16 that if this reservoir was a water dry before the Phillips
17 Well was depleted, you would see water.

18 Q Do you have any explanation at all as a geolo-
19 gist, why these good porosity sections which Mr. Carlton
20 described on the logs were never even tested when the wells
21 were drilled?

22 A I believe the porosity and permeability is as
23 good vertical as horizontal as I previously stated. They
24 perforated the upper portion of it. Looking at the logs, the
25 lower portion does not appear to be water wet and therefore

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1 they may have seen something in the samples that they
2 felt the sonic log porosity was not in fact porosity.

3 Q Isn't it more likely that what they found
4 was high water saturation, if you've got that porosity indi-
5 cation on your logs. Isn't that customary in the industry
6 where you've got a section like that and you only perforate
7 a very small portion of the upper interval that you do so
8 because of your fear of the water contact?

9 A I don't believe the lower portion is porosity.
10 It may have been curiosity or something else in the samples
11 that led them to -- they didn't test it and they didn't
12 know why. In speculation on both our sides as to who's
13 right but this is my opinion.

14 Q Why does a water dry reservoir require uniform
15 permeability?

16 A I didn't say uniform, it requires good permea-
17 bility, you need a larger hole to push a water molecule
18 through than a gas molecule.

19 MR. HENSLEY: No further questions.

20 MR. RAMEY: Do you have any questions?

21 MR. LOSEY: I have no further questions.

22 MR. RAMEY: The witness may be excused. Do
23 you have anything further Mr. Losey?

24 MR. LOSEY: Yes sir. Mr. Strand. He has not
25 been sworn.

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1 ROBERT STRAND

2 being called as a witness and having been duly sworn upon
3 his oath, testified as follows, to-wit:

4 DIRECT EXAMINATION

5 BY MR. LOSEY:

6 Q You heard Mr. Monaghan testify with respect
7 to a phone conversation with a person who he said called
8 him and told him he was Bob Strand, did you not?

9 A Yes sir.

10 Q Have you ever talked to your knowledge to Mr.
11 Monaghan?

12 A No, I have not.

13 Q Did you not call him on February the first
14 and have the telephone conversation that he testified to?

15 A No.

16 Q Did you ever tell him in a telephone conversa-
17 tion that if he drilled the East half he'd have to carry
18 Harvey Yates Company and with no penalty?

19 A No sir.

20 Q Have you ever had any telephone conversation
21 with Mr. Monaghan?

22 A No sir.

23 Q Did you ever send any letters to Mr. Monaghan?

24 A Yes, Mr. Losey, on February first I directed a
25 letter to Cal-Mon, to the attention of Mr. Monaghan, and

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1 enclosed with that letter were an operating agreement and
2 the AFE that's been referred to previously. Requesting them
3 to join and participate in the well.

4 Q Did you have further correspondence with
5 them?

6 A Yes, on February eighth, I might back up and
7 state when I sent the first letter the only interest owners
8 that I was aware of that were in ownership in that particular
9 state lease were Cal-Mon Oil Company and John Hendrix Corpor-
10 ation. Subsequent to that I ordered some assignments from
11 an abstractor in Lovington which indicated there were a
12 number of other parties that owned working interest in that
13 particular lease. On February 8, 1979, I directed another
14 letter with basically the same terms in it to all of these
15 people, and I believe it also went to Cal-Mon and the Hendrix
16 Corporation.

17 Q I have marked that as Exhibit Six, and your
18 prior letter of February one as Exhibit Five. Is Harvey
19 Yates Company a party to the Adobe 3 operating agreement?

20 A Yes sir.

21 Q And that resulted in the well that's been
22 testified to drill in Section 16?

23 A That's correct.

24 Q Are you familiar with the joint operating agree-
25 ment that was proposed by Adobe in the drilling of that well?

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1 A Yes I am.

2 Q Are you familiar with the monthly drilling well
3 rate charged by Adobe to the other owners?

4 A Yes sir, Mr. Losey, I called our office in
5 Rosewell about an hour ago and talked to my secretary and
6 had her get the particular file involved and she pulled out
7 the operating agreement and read it to me, the figures of
8 \$2,620 for drilling, \$275 for producing each per month.

9 Q The proposal of Harvey Yates Company in this
10 case was \$2,700 for drilling and \$270 for producing?

11 A Yes.

12 Q Did you also determine what the AFE was for
13 drilling of this Adobe 16 Well?

14 A I was unable to locate that, Mr. Losey. I do
15 have that information for Hannah Well drilled in Section
16 17.

17 Q That was the well that is just now being
18 completed in the same pay zone, is it not?

19 A Yes sir.

20 Q And Harvey Yates Company was a party to it?

21 A Yes.

22 Q What was the dry hole cost for that well, the
23 AFE?

24 A This particular AFE, Mr. Losey, indicated a
25 casing point cost of \$588,500.

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1 Q What was a producing well cost?

2 A \$913,500.

3 MR. LOSEY: I believe that's all Mr. Strand.

4 CROSS EXAMINATION

5 BY MR. HENSLEY:

6 Q Mr. Strand, what is your position with Harvey
7 Yates Company?

8 A Mr. Hensley, I'm employed by the company as an
9 in-house lawyer and as a land man.

10 Q When you talked to your secretary a few minutes
11 ago, did you ask her to see if she could locate any telephone
12 tickets for February one, between your office and Mr. Mona-
13 ghan's office for Midland?

14 A No sir, I did not.

15 Q If you didn't have this conversation with Mr.
16 Monaghan, who did?

17 A I haven't the faintest idea.

18 Q Were you in the office that day?

19 A Yes, I expect so. This letter was dated Feb-
20 ruary first, the first letter we put into evidence, the
21 Exhibit Five, and I'm sure I wrote that letter on February
22 first.

23 MR. HENSLEY: No further questions.

24 MR. LOSEY: I have no further questions.

25 MR. RAMEY: The witness may be excused.

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FURTHER RE-DIRECT EXAMINATION

BY MR. LOSEY:

Q You are the same George Yates who testified on Direct?

A Yes sir, I am.

Q And you're the same George Yates who offered Mr. Monaghan of Cal-Mon Oil Company in Mr. Carlton's presence the opportunity to, on January 23rd, to 22nd, to participate in drilling a well in the South half of Section 8?

A Yes sir.

Q Have you had any response from Mr. Monaghan since then?

A I have not.

Q Mr. Yates, if the Commission sees fit to approve the dedication of the South half and the drilling of the well you propose in the Southeast/Southwest, and it results in a producer and confirms the geology that Mr. Lattu has presented here today, would Harvey Yates Company be interested in drilling a well in the North half of Section 8?

A If our prospect is confirmed by the drilling of the well in the South half of Section, I would anticipate drilling the North half of Section 8.

Q Actually, your company and the unit in the North half of Section 8, own three quarters of that acreage, do they not?

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1 A That's correct.

2 MR. LOSEY: That's all.

3 FURTHER RE-CROSS EXAMINATION

4 BY MR. HENSLEY:

5 Q Mr. Yates, directing your attention to Hendrix
6 Exhibit number eleven, which is a letter from John Hendrix
7 to you dated January 31, 1979, concerning drilling a well
8 in the East half of Section 8, did you ever reply to that
9 letter?

10 A I didn't reply to that letter. Harold, the
11 tactics that were being used by Cal-Mon and it's partners
12 it was pretty apparent at that point. I'd never received
13 an answer to my proposal. This was my answer. We sent at
14 that point an AFE and an operating agreement to Cal-Mon
15 and it's partners.

16 Q So neither of you responded to each other's
17 proposals in writing?

18 A That's correct.

19 MR. HENSLEY: Thank you.

20 MR. RAMEY: Any other questions of the witness?

21 MR. LOSEY: No further questions.

22 MR. RAMEY: You may be excused. Do you have
23 anything further, Mr. Losey?

24 MR. LOSEY: No sir, Mr. Ramey.

25 MR. RAMEY: Mr. Hensley? Mr. Coffield?

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1 MR. COFFIELD: No sir.

2 MR. RAMEY: The Commission will take the case
3 under advisement, and the hearing is adjourned.
4
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REPORTER'S CERTIFICATE

I, STEFANIE XANTHULL, a court reporter, DO HEREBY
CERTIFY that the foregoing and attached Transcript of
Hearing before the Oil Conservation Division was reported
by me; that the said transcript is a full, true, and
correct record of the hearing, prepared by me to the
best of my ability, knowledge and skill, from my notes taken
at the time of the hearing.

Stefanie Xanthull, C.S.R.

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Loose

Letta

Control 280 of 320
211 but NE SE

Contented structural low in E/2
Section 6

Risk 200%

Called
Hendrix

No Upper Penn Bank production

Jan 22 or 23

George Yates VP of Heyco

\$604,000 Dry

913,500 Producer } Drlg. costs

Cost \$270

Drlg. \$2700 } Recommendations for
operating costs

Need Order before 3-18-79

Conrad Confield Hendrix
AT Corlton

Penalty - 100%

John Hendrix

623-6601

Bob Strand

\$515,500 Dry hole

794,000 Prod.

Operating ~~Costs~~
Overhead

Prod \$150 / Month
Drlg \$2500



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

P. O. BOX 2088 - SANTA FE

87501

DIRECTOR
JOE D. RAMEY

LAND COMMISSIONER
PHIL R. LUCERO

March 9, 1979



STATE GEOLOGIST
EMERY C. ARNOLD

Mr. Conrad E. Coffield
Hinkle, Cox, Eaton, Coffield
& Hensley
Attorneys at Law
P. O. Box 3580
Midland, Texas 79702

Re:

CASE NO. 6488
ORDER NO. P-5945

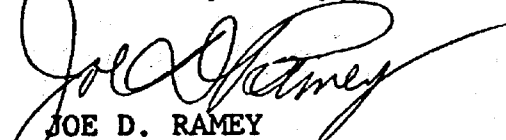
Applicant:

John H. Hendrix Corporation

Dear Sir:

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

Yours very truly,


JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCC x
Artesia OCC x
Aztec OCC

Other Harold Hensley, A. J. Losee

DRAFT

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

APPLICATION OF JOHN H. HENDRIX
CORPORATION FOR COMPULSORY
POOLING, LEA COUNTY, NEW
MEXICO

CASE NO. 6488

Order No. R- 5945

ORDER OF THE ^{Commission} ~~DIVISION~~

BY THE ^{Commission} ~~DIVISION~~:

to as the
(Commission)

This cause came on for hearing at 9 a.m. on March 2

19 79, at Santa Fe, New Mexico, before ~~Examiner~~ ^{the Oil Conservation}
~~Commission of the State of New Mexico, hereinafter referred to as the~~ ^{Commission}
NOW, on this March day of March, 19 79, the ~~DIVISION~~ ^{Commission}

2 quorum being present

~~Director~~, having considered the testimony, the record, and the
~~exhibits of the hearing,~~
~~recommendations of the Examiner,~~ and being fully advised in the
premises,

FINDS:

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

(2) That the applicant, John H. Hendrix Corporation,
seeks an order pooling all mineral interests in The Wolfcamp,
Pennsylvanian & Mississippian formation underlying the E/2
of Section 8, Township 14 South, Range 36 East
NMPM, Austin Mississippian Pool, Lea County, New
Mexico.

(3) That the applicant has the right to drill and proposes
to drill a well at 2 standard location ^{in the E/2 of} ~~Section 8~~

(4) That Harvey P. Yuen Company seeks the
pooling and dedication of the S/2 of ^{said} ~~the~~ Section 8
in Case No. 6483.

~~non-remedial~~
~~state~~

(5) That all of said Section 8 can reasonably be presumed to be productive of gas

(6) That the evidence indicates that ^{two} wells will be required to effectively ^{and efficiently} drain said Section 8.

(7) That the evidence indicates that ^{two} commercially productive wells can be drilled in the $\frac{3}{2}$ of said Section 8.

(8) That the evidence indicates that a well drilled in the $\frac{N}{2}$ of said Section 8 would in all probability not recover gas in commercial quantities.

(9) That to prevent waste & to ~~best~~ better protect correlative rights, said Section 8 should be developed on drilling units comprising the $\frac{E}{2}$ & the $\frac{W}{2}$ of the section.

(10) That by dividing said Section 8 into $\frac{E}{2}$ & $\frac{W}{2}$ drilling units, each working interest owner will be better afforded the opportunity to develop ~~his~~ ^{its} acreage in the section.

Case No.
Order No. R-

~~14~~(4) That there are interest owners in the proposed proration unit ^(the E/2 of said Section 8) who have not agreed to pool their interests.

~~12~~(5) That to avoid the drilling of unnecessary wells, to protect correlative rights, and to afford to the owner of each interest in said unit the opportunity to recover or receive without unnecessary expense his just and fair share of the gas in said pool, the subject application should be approved by pooling all mineral interests, whatever they may be, within said unit.

~~13~~(6) That the applicant should be designated the operator of the subject well and unit.

~~14~~(7) That any non-consenting working interest owner should be afforded the opportunity to pay his share of estimated well costs to the operator in lieu of paying his share of reasonable well costs out of production.

~~15~~(8) That any non-consenting working interest owner that does not pay his share of estimated well costs should have withheld from production his share of the reasonable well costs plus an additional 100% thereof as a reasonable charge for the risk involved in the drilling of the well.

~~16~~(9) That any non-consenting interest owner should be afforded the opportunity to object to the actual well costs but that actual well costs should be adopted as the reasonable well costs in the absence of such objection.

~~17~~(10) That following determination of reasonable well costs, any non-consenting working interest owner that has paid his share of estimated costs should pay to the operator any amount that reasonable well costs exceed estimated well costs and should receive from the operator any amount that paid estimated well costs exceed reasonable well costs.

#2500⁰⁰ per month while drilling &
#150⁰⁰ " " " producing

18(12) That ~~\$150~~ per month should be fixed as a reasonable charge for supervision (combined fixed rates); that the operator should be authorized to withhold from production the proportionate share of such supervision charges attributable to each non-consenting working interest, and in addition thereto, the operator should be authorized to withhold from production the proportionate share of actual expenditures required for operating the subject well, not in excess of what are reasonable, attributable to each non-consenting working interest.

19(12) That all proceeds from production from the subject well which are not disbursed for any reason should be placed in escrow to be paid to the true owner thereof upon demand and proof of ownership.

20(12) That upon the failure of the operator of said pooled unit to commence drilling of the well to which said unit is dedicated on or before June 15, 1979, the order pooling said unit should become null and void and of no effect whatsoever.

IT IS THEREFORE ORDERED:

(1) That all mineral interests, whatever they may be, in the Wolfcamp, Pennsylvanian & Mississippian formations underlying the E/2 of Section 8, Township 14 South, Range 36 East, NMPM, Austin, Mississippian Gas Pool, Lea County, New Mexico, are hereby pooled to form a standard 320-acre gas spacing and proration unit to be dedicated to a well to be drilled at a standard location thereon.

PROVIDED HOWEVER, that the operator of said unit shall commence the drilling of said well on or before the 15th day of June, 1979, and shall thereafter continue the drilling of said well with due diligence to a depth sufficient to test the Mississippian formation;

PROVIDED FURTHER, that in the event said operator does not commence the drilling of said well on or before the 15th day of June, 1979, Order (1) of this order shall be null and void and of no effect whatsoever, unless said operator obtains a time extension from the Division for good cause shown.

PROVIDED FURTHER, that should said well not be drilled to completion, or abandonment, within 120 days after commencement thereof, said operator shall appear before the Division Director and show cause why Order (1) of this order should not be rescinded.

(2) That John H. Hendrix Corporation is hereby designated the operator of the subject well and unit.

(3) That after the effective date of this order and within 30 days prior to commencing said well, the operator shall furnish the Division and each known working interest owner in the subject unit an itemized schedule of estimated well costs.

(4) That within 30 days from the date the schedule of estimated well costs is furnished to him, any non-consenting working interest owner shall have the right to pay his share of estimated well costs to the operator in lieu of paying his share of reasonable well costs out of production, and that any such owner who pays his share of estimated well costs as provided above shall remain liable for operating costs but shall not be liable for risk charges.

(5) That the operator shall furnish the Division and each known working interest owner an itemized schedule of actual well costs within 90 days following completion of the well; that if no objection to the actual well costs is received by the Division and the Division has not objected within 45 days following receipt of said schedule, the actual well costs shall be the reasonable well costs; provided however, that if there is an objection to actual well costs within said 45-day period the Division will determine reasonable well costs after public notice and hearing.

(6) That within 60 days following determination of reasonable well costs, any non-consenting working interest owner that has paid his share of estimated costs in advance as provided

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above shall pay to the operator his pro rata share of the amount that reasonable well costs exceed estimated well costs and shall receive from the operator his pro rata share of the amount that estimated well costs exceed reasonable well costs.

(7) That the operator is hereby authorized to withhold the following costs and charges from production:

- (A) The pro rata share of reasonable well costs attributable to each non-consenting working interest owner who has not paid his share of estimated well costs within 30 days from the date the schedule of estimated well costs is furnished to him.
- (B) As a charge for the risk involved in the drilling of the well, 100% of the pro rata share of reasonable well costs attributable to each non-consenting working interest owner who has not paid his share of estimated well costs within 30 days from the date the schedule of estimated well costs is furnished to him.

(8) That the operator shall distribute said costs and charges withheld from production to the parties who advanced the well costs. *\$2500⁰⁰ per month while drilling &*

(9) That *\$150⁰⁰ " " "* ~~per month~~ *producing* is hereby fixed as a reasonable charge for supervision (combined fixed rates); that the operator is hereby authorized to withhold from production the proportionate share of such supervision charge, attributable to each non-consenting working interest, and in addition thereto, the operator is hereby authorized to withhold from production the proportionate share of actual expenditures required for operating such well, not in excess of what are reasonable, attributable to each non-consenting working interest.

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Case
Order No.

(10) That any unsevered mineral interest shall be considered a seven-eighths (7/8) working interest and a one-eighth (1/8) royalty interest for the purpose of allocating costs and charges under the terms of this order.

(11) That any well costs or charges which are to be paid out of production shall be withheld only from the working interests share of production, and no costs or charges shall be withheld from production attributable to royalty interests.

(12) That all proceeds from production from the subject well which are not disbursed for any reason shall immediately be placed in escrow in Lea County, New Mexico, to be paid to the true owner thereof upon demand and proof of ownership; that the operator shall notify the Division of the name and address of said escrow agent within 30 days from the date of first deposit with said escrow agent.

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

DONE at Santa Fe, New Mexico, on the day and year herein-
above designated.

A. T. CARLETON

Geologist

POST OFFICE BOX 293

MIDLAND, TEXAS 79701

March 1, 1979

AUSTIN AREA, LEA COUNTY, NEW MEXICO

OIL CONSERVATION DIVISION

Santa Fe, New Mexico

Case No. 6488 Sub No. 8

Submitted by Hendrix

Working Date 3/2/79

The Austin Area appears to be on an anticlinal feature north of and on trend with the Caudill Anticline to the south. Production possibilities are primarily related to closure, although some are highly dependent on stratigraphic conditions. The main prospects are San Andres, Wolfcamp, Permo-Pennsylvanian Lime, upper Pennsylvanian Lime, Strawn Lime oil and Atoka, Morrow, Chester Lime and the Siluro-Devonian oil and/or gas. The Chester Lime and the Siluro-Devonian are the prime prospects here.

The Phillips #1 Austin (M-17-14-36) is the highest well on this feature to have penetrated the Siluro-Devonian. It found the top 140 feet of that section tight, but found good reservoir rock filled with formation water below that point. It was completed from 42 feet of microlog porosity in the Chester Lime for an IP COF 4,925 MCFGPD. It had made 4,023,145 MCFG + 57516 BD to 1-1-78 and was producing at an average rate of 15,000 MCFG + 122 BD per month at that time. Cherry Brothers #1 Austin-State (E-19-14-36) was an attempt to extend this production 3/4 mile to the southwest. This well was 47 feet low on the Siluro-Devonian and found the top 75 feet of that section mainly tight (100' brackish water). On a test of the Chester Lime pay, the packers failed and only the water blanket and 890' Sli GCM were recovered. Final Shut in Pressure was 1448#/45". This well was completed from a thin (10') Wolfcamp Lime zone (now abandoned) for an IPF 250 BOPD. In April 1978, Adobe #1 State "16" (M-16-14-36) was completed from 33 feet of log porosity in the Chester Lime for an IP COF 2,740 MCFGPD. Since that time, the pay section was re-acidized and reportedly was making gas at the rate of 14,000 MCFGPD. It is understood that Adobe has calculated recoverable reserves of 7 BCFG (based on 320 acre spacing) on their well. The Adobe #1 Hannah (H-17-14-36) has been drilled to 13825 feet in the Lower Mississippian Lime. It found 36 feet of log porosity in the upper 100 feet of the Chester Lime. As of this writing, the operators were preparing to production test the Lower Mississippian Lime and perhaps a zone in the lower Chester Lime section. There are several other wells staked, but none are at the stage where they could aid in evaluating this area. The Zapata #1 Danglade (H-3-14-36) appears to have a very porous Chester section (80' approximately, but no detail log) which had no shows and was not tested. The Texas Crude and Sinclair #1 Richardson (M-5-14-36) had 43 feet of sonic log porosity in four zones in the Chester Lime. The top 8 feet of porosity was included in a perforated interval which gave up gas at rates up to 2,100 MCFGPD on initial production tests. After repeated treating and testing, the volume of gas declined and apparently the volume of water increased. Lower and better developed porosity was not tested and is assumed to be water bearing. This well is thought to be very near the gas/water contact (-9375 +/-).

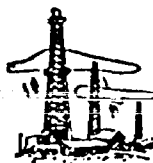
It appears that a band of porosity in the Chester Lime runs in a northeast-southwest direction across the generally north-south aligned Austin Anticline. The south half of section 8, T-14-S, R-36-E appears very well located on the structure, but the north half of that section appears to be dipping off on the north plunging axis of the Austin Anticline. With the exception of the Zapata #1 Danglade (which had additional section in the top of the Chester Lime), the main

Austin Chester Lime porosity occurs within the top 100 feet of that unit. Thus, although all of section 8 is shown to be above the estimated gas water contact of (-) 9375 feet, the entire Chester Lime porosity appears to be above this datum only in the south half of the section.

From the above analysis, it appears obvious that the south half of section 8, T-14-S, R-36-E is better located than the north half of that section. There is a very real possibility that the north half is so low as to be uneconomical to drill. Thus, if North Half and South Half Proration Units are approved, there may be only one well drilled in section 8--and that in the South Half. If Proration Units are designated as East Half and West Half, there could be two wells drilled which would be higher on the structure and both of which should find most of the Chester Lime Austin Pay Porosity above the estimated water table. This would result in more gas being recovered. It could also mean that the State of New Mexico would have all of its approximately 320 acres in this section committed to wells and potentially revenue earning. With only one well drilled in the south half of the section, the State of New Mexico would have only 160 acres committed to production.

DATE: January 26, 1979

AFE



JOHN H. HENDRIX CORPORATION

OIL PRODUCERS
515 MIDLAND TOWER
MIDLAND, TEXAS 79701

OFFICE PHONE 644-4431
RESIDENCE PHONE 644-4818

6488 9
Hendrix
3-2-79

CAL-MON STATE #1

Location: 1980' FSL & 660' FEL Section 8, T-14-S, R-36-E
Lea County, New Mexico

	Completed Well	To Casing Point	Actual
Location and Roads	12,500	12,500	
Damages	2,500	2,500	
Footage Contract 10,500 ft @ \$16.50	173,250	173,250	
Day Work 35 days @ 4100/Day	143,500	143,500	
Cement and Cementing	25,000	10,000	
Float Equipment, etc.	6,000	1,000	
Mud and Chemicals	35,000	35,000	
Log and Testing	40,000	40,000	
Core and Core Analysis			
Water	4,000	4,000	
Trucking	4,000	2,000	
Perforating	5,000		
Treating	50,000		
Completion Unit	6,000		
Labor	5,000		
Bits & Rental Equipment	20,000	15,000	
Overhead and Supervision	10,000	3,000	
Contingencies	20,000	10,000	
Total Intangibles	*561,750	451,750	
Surface Casing 400 ft @ \$17.04	6,816	6,816	
Intermediate Casing 4700 ft @ \$9.77	45,919	45,919	
2nd Intermediate Casing			
Well Head	20,000	10,000	
Oil String 13,900 ft @ \$6.33	87,987		
Tubing 13,900 ft @ \$3.02	41,978		
Rods			
Pumping Unit and Base			
Prime Mover			
Misc. Connections	5,000	1,000	
Total Well Tangibles	*207,700	63,735	
Tanks	10,000		
Treater-Separator	8,500		
Connections, Line Pipe, etc.	4,000		
Total Tank Battery	*22,500		
Total Cost	*791,950	515,485	

Your working interest share of the above estimate is \$

Please accept and approve in the space provided below and return one executed copy to this office.

JOHN H. HENDRIX CORPORATION

WORKING INTEREST OWNER

By

APPROVED AND ACCEPTED this Day of 19

Oil	
Case No.	6488
Sub	New Mex.
Hearing Date	3/2/79

A.A.P.L. FORM 610

MODEL FORM OPERATING AGREEMENT-1956

Non-Federal Lands

OPERATING AGREEMENT

DATED

January 26, 1979,

FOR UNIT AREA IN TOWNSHIP 14 South, RANGE 36 East,

Lea COUNTY, STATE OF New Mexico.

Section 8: E/2

AMERICAN ASSOCIATION OF PETROLEUM LANDMEN
 APPROVED FORM. A.A.P.L. NO. 610
 MAY BE ORDERED DIRECTLY FROM THE PUBLISHER
 KRAFTBILT PRODUCTS, BOX 800, TULSA 74101

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OPERATING AGREEMENT

THIS AGREEMENT, entered into this 26th day of January, 1979, between
John H. Hendrix Corporation

hereafter designated as "Operator", and the signatory parties other than Operator.

WITNESSETH, THAT:

WHEREAS, the parties to this agreement are owners of oil and gas leases covering and, if so indicated, unleased mineral interests in the tracts of land described in Exhibit "A", and all parties have reached an agreement to explore and develop these leases and interests for oil and gas to the extent and as hereinafter provided;

NOW, THEREFORE, it is agreed as follows:

1. DEFINITIONS

As used in this agreement, the following words and terms shall have the meanings here ascribed to them.

- (1) The words "party" and "parties" shall always mean a party, or parties, to this agreement.
- (2) The parties to this agreement shall always be referred to as "it" or "they", whether the parties be corporate bodies, partnerships, associations, or persons real.
- (3) The term "oil and gas" shall include oil, gas, casinghead gas, gas condensate, and all other liquid or gaseous hydrocarbons, unless an intent to limit the inclusiveness of this term is specifically stated.
- (4) The term "oil and gas interests" shall mean unleased fee and mineral interests in tracts of land lying within the Unit Area which are owned by parties to this agreement.
- (5) The term "Unit Area" shall refer to and include all of the lands, oil and gas leasehold interests and oil and gas interests intended to be developed and operated for oil and gas purposes under this agreement. Such lands, oil and gas leasehold interests and oil and gas interests are described in Exhibit "A".
- (6) The term "drilling unit" shall mean the area fixed for the drilling of one well by order or rule of any state or federal body having authority. If a drilling unit is not fixed by any such rule or order, a drilling unit shall be the drilling unit as established by the pattern of drilling in the Unit Area or as fixed by express agreement of the parties.
- (7) All exhibits attached to this agreement are made a part of the contract as fully as though copied in full in the contract.
- (8) The words "equipment" and "materials" as used here are synonymous and shall mean and include all oil field supplies and personal property acquired for use in the Unit Area.

2. TITLE EXAMINATION, LOSS OF LEASES AND OIL AND GAS INTERESTS

A. Title Examination:

There shall be no examination of title to leases, or to oil and gas interests, except that title to the lease covering the land upon which the exploratory well is to be drilled in accordance with Section 7, shall be examined on a complete abstract record by Operator's attorney, and the title to both the oil and gas lease and to the fee title of the lessors must be approved by the examining attorney, and accepted by all parties. A copy of the examining attorney's opinion shall be sent to each party immediately after the opinion is written, and, also, each party shall be given, as they are written, a copy of all subsequent supplemental attorney's reports. A good faith effort to satisfy the examining attorney's requirements shall be made by the party owning the lease covering the drillsite.

If title to the proposed drillsite is not approved by the examining attorney or the lease is not acceptable for a material reason, and all the parties do not accept the title, the parties shall select a new drillsite for the first exploratory well; provided, if the parties are unable to agree upon another drillsite, this agreement shall, in that case, come to an end and all parties shall then forfeit their rights and be relieved of obligations hereunder. If a new drillsite is selected, title to the oil and gas lease covering it and to the fee title of the lessor shall be examined, and title shall be approved or accepted or rejected in like manner as provided above concerning the drillsite first selected. If title to the oil and gas lease covering the second choice drillsite is not approved or accepted, other drillsites shall be successively selected and title examined, until a drillsite is chosen

to which title is approved or accepted, or until the parties fail to select another drillsite. As in the case of the drillsite first selected, so also with successive choices if the time comes that the parties have not approved title and are unable to agree upon an alternate drillsite, the contract shall, in that case and at that time, come to an end and all parties shall forfeit their rights and be relieved of obligations under this contract.

No well other than the first test shall be drilled in the Unit Area until after (1) the title to the lease covering the lands upon which such well is to be located has been examined by Operator's attorney, and (2) the title has been approved by the examining attorney and the title has been accepted by all of the parties who are to participate in the drilling of the well.

B. Failure of Title:

Should any oil and gas lease, or interest therein, be lost through failure of title, this agreement shall, nevertheless, continue in force as to all remaining leases and interests, and

- (1) The party whose lease or interest is affected by the title failure shall bear alone the entire loss and it shall not be entitled to recover from Operator or the other parties any development or operating costs which it may have theretofore paid, but there shall be no monetary liability on its part to the other parties hereto by reason of such title failure; and
- (2) There shall be no retroactive adjustment of expenses incurred or revenues received from the operation of the interest which has been lost, but the interests of the parties shall be revised on an acreage basis, as of the time it is determined finally that title failure has occurred, so that the interest of the party whose lease or interest is affected by the title failure will thereafter be reduced in the Unit Area by the amount of the interest lost; and
- (3) If the proportionate interests of the other parties hereto in any producing well theretofore drilled on the Unit Area is increased by reason of the title failure, the party whose title has failed shall receive the proceeds attributable to the increase in such interests (less operating costs attributable thereto) until it has been reimbursed for unrecovered costs paid by it in connection with such well; and
- (4) Should any person not a party to this agreement, who is determined to be the owner of any interest in the title which has failed, pay in any manner any part of the cost of operation, development, or equipment, or equipment previously paid under this agreement, such amount shall be proportionately paid to the party or parties hereto who in the first instance paid the costs which are so refunded; and
- (5) Any liability to account to a third party for prior production of oil and gas which arises by reason of title failure shall be borne by the party or parties whose title failed in the same proportions in which they shared in such prior production.

C. Loss of Leases for Causes Other Than Title Failure:

If any lease or interest subject to this agreement be lost through failure to develop or because express or implied covenants have not been performed, or if any lease be permitted to expire at the end of its primary term and not be renewed or extended, or if any lease or interest therein is lost due to the fact that the production therefrom is shut in by reason of lack of market, the loss shall not be considered a failure of title and all such losses shall be joint losses and shall be borne by all parties in proportion to their interests and there shall be no readjustment of interests in the Unit Area.

3. UNLEASED OIL AND GAS INTERESTS

~~If any party owns an unleased oil and gas interest in the Unit Area, that interest shall be treated for the purpose of this agreement as if it were a leased interest under the form of oil and gas lease attached as "Exhibit B" and for the primary term therein stated. As to such interests, the owner shall receive royalty on production as prescribed in the form of oil and gas lease attached hereto as Exhibit "B". Such party shall, however, be subject to all of the provisions of this agreement relating to lessees, to the extent that it owns the lessee interest.~~

4. INTERESTS OF PARTIES

Exhibit "A" lists all of the parties, and their respective percentage or fractional interests under this agreement. Unless changed by other provisions, all costs and liabilities incurred in operations under this contract shall be borne and paid, and all equipment and material acquired in operations on the Unit Area shall be owned, by the parties as their interests are given in Exhibit "A". All production of oil and gas from the Unit Area, subject to the payment of lessor's royalties, shall also be owned by the parties in the same manner.

If the interest of any party in any oil and gas lease covered by this agreement is subject to an overriding royalty, production payment, or other charge over and above the usual one-eighth ($\frac{1}{8}$) royalty, such party shall assume and alone bear all such excess obligations and shall account for them to the owners thereof out of its share of the working interest production of the Unit Area.

5. OPERATOR OF UNIT

John H. Hendrix Corporation shall be the Operator of the Unit Area, and shall conduct and direct and have full control of all operations on the Unit Area as permitted and required by, and within the limits of, this agreement. It shall conduct all such operations in a good and workmanlike manner, but it shall have no liability as Operator to the other parties for losses sustained, or liabilities incurred, except such as may result from gross negligence or from breach of the provisions of this agreement.

6. EMPLOYEES

The number of employees and their selection, and the hours of labor and the compensation for services performed, shall be determined by Operator. All employees shall be the employees of Operator.

7. TEST WELL

On or before the 29th day of April, 1979, Operator shall commence the drilling of a well for oil and gas in the following location: 1980 feet from the south line and 660 feet from the east line of Section 8, Township 14 South, Range 36 East, N.M.P.M. Lea County, New Mexico.

and shall thereafter continue the drilling of the well with due diligence to a depth sufficient to test the Mississippian formation or to a depth of 13,900' whichever is the shallower.

unless granite or other practically impenetrable substance is encountered at a lesser depth or unless all parties agree to complete the well at a lesser depth.

Operator shall make reasonable tests of all formations encountered during drilling which give indication of containing oil and gas in quantities sufficient to test, unless this agreement shall be limited in its application to a specific formation or formations, in which event Operator shall be required to test only the formation or formations to which this agreement may apply.

If in Operator's judgment the well will not produce oil or gas in paying quantities, and it wishes to plug and abandon the test as a dry hole, it shall first secure the consent of all parties to the plugging, and the well shall then be plugged and abandoned as promptly as possible.

8. COSTS AND EXPENSES

Except as herein otherwise specifically provided, Operator shall promptly pay and discharge all costs and expenses incurred in the development and operation of the Unit Area pursuant to this agreement and shall charge each of the parties hereto with their respective proportionate shares upon the cost and expense basis provided in the Accounting Procedure attached hereto and marked Exhibit "C". If any provision of Exhibit "C" should be inconsistent with any provision contained in the body of this agreement, the provisions in the body of this agreement shall prevail.

Operator, at its election, shall have the right from time to time to demand and receive from the other parties payment in advance of their respective shares of the estimated amount of the costs to be incurred in operations hereunder during the next succeeding month, which right may be exercised only by submission to each such party of an itemized statement of such estimated costs, together with an invoice for its share thereof. Each such statement and invoice for the payment in advance of estimated costs shall be submitted on or before the 20th day of the next preceding month. Each party shall pay to Operator its proportionate share of such estimate within fifteen (15) days after such estimate and invoice is received. If any party fails to pay its share of said estimate within said time, the amount due shall bear interest at the rate of six percent (6%) per annum until paid. Proper adjustment shall be made monthly between advances and actual cost, to the end that each party shall bear and pay its proportionate share of actual costs incurred, and no more.

9. OPERATOR'S LIEN

Operator is given a first and preferred lien on the interest of each party covered by this contract, and in each party's interest in oil and gas produced and the proceeds thereof, and upon each party's interest in material and equipment, to secure the payment of all sums due from each such party to Operator.

In the event any party fails to pay any amount owing by it to Operator as its share of such costs and expense or such advance estimate within the time limited for payment thereof, Operator, without prejudice to other existing remedies, is authorized, at its election, to collect from the purchaser or purchasers of oil or gas, the proceeds accruing to the working interest or interests in the Unit Area of the delinquent party up to the amount owing by such party, and each purchaser of oil or gas is authorized to rely upon Operator's statement as to the amount owing by such party.

In the event of the neglect or failure of any non-operating party to promptly pay its proportionate part of the cost and expense of development and operation when due, the other non-operating parties and Operator, within thirty (30) days after the rendition of statements therefor by Operator, shall proportionately contribute to the payment of such delinquent indebtedness and the non-operating parties so contributing shall be entitled to the same lien rights as are granted to Operator in this section. Upon the payment by such delinquent or defaulting party to Operator of any amount or amounts on such delinquent indebtedness, or upon any recovery on behalf of the non-operating parties under the lien conferred above, the amount or amounts so paid or recovered shall be distributed and paid by Operator to the other non-operating parties and Operator proportionately in accordance with the contributions theretofore made by them.

10. TERM OF AGREEMENT

This agreement shall remain in full force and effect for as long as any of the oil and gas leases subjected to this agreement remain or are continued in force as to any part of the Unit Area, whether by production, extension, renewal or otherwise; provided, however, that in the event the first well drilled hereunder results in a dry hole and no other well is producing oil or gas in paying quantities from the Unit Area, then at the end of ninety (90) days after abandonment of the first test well, this agreement shall terminate unless one or more of the parties are then engaged in drilling a well or wells pursuant to Section 12 hereof, or all parties have agreed to drill an additional well or wells under this agreement, in which event this agreement shall continue in force until such well or wells shall have been drilled and completed. If production results therefrom this agreement shall continue in force thereafter as if said first test well had been productive in paying quantities, but if production in paying quantities does not result therefrom this agreement shall terminate at the end of ninety (90) days after abandonment of such well or wells. It is agreed, however, that the termination of this agreement shall not relieve any party hereto from any liability which has accrued or attached prior to the date of such termination.

11. LIMITATION ON EXPENDITURES

Without the consent of all parties: (a) No well shall be drilled on the Unit Area except any well expressly provided for in this agreement and except any well drilled pursuant to the provisions of Section 12 of this agreement, it being understood that the consent to the drilling of a well shall include consent to all necessary expenditures in the drilling, testing, completing, and equipping of the well, including necessary tankage; (b) No well shall be reworked, plugged back or deepened except a well reworked, plugged back or deepened pursuant to the provisions of Section 12 of this agreement, it being understood that the consent to the reworking, plugging back or deepening of a well shall include consent to all necessary expenditures in conducting such operations and completing and equipping of said well to produce, including necessary tankage; (c) Operator shall not undertake any single project reasonably estimated to require an expenditure in excess of Ten Thousand Dollars (\$ 10,000.00) except in connection with a well the drilling, reworking, deepening, or plugging back of which has been previously authorized by or pursuant to this agreement; provided, however, that in case of explosion, fire, flood, or other sudden emergency, whether of the same or different nature, Operator may take such steps and incur such expenses as in its opinion are required to deal with the emergency and to safeguard life and property, but Operator shall, as promptly as possible, report the emergency to the other parties. Operator shall, upon request, furnish copies of its "Authority for Expenditures" for any single project costing in excess of \$ 10,000.00.

12. OPERATIONS BY LESS THAN ALL PARTIES

If all the parties cannot mutually agree upon the drilling of any well on the Unit Area other than the test well provided for in Section 7, or upon the reworking, deepening or plugging back of a dry hole drilled at the joint expense of all parties or a well jointly owned by all the parties and not then producing in paying quantities on the Unit Area, any party or parties wishing to drill, rework, deepen or plug back such a well may give the other parties written notice of the proposed operation, specifying the work to be performed, the location, proposed depth, objective formation and the estimated cost of the operation. The parties receiving such a notice shall have thirty (30) days (except as to reworking, plugging back or drilling deeper, where a drilling rig is on location, the period shall be limited to forty-eight (48) hours exclusive of Saturday or Sunday) after receipt of the notice within which to notify the parties wishing to do the work whether they elect to participate in the cost of the proposed operation. Failure of a party receiving such a notice to so reply to it within the period above fixed shall constitute an election by that party not to participate in the cost of the proposed operation.

If any party receiving such a notice elects not to participate in the proposed operation (such party or parties being hereafter referred to as "Non-Consenting Party"), then in order to be entitled to the benefits of this section, the party or parties giving the notice and such other parties as shall elect to participate in the operation (all such parties being hereafter referred to as the "Consenting Parties") shall, within thirty (30) days after the expiration of the notice period of thirty (30) days (or as promptly as possible after the expiration of the 48-hour period where the drilling rig is on location, as the case may be) actually commence work on the proposed operation and complete it with due diligence.

The entire cost and risk of conducting such operations shall be borne by the Consenting Parties in the proportions that their respective interests as shown in Exhibit "A" bear to the total interests of all Consenting Parties. Consenting Parties shall keep the leasehold estates involved in such operations free and clear of all liens and encumbrances of every kind created by or arising from the operations of the Consenting Parties. If such an operation results in a dry hole, the Consenting Parties shall plug and abandon the well at their sole cost, risk and expense. If any well drilled, reworked, deepened or plugged back under the provisions of this section results in a producer of oil and/or gas in paying quantities, the Consenting Parties shall complete and equip the well to produce at their sole cost and risk, and the well shall then be turned over to Operator and shall be operated by it at the expense and for the account of the Consenting Parties. Upon commencement of operations for the drilling, reworking, deepening or plugging back of any such well by Consenting Parties in accordance with the provisions of this section, each Non-Consenting Party shall be deemed to have relinquished to Consenting Parties, and the Consenting Parties shall own and be entitled to receive, in proportion to their respective interests, all of such Non-Consenting Party's interest in the well, its leasehold operating rights, and share of production therefrom until the proceeds or market value thereof (after deducting production taxes, royalty, overriding royalty and other interests payable out of or measured by the production from such well accruing with respect to such interest until it reverts) shall equal the total of the following:

- (A) 100% of each such Non-Consenting Party's share of the cost of any newly acquired surface equipment beyond the wellhead connections (including, but not limited to, stock tanks, separators, treaters, pumping equipment and piping), plus 100% of each such Non-Consenting Party's share of the cost of operation of the well commencing with first production and continuing until each such Non-Consenting Party's relinquished interest shall revert to it under other provisions of this section, it being agreed that each Non-Consenting Party's share of such costs and equipment will be that interest which would have been chargeable to each Non-Consenting Party had it participated in the well from the beginning of the operation; and
- (B) 200% of that portion of the costs and expenses of drilling, reworking, deepening or plugging back, testing and completing, after deducting any cash contributions received under Section 25, and 200% of that portion of the cost of newly acquired equipment in the well (to and including the wellhead connections), which would have been chargeable to such Non-Consenting Party if it had participated therein.

In the case of any reworking, plugging back or deeper drilling operation, the Consenting Parties shall be permitted to use, free of cost, all casing, tubing and other equipment in the well, but the ownership of all such equipment shall remain unchanged; and upon abandonment of a well after such reworking, plugging back or deeper drilling, the Consenting Parties shall account for all such equipment to the owners thereof, with each party receiving its proportionate part in kind or in value.

Within sixty (60) days after the completion of any operation under this section, the party conducting the operations for the Consenting Parties shall furnish each Non-Consenting Party with an inventory of the equipment in and connected to the well, and an itemized statement of the cost of drilling, deepening, plugging back, testing, completing, and equipping the well for production; or, at its option, the operating party, in lieu of an itemized statement of such costs of operation, may submit a detailed statement of monthly billings. Each month thereafter, during the time the Consenting Parties are being reimbursed as provided above, the Consenting Parties shall furnish the Non-Consenting Parties with an itemized statement of all costs and liabilities incurred in the operation of the well, together with a statement of the quantity of oil and gas produced from it and the amount of proceeds realized from the sale of the well's working interest production during the preceding month. Any amount realized from the sale or other disposition of equipment newly acquired in connection with any such operation which would have been owned by a Non-Consenting Party had it participated therein shall be credited against the total unreturned costs of the work done and of the equipment purchased, in determining when the interest of such Non-Consenting Party shall revert to it as above provided; if there is a credit balance it shall be paid to such Non-Consenting Party.

If and when the Consenting Parties recover from a Non-Consenting Party's relinquished interest the amounts provided for above, the relinquished interests of such Non-Consenting Party shall automatically revert to it and from and after such reversion such Non-Consenting Party shall own the same interest in such well, the operating rights and working interest therein, the material and equipment in or pertaining thereto, and the production therefrom as such Non-Consenting Party would have owned had it participated in the drilling, reworking, deepening or plugging back of said well. Thereafter, such Non-Consenting Party shall be charged with and shall pay its proportionate part of the further costs of the operation of said well in accordance with the terms of this agreement and the accounting procedure schedule, Exhibit "C", attached hereto.

Notwithstanding the provisions of this Section 12, it is agreed that without the mutual consent of all parties, no wells shall be completed in or produced from a source of supply from which a well located elsewhere on the Unit Area is producing, unless such well conforms to the then-existing well spacing pattern for such source of supply.

The provisions of this section shall have no application whatsoever to the drilling of the initial test well on the Unit Area, but shall apply to the reworking, deepening, or plugging back of the initial test well after it has been drilled to the depth specified in Section 7, if it is, or thereafter shall prove to be, a dry hole or non-commercial well, and to all other wells drilled, reworked, deepened, or plugged back, or proposed to be drilled, reworked, deepened, or plugged back, upon the Unit Area subsequent to the drilling of the initial test well.

13. RIGHT TO TAKE PRODUCTION IN KIND

Each party shall take in kind or separately dispose of its proportionate share of all oil and gas produced from the Unit Area, exclusive of production which may be used in development and producing operations and in preparing and treating oil for marketing purposes and production unavoidably lost. Each party shall pay or deliver, or cause to be paid or delivered, all royalties, overriding royalties, or other payments due on its share of such production, and shall hold the other parties free from any liability therefor. Any extra expenditure incurred in the taking in kind or separate disposition by any party of its proportionate share of the production shall be borne by such party.

Each party shall execute all division orders and contracts of sale pertaining to its interest in production from the Unit Area, and shall be entitled to receive payment direct from the purchaser or purchasers thereof for its share of all production.

In the event any party shall fail to make the arrangements necessary to take in kind or separately dispose of its proportionate share of the oil and gas produced from the Unit Area, Operator shall have the right, subject to revocation at will by the party owning it, but not the obligation, to purchase such oil and gas or sell it to others for the time being, at not less than the market price prevailing in the area, which shall in no event be less than the price which Operator receives for its portion of the oil and gas produced from the Unit Area. Any such purchase or sale by Operator shall be subject always to the right of the owner of the production to exercise at any time its right to take in kind, or separately dispose of, its share of all oil and gas not previously delivered to a purchaser. Notwithstanding the foregoing, Operator shall not make a sale into interstate commerce of any other party's share of gas production without first giving such other party sixty (60) days notice of such intended sale.

14. ACCESS TO UNIT AREA

Each party shall have access to the Unit Area at all reasonable times, at its sole risk, to inspect or observe operations, and shall have access at reasonable times to information pertaining to the development or operation thereof, including Operator's books and records relating thereto. Operator shall, upon request, furnish each of the other parties with copies of all drilling reports, well logs, tank tables, daily gauge and run tickets and reports of stock on hand at the first of each month, and shall make available samples of any cores or cuttings taken from any well drilled on the Unit Area.

15. DRILLING CONTRACTS

All wells drilled on the Unit Area shall be drilled on a competitive contract basis at the usual rates prevailing in the area. Operator, if it so desires, may employ its own tools and equipment in the drilling of wells, but its charges therefor shall not exceed the prevailing rates in the field, and the rate of such charges shall be agreed upon by the parties in writing before drilling operations are commenced, and such work shall be performed by Operator under the same terms and conditions as shall be customary and usual in the field in contracts of independent contractors who are doing work of a similar nature.

16. ABANDONMENT OF WELLS

No well, other than any well which has been drilled or reworked pursuant to Section 12 hereof for which the Consenting Parties have not been fully reimbursed as therein provided, which has been completed as a producer shall be plugged and abandoned without the consent of all parties; provided, however, if all parties do not agree to the abandonment of any well, those wishing to continue its operation shall tender to each of the other parties its proportionate share of the value of the well's salvable material and equipment, determined in accordance with the provisions of Exhibit "C", less the estimated cost of salvaging and the estimated cost of plugging and abandoning. Each abandoning party shall then assign to the non-abandoning parties, without warranty, express or implied, as to title or as to quantity, quality, or fitness for use of the equipment and material, all of its interest in the well and its equipment, together with its interest in the leasehold estate as to, but only as to, the interval or intervals of the formation or formations then open to production. The assignments so limited shall encompass the "drilling unit" upon which the well is located. The payments by, and the assignments to, the assignees shall be in a ratio based upon the relationship of their respective percentages of participation in the Unit Area to the aggregate of the percentages of participation in the Unit Area of all assignees. There shall be no readjustment of interest in the remaining portion of the Unit Area.

After the assignment, the assignors shall have no further responsibility, liability, or interest in the operation of or production from the well in the interval or intervals then open. Upon request of the assignees, Operator shall continue to operate the assigned well for the account of the non-abandoning parties at the rates and charges contemplated by this agreement, plus any additional cost and charges which may arise as the result of the separate ownership of the assigned well.

17. DELAY RENTALS AND SHUT-IN WELL PAYMENTS

Delay rentals and shut-in well payments which may be required under the terms of any lease shall be paid by the party who has subjected such lease to this agreement, at its own expense. Proof of each payment shall be given to Operator at least ten (10) days prior to the rental or shut-in well payment date. Operator shall furnish similar proof to all other parties concerning payments it makes in connection with its leases. Any party may request, and shall be entitled to receive, proper evidence of all such payments. If, through mistake or oversight, any delay rental or shut-in well payment is not paid or is erroneously paid, and as a result a lease or interest therein terminates, there shall be no monetary liability against the party who failed to make such payment. Unless the party who failed to pay a rental or shut-in well payment secures a new lease covering the same interest within ninety (90) days from the discovery of the failure to make proper payment, the interests of the parties shall be revised on an acreage basis effective as of the date of termination of the lease involved, and the party who failed to make proper payment will no longer be credited with an interest in the Unit Area on account of the ownership of the lease which has terminated. In the event the party who failed to pay the rental or the shut-in well payment shall not have been fully reimbursed, at the time of the loss, from the proceeds of the sale of oil and gas attributable to the lost interest, calculated on an acreage basis, for the development and operating costs theretofore paid on account of such interest, it shall be reimbursed for unrecovered actual costs theretofore paid by it (but not for its share of the cost of any dry hole previously drilled or wells previously abandoned) from so much of the following as is necessary to effect reimbursement:

- (1) Proceeds of oil and gas, less operating expenses, theretofore accrued to the credit of the lost interest, on an acreage basis, up to the amount of unrecovered costs;
- (2) proceeds, less operating expenses thereafter incurred attributable to the lost interest on an acreage basis, of that portion of oil and gas thereafter produced and marketed (excluding production from any wells thereafter drilled) which would, in the absence of such lease termination, be attributable to the lost interest on an acreage basis, up to the amount of unrecovered costs, the proceeds of said portion of the oil and gas to be contributed by the other parties in proportion to their respective interests; and
- (3) any moneys, up to the amount of unrecovered costs, that may be paid by any party who is, or becomes, the owner of the interest lost, for the privilege of participating in the Unit Area or becoming a party to this contract.

Operator shall attempt to notify all parties when a gas well is shut-in or returned to production, but assumes no liability whatsoever for failure to do so.

18. PREFERENTIAL RIGHT TO PURCHASE

~~Should any party desire to sell all or any part of its interests under this contract, or its rights and interests in the Unit Area, it shall promptly give written notice to the other parties, with full information concerning its proposed sale, which shall include the name and address of the prospective purchaser (who must be ready, willing and able to purchase), the purchase price, and all other terms of the offer. The other parties shall then have an optional prior right, for a period of ten (10) days after receipt of the notice, to purchase on the same terms and conditions the interest which the other party proposes to sell; and, if this optional right is exercised, the purchasing parties shall share the purchased interest in the proportions that the interest of each bears to the total interest of all purchasing parties. However, there shall be no preferential right to purchase in those cases where any party wishes to mortgage its interests, or to dispose of its interests by merger, reorganization, consolidation, or sale of all of its assets, or a sale or transfer of its interests to a subsidiary or parent company, or subsidiary of a parent company, or to any company in which any one party owns a majority of the stock.~~

19. SELECTION OF NEW OPERATOR

Should a sale be made by Operator of its rights and interests, the other parties shall have the right within sixty (60) days after the date of such sale, by majority vote in interest, to select a new Operator. If a new Operator is not so selected, the transferee of the present Operator shall assume the duties of and act as Operator. In either case, the retiring Operator shall continue to serve as Operator, and discharge its duties in that capacity under this agreement, until its successor Operator is selected and begins to function, but the present Operator shall not be obligated to continue the performance of its duties for more than 120 days after the sale of its rights and interests has been completed.

20. MAINTENANCE OF UNIT OWNERSHIP

For the purpose of maintaining uniformity of ownership in the oil and gas leasehold interests covered by this contract, and notwithstanding any other provisions to the contrary, no party shall sell, encumber, transfer or make other disposition of its interest in the leases embraced within the Unit Area and in wells, equipment and production unless such disposition covers either:

- (1) the entire interest of the party in all leases and equipment and production; or
- (2) an equal undivided interest in all leases and equipment and production in the Unit Area.

Every such sale, encumbrance, transfer or other disposition made by any party shall be made expressly subject to this agreement, and shall be made without prejudice to the rights of the other parties.

If at any time the interest of any party is divided among and owned by four or more co-owners, Operator may, at its discretion, require such co-owners to appoint a single trustee or agent with full authority to receive notices, approve expenditures, receive billings for and approve and pay such party's share of the joint expenses, and to deal generally with, and with power to bind, the co-owners of such party's interests within the scope of the operations embraced in this contract; however, all such co-owners shall enter into and execute all contracts or agreements for the disposition of their respective shares of the oil and gas produced from the Unit Area and they shall have the right to receive, separately, payment of the sale proceeds thereof.

21. RESIGNATION OF OPERATOR

Operator may resign from its duties and obligations as Operator at any time upon written notice of not less than ninety (90) days given to all other parties. In this case, all parties to this contract shall select by majority vote in interest, not in numbers, a new Operator who shall assume the responsibilities and duties, and have the rights, prescribed for Operator by this agreement. The retiring Operator shall deliver to its successor all records and information necessary to the discharge by the new Operator of its duties and obligations.

22. LIABILITY OF PARTIES

The liability of the parties shall be several, not joint or collective. Each party shall be responsible only for its obligations, and shall be liable only for its proportionate share of the costs of developing and operating the Unit Area. Accordingly, the lien granted by each party to Operator in Section 9 is given to secure only the debts of each severally. It is not the intention of the parties to create, nor shall this agreement be construed as creating, a mining or other partnership or association, or to render them liable as partners.

23. RENEWAL OR EXTENSION OF LEASES

If any party secures a renewal of any oil and gas lease subject to this contract, each and all of the other parties shall be notified promptly, and shall have the right to participate in the ownership of the renewal lease by paying to the party who acquired it their several proper proportionate shares of the acquisition cost, which shall be in proportion to the interests held at that time by the parties in the Unit Area.

If some, but less than all, of the parties elect to participate in the purchase of a renewal lease, it shall be owned by the parties who elect to participate therein, in a ratio based upon the relationship of their respective percentage of participation in the unit area to the aggregate of the percentages of participation in the unit area of all parties participating in the purchase of such renewal lease. Any renewal lease in which less than all the parties elect to participate shall not be subject to this agreement.

Each party who participates in the purchase of a renewal lease shall be given an assignment of its proportionate interest therein by the acquiring party.

The provisions of this section shall apply to renewal leases whether they are for the entire interest covered by the expiring lease or cover only a portion of its area or an interest therein. Any renewal lease taken before the expiration of its predecessor lease, or taken or contracted for within six (6) months after the expiration of the existing lease shall be subject to this provision; but any lease taken or contracted for more than six (6) months after the expiration of an existing lease shall not be deemed a renewal lease and shall not be subject to the provisions of this section.

The provisions in this section shall apply also and in like manner to extensions of oil and gas leases.

24. SURRENDER OF LEASES

The leases covered by this agreement, in so far as they embrace acreage in the Unit Area, shall not be surrendered in whole or in part unless all parties consent.

However, should any party desire to surrender its interest in any lease or in any portion thereof, and other parties not agree or consent, the party desiring to surrender shall assign, without express or implied warranty of title, all of its interest in such lease, or portion thereof, and any well, material and equipment which may be located thereon and any rights in production thereafter secured, to the parties not desiring to surrender it. Upon such assignment, the assigning party shall be relieved from all obligations thereafter accruing, but not theretofore accrued, with respect to the acreage assigned and the operation of any well thereon, and the assigning party shall have no further interest in the lease assigned and its equipment and production. The parties assignee shall pay to the party assignor the reasonable salvage value of the latter's interest in any wells and equipment on the assigned acreage, determined in accordance with the provisions of Exhibit "C", less the estimated cost of salvaging and the estimated cost of plugging and abandoning. If the assignment is in favor of more than one party, the assigned interest shall be shared by the parties assignee in the proportions that the interest of each bears to the interest of all parties assignee.

Any assignment or surrender made under this provision shall not reduce or change the assignors' or surrendering parties' interest, as it was immediately before the assignment, in the balance of the Unit Area; and the acreage assigned or surrendered, and subsequent operations thereon, shall not thereafter be subject to the terms and provisions of this agreement.

25. ACREAGE OR CASH CONTRIBUTIONS

If any party receives while this agreement is in force a contribution of cash toward the drilling of a well or any other operation on the Unit Area, such contribution shall be paid to the party who conducted the drilling or other operation and shall be applied by it against the cost of such drilling or other operation. If the contribution be in the form of acreage, the party to whom the contribution is made shall promptly execute an assignment of the acreage, without warranty of title, to all parties to this agreement in proportion to their interests in the Unit Area at that time, and such acreage shall become a part of the Unit Area and be governed by all the provisions of this contract. Each party shall promptly notify all other parties of all acreage or money contributions it may obtain in support of any well or any other operation on the Unit Area.

26. PROVISION CONCERNING TAXATION

Each of the parties hereto elects, under the authority of Section 761(a) of the Internal Revenue Code of 1954, to be excluded from the application of all of the provisions of Subchapter K of Chapter 1 of Subtitle A of the Internal Revenue Code of 1954. If the income tax laws of the state or states in which the property covered hereby is located contain, or may hereafter contain, provisions similar to those contained in the Subchapter of the Internal Revenue Code of 1954 above referred to under which a similar election is permitted, each of the parties agrees that such election shall be exercised. Each party authorizes and directs the Operator to execute such an election or elections on its behalf and to file the election with the proper governmental office or agency. If requested by the Operator so to do, each party agrees to execute and join in such an election.

Operator shall render for ad valorem taxation all property subject to this agreement which by law should be rendered for such taxes, and it shall pay all such taxes assessed thereon before they become delinquent. Operator shall bill all other parties for their proportionate share of all tax payments in the manner provided in Exhibit "C".

If any tax assessment is considered unreasonable by Operator, it may at its discretion protest such valuation within the time and manner prescribed by law, and prosecute the protest to a final determination, unless all parties agree to abandon the protest prior to final determination. When any such protested valuation shall have been finally determined, Operator shall pay the assessment for the joint account, together with interest and penalty accrued, and the total cost shall then be assessed against the parties, and be paid by them, as provided in Exhibit "C".

27. INSURANCE

At all times while operations are conducted hereunder, Operator shall comply with the Workmen's Compensation Law of the State where the operations are being conducted. Operator shall also carry or provide insurance for the benefit of the joint account of the parties as may be outlined in Exhibit "D" attached to and made a part hereof. Operator shall require all contractors engaged in work on or for the Unit Area to comply with the Workmen's Compensation Law of the State where the operations are being conducted and to maintain such other insurance as Operator may require.

In the event Automobile Public Liability Insurance is specified in said Exhibit "D", or subsequently receives the approval of the parties, no direct charge shall be made by Operator for premiums paid for such insurance for operator's fully owned automotive equipment.

28. CLAIMS AND LAWSUITS

If any party to this contract is sued on an alleged cause of action arising out of operations on the Unit Area, or on an alleged cause of action involving title to any lease or oil and gas interest subjected to this contract, it shall give prompt written notice of the suit to the Operator and all other parties.

The defense of lawsuits shall be under the general direction of a committee of lawyers representing the parties, with Operator's attorney as Chairman. Suits may be settled during litigation only with the joint consent of all parties. No charge shall be made for services performed by the staff attorneys for any of the parties, but otherwise all expenses incurred in the defense of suits, together with the amount paid to discharge any final judgment, shall be considered costs of operation and shall be charged to and paid by all parties in proportion to their then interests in the Unit Area. Attorneys, other than staff attorneys for the parties, shall be employed in lawsuits involving Unit Area operations only with the consent of all parties; if outside counsel is employed, their fees and expenses shall be considered Unit Area expense and shall be paid by Operator and charged to all of the parties in proportion to their then interests in the Unit Area. The provisions of this paragraph shall not be applied in any instance where the loss which may result from the suit is treated as an individual loss rather than a joint loss under prior provisions of this agreement, and all such suits shall be handled by and be the sole responsibility of the party or parties concerned.

Damage claims caused by and arising out of operations on the Unit Area, conducted for the joint account of all parties, shall be handled by Operator and its attorneys, the settlement of claims of this kind shall be within the discretion of Operator so long as the amount paid in settlement of any one claim does not exceed one thousand (\$1000.00) dollars and, if settled, the sums paid in settlement shall be charged as expense to and be paid by all parties in proportion to their then interests in the Unit Area.

29. FORCE MAJEURE

If any party is rendered unable, wholly or in part, by force majeure to carry out its obligations under this agreement, other than the obligation to make money payments, that party shall give to all other parties prompt written notice of the force majeure with reasonably full particulars concerning it; thereupon, the obligations of the party giving the notice, so far as they are affected by the force majeure, shall be suspended during, but no longer than, the continuance of the force majeure. The affected party shall use all possible diligence to remove the force majeure as quickly as possible.

The requirement that any force majeure shall be remedied with all reasonable dispatch shall not require the settlement of strikes, lockouts, or other labor difficulty by the party involved, contrary to its wishes; how all such difficulties shall be handled shall be entirely within the discretion of the party concerned.

The term "force majeure" as here employed shall mean an act of God, strike, lockout, or other industrial disturbance, act of the public enemy, war, blockade, public riot, lightning, fire, storm, flood, explosion, governmental restraint, unavailability of equipment, and any other cause, whether of the kind specifically enumerated above or otherwise, which is not reasonably within the control of the party claiming suspension.

30. NOTICES

All notices authorized or required between the parties, and required by any of the provisions of this agreement, shall, unless otherwise specifically provided, be given in writing by United States mail or Western Union Telegram, postage or charges prepaid, and addressed to the party to whom the notice is given at the

addresses listed on Exhibit "A". The originating notice to be given under any provision hereof shall be deemed given only when received by the party to whom such notice is directed and the time for such party to give any notice in response thereto shall run from the date the originating notice is received. The second or any responsive notice shall be deemed given when deposited in the United States mail or with the Western Union Telegraph Company, with postage or charges prepaid. Each party shall have the right to change its address at any time, and from time to time, by giving written notice thereof to all other parties.

31. OTHER CONDITIONS, IF ANY, ARE:

This agreement may be signed in counterpart, and shall be binding upon the parties and upon their heirs, successors, representatives and assigns.

OPERATOR

ATTEST:

JOHN H. HENDRIX CORPORATION

By: _____
President

Secretary

NON-OPERATORS

ATTEST:

CAL-MON OIL COMPANY

By: _____

ATTEST:

HARVEY E. YATES COMPANY

By: _____

EXHIBIT "A"

Attached to and made a part of Operating Agreement
dated January 26, 1979, between John H. Hendrix Corporation as
Operator and Cal-Mon Oil Company and others as non-operators.

1. Lands Subject to Contract:

Township 14 South, Range 36 East, N.M.P.M.

Section 8: E/2
Lea County, New Mexico

containing 320 Acres more or less.

2. Restrictions as to Formations and Depths:

From the top of the Wolfcamp to deepest depth
drilled in the initial Test Well.

3. Percentage Interests of the Parties to this Agreement:

John H. Hendrix Corporation, Cal-Mon Oil Company et al	37.5%
Harvey E. Yates Company	62.5%
	<u>100.0%</u>

4. Names and Addresses of the Parties hereto for Notice purposes:

John H. Hendrix Corporation
525 Midland Tower
Midland, Texas 79701

Harvey E. Yates Company
P.O. Box 1933
Roswell, New Mexico 88201

Cal-Mon Oil Company
P.O. Box 2066
Midland, Texas 79701

EXHIBIT "C"

Attached to and made a part of Operating Agreement dated
January 26, 1979 between John H. Hendrix Corporation
as operator and Cal-Mon Oil Company and others as
non-operators

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 I. 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%).

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:

- (☒) 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 (☒) 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 \$ 2500.00
Producing Well Rate \$ 150.00

(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 Basis

(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 9 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 \$ _____:

A. _____ % of total costs if such costs are more than \$ _____ but less than \$ _____; plus

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

C. _____ % 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

- (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 "D"

SCHEDULE OF INSURANCE

Unit Operator shall carry and require its contractor and sub-contractors to carry the following insurance at the expense and for the benefit of the parties hereto covering its operations under the terms of this agreement, to-wit:

1. Workmen's Compensation Insurance as required by the laws of the State of New Mexico.
2. Employer's Liability Insurance with minimum limits as required by the laws of the State of New Mexico
3. Contractor's or Comprehensive General Public Liability Insurance with minimum limits of at least \$100,000.00 for injuries to one person; \$300,000.00 for injury in one accident and \$100,000.00 for property damage in one accident.
4. Automobile - Public Liability and Property Damage Insurance (with an endorsement covering non-owned and hired cars) with minimum limits of at least \$100,000.00 for injuries to one person; \$300,000.00 for injuries in one accident and \$100,000.00 for property damage in any one accident.
5. Insurance coverage on equipment as the operator deems necessary for the protection of the joint account.

January 31, 1979

Mr. George M. Yates
c/o H. E. Yates Company
P. O. Box 1933
Roswell, New Mexico 88201

RECORD THE	
OIL CONSERVATION COMMISSION	
Case No. 6488	11
SUBJECT: Hendrix	
Hearing Date: 3-2-79	

Re: Austin-Missippian Field
T-14-S, R-33-E
Lea County, New Mexico

Dear George:

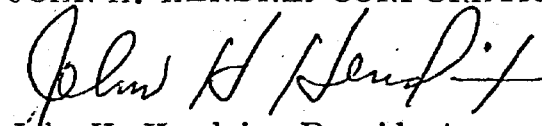
We have not heard from you since your meeting with Robert L. Monaghan and A. T. Carleton in Midland on Tuesday, January 23, 1979, regarding the problems raised with regard to the drilling of a test well in the subject area; therefore we have decided to proceed with the drilling of a well at a location in the SE/4 of Section 8.

We are therefore asking that you join us in the proration unit consisting of the E/2 of Section 8 as was approved by the New Mexico Oil Conservation Commission on January 29, 1979.

As a joint interest owner with Cal-Mon Oil Company in this lease, we will act as Operator if this is satisfactory to you and will be more than happy to furnish you with our AFE and Operating Agreement for your approval.

Yours very truly,

JOHN H. HENDRIX CORPORATION


John H. Hendrix, President

JHH/wh
cc: Cal-Mon Oil Company

Docket Nos. 10-79 and 11-79 are tentatively set for hearing on March 14 and 28, 1979. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: COMMISSION HEARING - FRIDAY - MARCH 2, 1979

OIL CONSERVATION COMMISSION - 9 A.M. - ROOM 205
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

CASE 6483: (Continued from February 28, 1979, Examiner Hearing)

Application of Harvey E. Yates Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp, Pennsylvanian, and Mississippian formations underlying the S/2 of Section 8, Township 14 South, Range 36 East, Lea County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6488: Application of John H. Hendrix Corporation for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Mississippian formation underlying the E/2 of Section 8, Township 14 South, Range 36 East, Lea County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6222: (Rehearing) (Continued from August 23, 1978, Commission Hearing)

Application of Paul Hamilton for salt water disposal well shut-in, Lea County, New Mexico. Upon application of Paul Hamilton there will be a rehearing of Case No. 6222, Order No. R-5753. This case involves the application of Paul Hamilton for an order shutting down salt water disposal operations in the Texaco Inc., New Mexico State "BO" SWD Well No. 3, located in Unit D of Section 24, Township 11 South, Range 32 East, Moore-Devonian Pool, Lea County, New Mexico. Pursuant to Commission Order No. R-5753-A, evidence at said rehearing shall be limited to evidence relating to data regarding water quality and water level obtained from an observation well completed next to the aforesaid SWD Well No. 3, and to other new evidence unavailable at the time of the original hearing of this case on May 31, 1978.

LAW OFFICES

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T. CALDER EZZELL, JR.
WILLIAM B. BURFORD
JOHN S. NELSON
RICHARD E. OLSON

February 12, 1979

Mr. Dick Stamets
Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87501

Re: John H. Hendrix Corporation
Application for Compulsory
Pooling versus Harvey E. Yates
Co., Inc.

Dear Dick:

Transmitted herewith you will find triplicate executed Applications on the above referenced matter relative to a well which John H. Hendrix Corporation seeks to have located in the E $\frac{1}{2}$ of Section 8, Township 14 South, Range 36 East, N.M.P.M., Lea County, New Mexico. It is my understanding that in addition to Harvey E. Yates, Inc., the other owners of the working interests in the E $\frac{1}{2}$ of said Section 8 which must be force pooled in connection with this E $\frac{1}{2}$ Section 8 include Yates Petroleum Company, with both Harvey E. Yates Co., Inc. and Yates Petroleum Company either owning the working interest in the W $\frac{1}{2}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$ and NW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 8 or having the same within their control pursuant to farmout agreements.

Pursuant to our telephone conversation today, I am assuming that unless and until I hear from you to the contrary, that this matter will be set on the docket for a full Commission hearing on March 2, 1979, along with the Application of Harvey E. Yates Co., Inc. covering a force pool application for the S $\frac{1}{2}$ of said Section 8.

I trust that the enclosed Applications will provide all you need in order to have this matter set on the docket for

Mr. Dick Stamets

-2-


February 12, 1979

March 2 (or the March 14 Examiners hearing if it is necessary), but if anything in addition is needed or if you need additional information in this regard, please do not hesitate to call.

Thank you.

Very truly yours,

HINKLE, COX, EATON,
COFFIELD & HENSLEY



Conrad E. Coffield

CEC:rf

xc: John H. Hendrix Corporation
525 Midland Tower Building
Midland, Texas 79701
xc: Cal-Mon Oil Company
Post Office Box 2066
Midland, Texas 79702

BEFORE THE OIL CONSERVATION DIVISION OF
THE DEPARTMENT OF ENERGY AND MINERALS
STATE OF NEW MEXICO

APPLICATION OF JOHN H. HENDRIX)
CORPORATION FOR COMPULSORY)
POOLING, LEA COUNTY, NEW MEXICO)

APPLICATION

John H. Hendrix Corporation, by its undersigned attorneys,
hereby makes application for an Order pooling all mineral
interests in the Mississippian formation underlying E $\frac{1}{2}$ of
Section 8, Township 14 South, Range 36 East, N.M.P.M., Lea
County, New Mexico, and in support thereof would show:

1. Applicant is entitled to proceed with the drilling
of a well located in E $\frac{1}{2}$ Section 8, Township 14 South, Range 36
East, N.M.P.M. under the authority of Applicant's ownership of
oil and gas leasehold interests. Harvey E. Yates Co., Inc.,
et al are the owners of the working interest in W $\frac{1}{2}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$,
NW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 8, Township 14 South, Range 36 East,
N.M.P.M., Lea County, New Mexico.

2. Applicant proposes to drill a gas well 660 feet
from the East line and 1,980 feet from the South line of
Section 8, to a depth of 13,900 feet or to a depth sufficient
to test the Mississippian formation and seeks to dedicate
the E $\frac{1}{2}$ of Section 8 to the well pursuant to the field rules
for the Austin Mississippian Pool. Applicant has requested
Harvey E. Yates Co., Inc., et al, as owners of the working
interest in the W $\frac{1}{2}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 8, to agree to
participate in the drilling of said well or to farmout or
otherwise commit their interest to said well, but Harvey E.
Yates Co., Inc., et al so far have refused to do so.

3. The pooling of all interests in the Mississippian
formation in the E $\frac{1}{2}$ of Section 8 will avoid the drilling of
unnecessary wells, prevent waste and protect correlative
rights.

4. Applicant requests that this matter be set on the earliest possible docket, before an Examiner or, if appropriate, before the full Oil Conservation Commission.

HINKLE, COX, EATON,
COFFIELD & HENSLEY

By: 

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Post Office Box 3580
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Attorneys for
John H. Hendrix Corporation

BEFORE THE OIL CONSERVATION DIVISION OF
THE DEPARTMENT OF ENERGY AND MINERALS
STATE OF NEW MEXICO

APPLICATION OF JOHN H. HENDRIX)
CORPORATION FOR COMPULSORY)
POOLING, LEA COUNTY, NEW MEXICO)

APPLICATION

John H. Hendrix Corporation, by its undersigned attorneys, hereby makes application for an Order pooling all mineral interests in the Mississippian formation underlying E $\frac{1}{2}$ of Section 8, Township 14 South, Range 36 East, N.M.P.M., Lea County, New Mexico, and in support thereof would show:

1. Applicant is entitled to proceed with the drilling of a well located in E $\frac{1}{2}$ Section 8, Township 14 South, Range 36 East, N.M.P.M. under the authority of Applicant's ownership of oil and gas leasehold interests. Harvey E. Yates Co., Inc., et al are the owners of the working interest in W $\frac{1}{2}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 8, Township 14 South, Range 36 East, N.M.P.M., Lea County, New Mexico.

2. Applicant proposes to drill a gas well 660 feet from the East line and 1,980 feet from the South line of Section 8, to a depth of 13,900 feet or to a depth sufficient to test the Mississippian formation and seeks to dedicate the E $\frac{1}{2}$ of Section 8 to the well pursuant to the field rules for the Austin Mississippian Pool. Applicant has requested Harvey E. Yates Co., Inc., et al, as owners of the working interest in the W $\frac{1}{2}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 8, to agree to participate in the drilling of said well or to farmout or otherwise commit their interest to said well, but Harvey E. Yates Co., Inc., et al so far have refused to do so.

3. The pooling of all interests in the Mississippian formation in the E $\frac{1}{2}$ of Section 8 will avoid the drilling of unnecessary wells, prevent waste and protect correlative rights.

4. Applicant requests that this matter be set on the earliest possible docket, before an Examiner or, if appropriate, before the full Oil Conservation Commission.

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2-12-79

Application

Conrad Coffield

John H. Hendrix Corp. Force Pooling

E/2 8-145-36

Mississippian form
for a well to be drilled at ~~st~~ loc.

1986S 660 E

See case 6483

RL

A. T. CARLETON

Geologist

POST OFFICE BOX 293
MIDLAND, TEXAS 79701

March 1, 1979

AUSTIN AREA, LEA COUNTY, NEW MEXICO

3488
Hendrix
3/2/79

The Austin Area appears to be on an anticlinal feature north of and on trend with the Caudill Anticline to the south. Production possibilities are primarily related to closure, although some are highly dependent on stratigraphic conditions. The main prospects are San Andres, Wolfcamp, Permo-Pennsylvanian Lime, upper Pennsylvanian Lime, Strawn Lime oil and Atoka, Morrow, Chester Lime and the Siluro-Devonian oil and/or gas. The Chester Lime and the Siluro-Devonian are the prime prospects here.

The Phillips #1 Austin (M-17-14-36) is the highest well on this feature to have penetrated the Siluro-Devonian. It found the top 140 feet of that section tight, but found good reservoir rock filled with formation water below that point. It was completed from 42 feet of microlog porosity in the Chester Lime for an IP COF 4,925 MCFGPD. It had made 4,023,145 MCFG + 57516 BD to 1-1-78 and was producing at an average rate of 15,000 MCFG + 122 BD per month at that time. Cherry Brothers #1 Austin-State (E-19-14-36) was an attempt to extend this production 3/4 mile to the southwest. This well was 47 feet low on the Siluro-Devonian and found the top 75 feet of that section mainly tight (100' brackish water). On a test of the Chester Lime pay, the packers failed and only the water blanket and 890' SLI GCM were recovered. Final Shut in Pressure was 1448#/45". This well was completed from a thin (10') Wolfcamp Lime zone (now abandoned) for an IPF 250 BOPD. In April 1978, Adobe #1 State "16" (M-16-14-36) was completed from 33 feet of log porosity in the Chester Lime for an IP COF 2,740 MCFGPD. Since that time, the pay section was re-acidized and reportedly was making gas at the rate of 14,000 MCFGPD. It is understood that Adobe has calculated recoverable reserves of 7 BCFG (based on 320 acre spacing) on their well. The Adobe #1 Hannah (H-17-14-36) has been drilled to 13825 feet in the Lower Mississippian Lime. It found 36 feet of log porosity in the upper 100 feet of the Chester Lime. As of this writing, the operators were preparing to production test the Lower Mississippian Lime and perhaps a zone in the lower Chester Lime section. There are several other wells staked, but none are at the stage where they could aid in evaluating this area. The Zapata #1 Danglade (H-3-14-36) appears to have a very porous Chester section (80' approximately, but no detail log) which had no shows and was not tested. The Texas Crude and Sinclair #1 Richardson (M-5-14-36) had 43 feet of sonic log porosity in four zones in the Chester Lime. The top 8 feet of porosity was included in a perforated interval which gave up gas at rates up to 2,100 MCFGPD on initial production tests. After repeated treating and testing, the volume of gas declined and apparently the volume of water increased. Lower and better developed porosity was not tested and is assumed to be water bearing. This well is thought to be very near the gas/water contact (-9375 +/-).

It appears that a band of porosity in the Chester Lime runs in a northeast-southwest direction across the generally north-south aligned Austin Anticline. The south half of section 8, T-14-S, R-36-E appears very well located on the structure, but the north half of that section appears to be dipping off on the north plunging axis of the Austin Anticline. With the exception of the Zapata #1 Danglade (which had additional section in the top of the Chester Lime), the main

Austin Chester Lime porosity occurs within the top 100 feet of that unit. Thus, although all of section 8 is shown to be above the estimated gas water contact of (-) 9375 feet, the entire Chester Lime porosity appears to be above this datum only in the south half of the section.

From the above analysis, it appears obvious that the south half of section 8, T-14-S, R-36-E is better located than the north half of that section. There is a very real possibility that the north half is so low as to be uneconomical to drill. Thus, if North Half and South Half Proration Units are approved, there may be only one well drilled in section 8--and that in the South Half. If Proration Units are designated as East Half and West Half, there could be two wells drilled which would be higher on the structure and both of which should find most of the Chester Lime Austin Pay Porosity above the estimated water table. This would result in more gas being recovered. It could also mean that the State of New Mexico would have all of its approximately 320 acres in this section committed to wells and potentially revenue earning. With only one well drilled in the south half of the section, the State of New Mexico would have only 160 acres committed to production.