BEFORE EXAMINER CATANACH
OIL CONSERVATION DIVISION
CHEVRON EXHICIT NO. 35
CASE NO. 10059-61

EUNICE MONUMENT SOUTH SECONDARY RECOVERY UNIT

(Royalty Owners Overview)
LEA COUNTY, NEW MEXICO

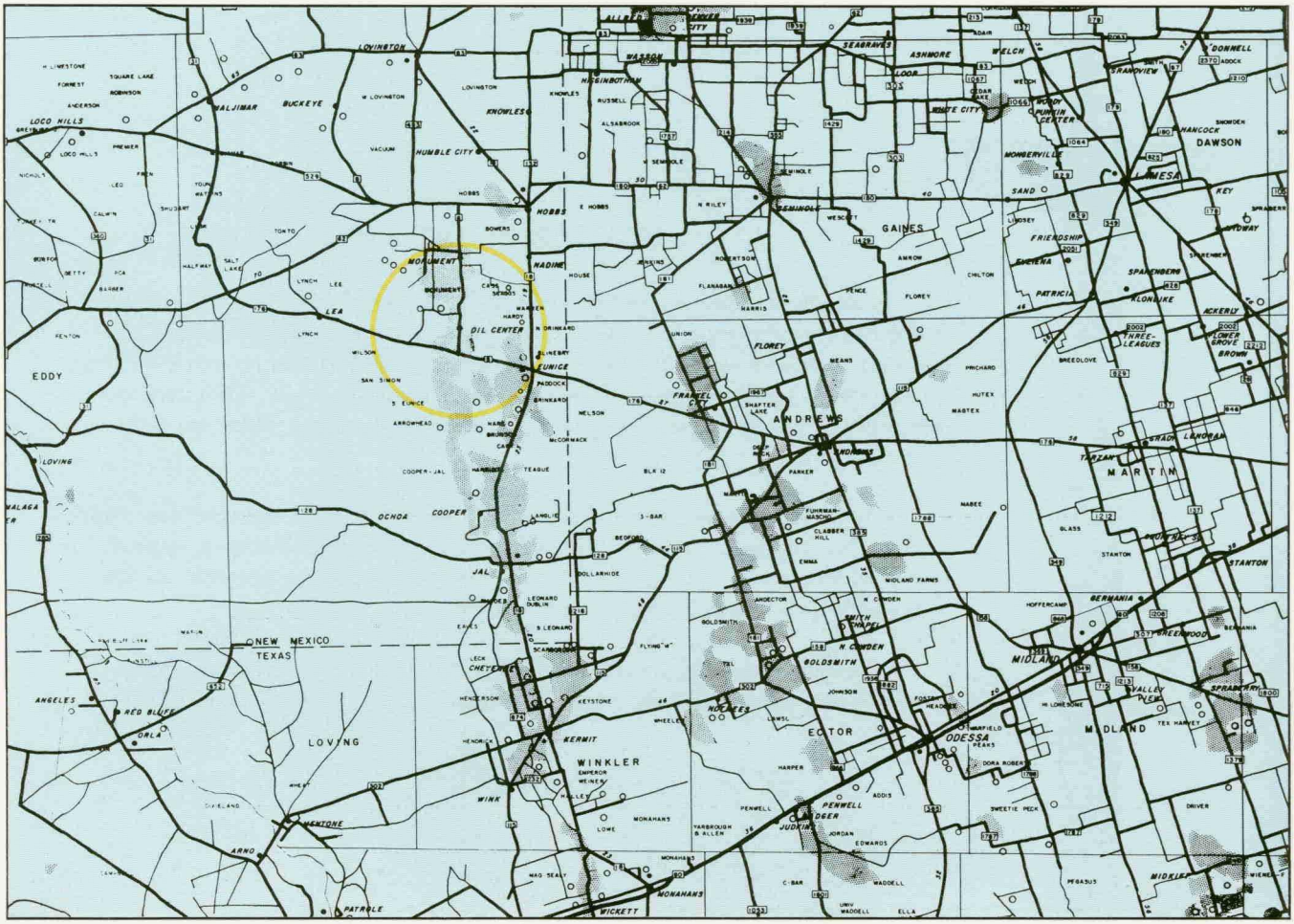
INTRODUCTION

The Proposed Eunice Monument South Secondary Recovery Unit in Lea County, New Mexico, encircles the Town of Oil Center, is approximately four miles south of the Town of Monument, and is fifteen miles southwest of the City of Hobbs. The unit area covers 14,190 acres in Townships 20 and 21 South, Ranges 36 and 37 East, New Mexico Principal Meridian, and includes all or portions of 24 sections of land. At its longest and widest portions, the unit area is six miles by five and one-fourth miles.

The field was discovered March 21, 1929 with the completion of the Continental Lockhart "B-31" well in Section 31, Township 21 South, Range 36 East, N.M.P.M., Lea County, New Mexico. Following discovery, the field was designated as the Eunice (Queen-Penrose, Grayburg and San Andres geological formations) Pool. In 1953, the Eunice Pool was separated into the Eumont Gas Pool and Eunice Monument Oil Pool.

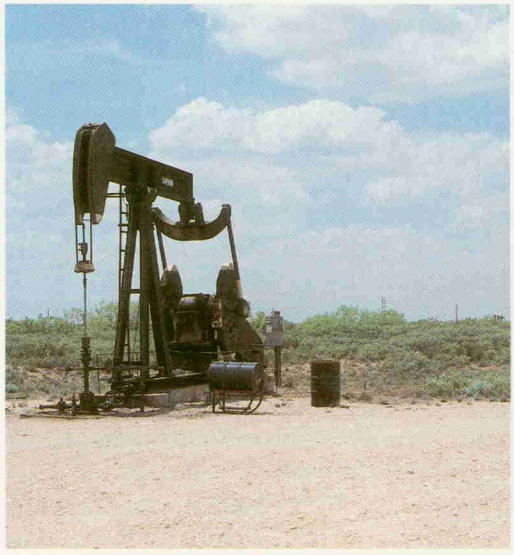
The oil field was developed on 40-acre spacing with the majority of wells being drilled and completed during the three-year period from 1934 through 1937. Peak oil production from the collective wells occurred in May of 1937 when the monthly production was 791,800 barrels of oil, or 25,542 barrels per day.

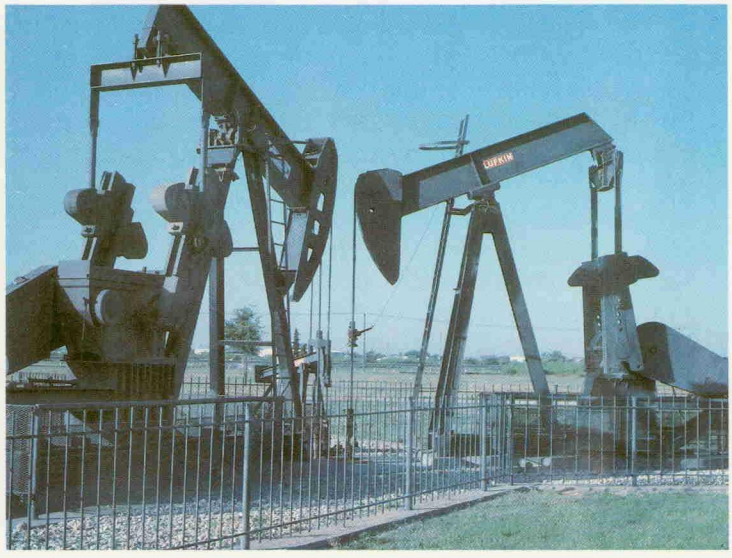
Since May of 1937, oil production within the unit has steadily declined. Twenty-three companies have drilled and completed 344 oil wells, but because of production decline, only 200 oil wells are active. The remaining wells have been temporarily abandoned, plugged, or recompleted in other zones. The oil production is now approximately 60,000 barrels of oil per month, or 7½% of the peak (1937) monthly production.

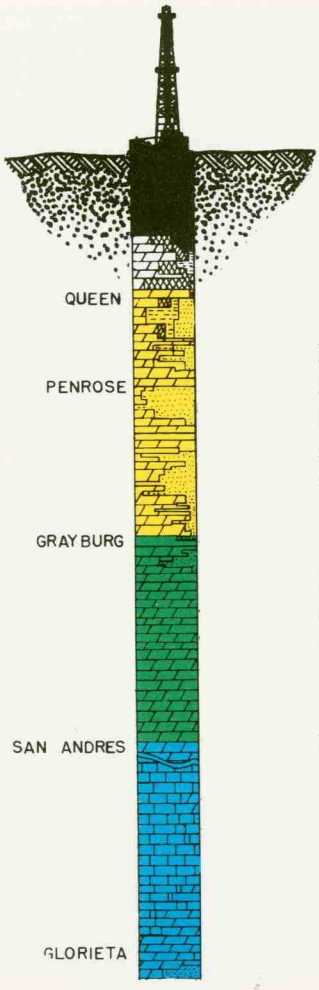


HOW CAN WE EXTEND THE LIFE OF THIS FIELD — 1929 TO _____

As with all oil fields, production has declined with time. In 1979, the Working Interest Owners (companies operating the wells and paying the maintenance costs) began a series of meetings and engineering studies to attempt to extend the productive life of this field by recovering oil that can never be produced with the present method of operation and existing facilities.







WATER INJECTION

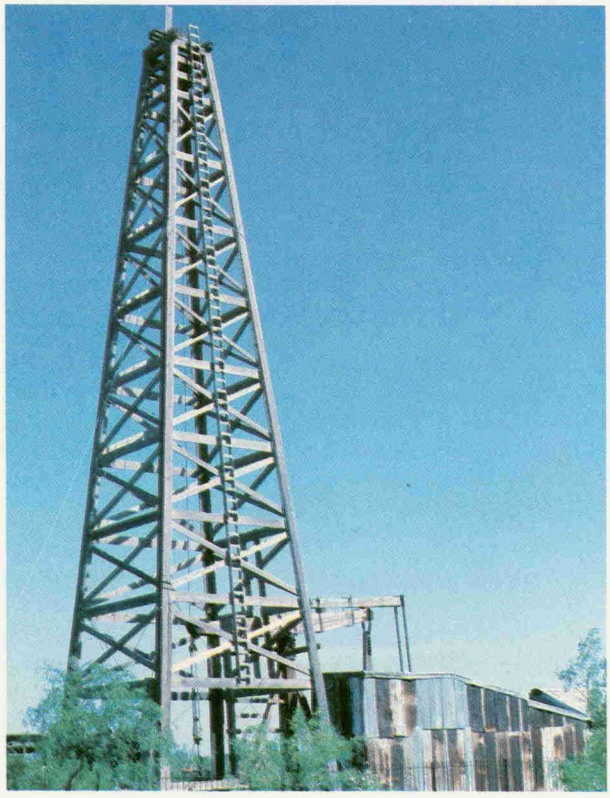
After the various company geologists and engineers completed their laboratory and reservoir studies, they concluded that a unit should be formed to inject water into the oil producing formations to force oil trapped in the rocks to the pumping units of the producing wells. This method of recovery is being successfully employed in many of the older oil fields in the area

For this proposed unit, salt water from the non-productive San Andres formation, supplemented by the reinjection of produced water, was recommended for pressurized injection into the oil producing portions of the Grayburg and Lower Penrose formations.

To understand the benefits of water injection, a brief discussion of primary and secondary recovery is helpful.

PRIMARY RECOVERY

Water, oil and gas existed under high temperature and high pressure when the first well was drilled into the oil producing formations. Because of the high gas pressure, the Continental Lockhart "B-31" well was a true gusher when it was drilled in 1929. The oil, along with some water and gas, was pushed out the well bore by the pressure of the gas. As more wells were drilled, the pressure decreased and pumps had to be installed on the wells.



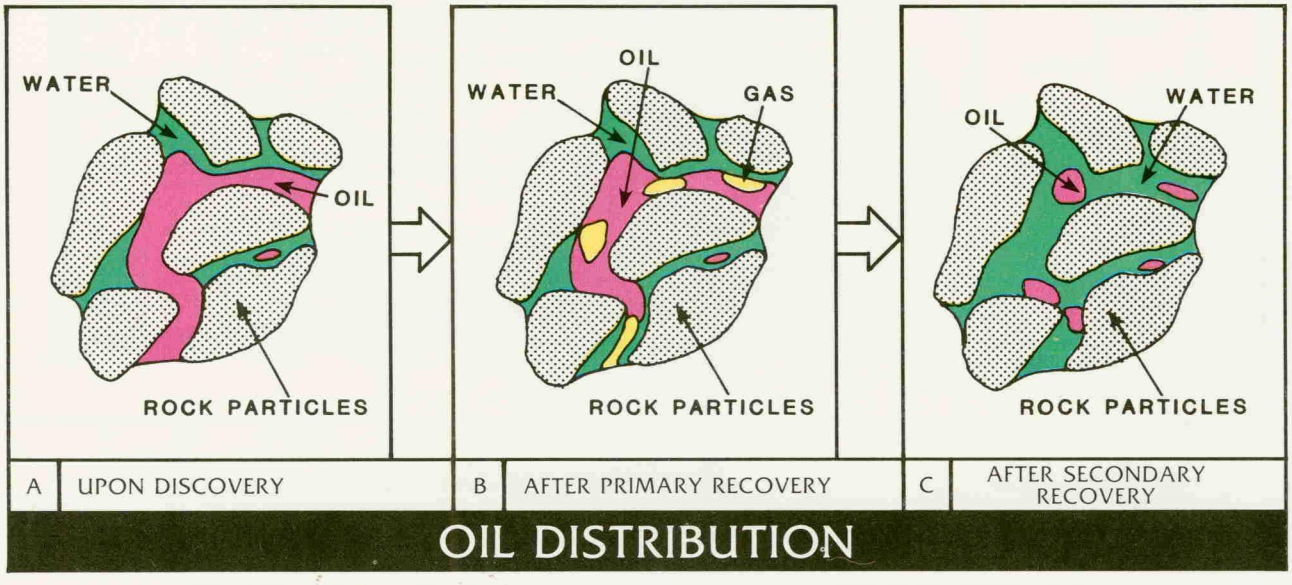
With the decreased reservoir pressure, a large amount of oil was trapped in the pore spaces of the reservoir rocks. The diagram shown below represents the pore spaces in the reservoir at different times during the life of the field. The original condition of the reservoir at the time of discovery is shown in Figure (a), with only oil and water filling the pore spaces. It is seen that as oil is produced, gas bubbles, water, and the small pore spaces prevent recovery of 80% of the oil in place. At this point, as shown in Figure (b), a large amount of oil remains trapped in the reservoir.

SECONDARY RECOVERY

Two natural forces provide the energy necessary to move oil from the reservoir to a producing well. One is the expansion of the gas that is dissolved in the oil (solution gas drive) and the second is the movement of water which displaces the oil (water drive).

Generally speaking, a reservoir that has a water drive (natural or man-made) will yield significantly more oil than if subjected only to a solution gas drive. When it is determined that a reservoir is primarily producing by gas expansion, consideration is given to supplementing the solution gas drive with the injection of water to recover additional oil.

A water injection program, also referred to as secondary recovery, requires pressurized injection of water through selected wells into the oil-bearing reservoir. The injected water forces the oil to the surrounding producing wells where it is pumped to the surface. Following a water injection program, a large portion of the original oil is recovered as shown in Figure (c).



UNITIZATION'S AFFECT UPON ROYALTY OWNERS

★ ARE MOST OF THE WORKING INTEREST AND ROYALTY OWNERS IN FAVOR OF THE UNIT?

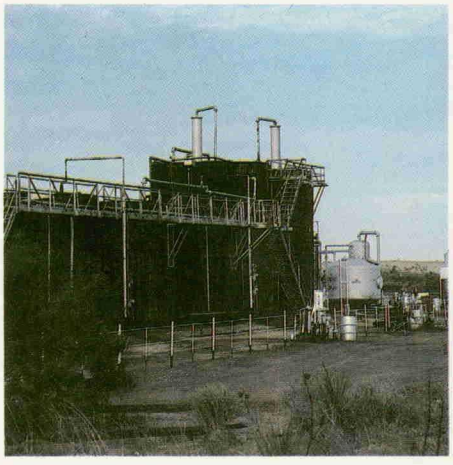
Yes, in excess of 80% of the Working Interest Owners have indicated approval of the unit and the water injection program. The State of New Mexico and the federal government own 78% of the lands within the unit, and because of the projected increase in recoverable oil and income, both have indicated preliminary approval of the unit.

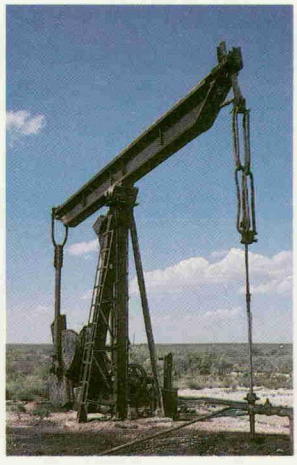
★ HOW WILL UNIT PRODUCTION BE ALLOCATED?

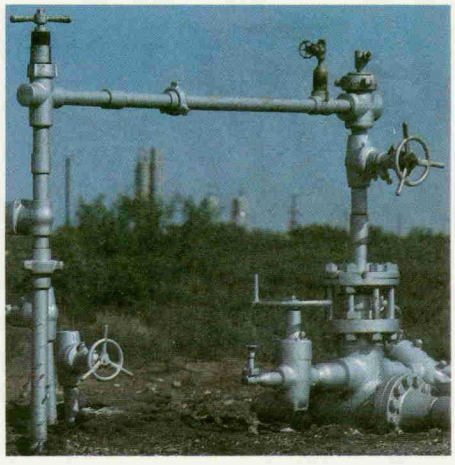
Unitization allocates to each tract in the unit a percentage of the unit's overall production based upon a formula which compares overall unit production figures to cummulative oil production from the tract, the primary oil reserves of the tract, and the oil production from January 1, 1982 through September 30, 1982 for the tract. This formula allows equitable sharing in the increased unit production even if the property contains only an injection well and no producing oil well.

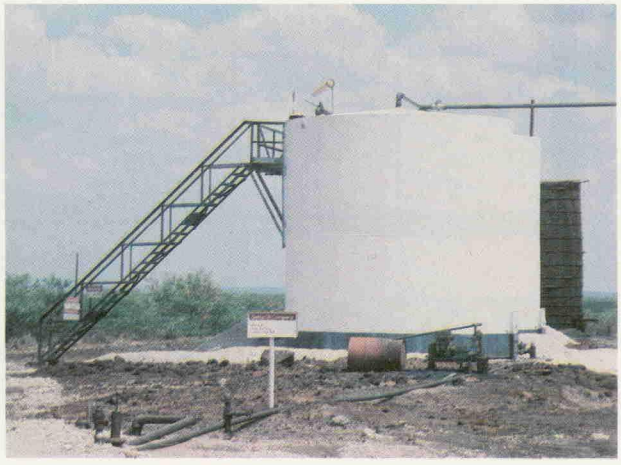
★ HOW WILL JOINING THE UNIT AFFECT MY INCOME?

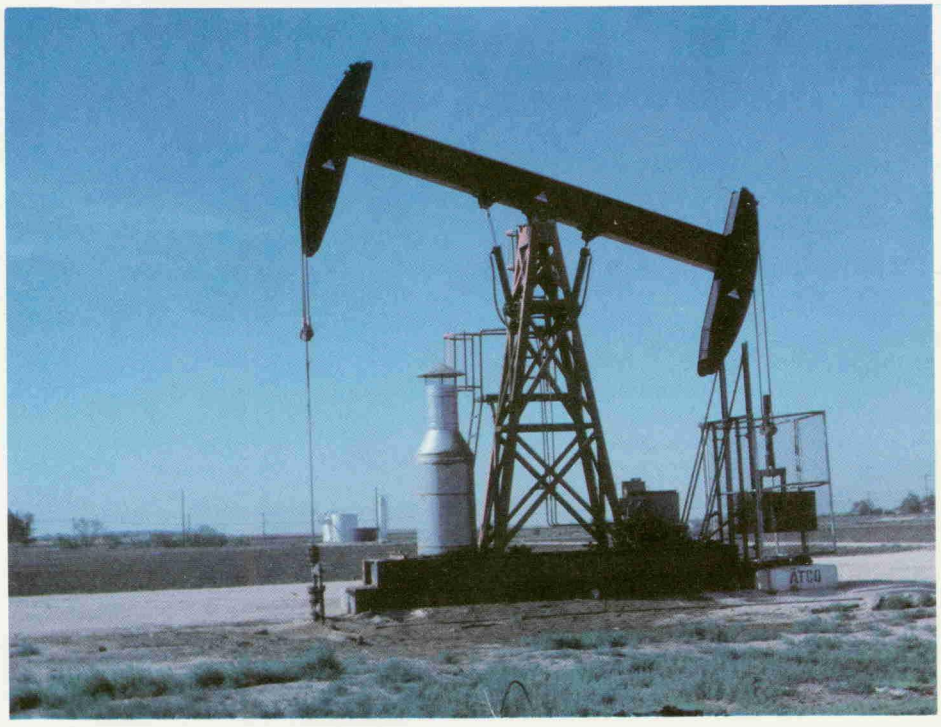
As indicated in the graph on page 4, oil production (and your royalty income) has been declining annually. When unitization is completed and water injection has begun, the estimates of unit production and your income are expected to increase through 1993. After 1993 your monthly income is still projected to be greater than if no water injection were begun.











A SUCCESSFUL WATER INJECTION PROGRAM REQUIRES COOPERATION

Unitization of the Eunice Monument South field requires the cooperation of the various oil companies and Royalty Owners. In forming a unit, it is necessary for Royalty and Working Interest Owners to join in a written agreement which states, among other things, the method of arriving at each tract's participation. By signing the Ratification to the agreement, the Royalty Owner is agreeing to the unitization and water injection concept, the tract participation formula, and his interest in the tract.

Since the purpose of the unitization and water injection is to increase both the amount of oil recovered and the rate of recovery, the Royalty Owner should receive more money, but does not pay any of the costs associated with increasing the production.

We urge you, therefore, to PLEASE COMMIT YOUR INTEREST to the unit BY SIGNING, BEFORE A NOTARY PUBLIC, SIX (6) COPIES of the attached "Ratification and Joinder" to the Unit Agreement and return them in the enclosed, self-addressed, postage paid envelope as soon as possible.

If you have any additional questions, please call Mr. Ray M. Vaden at (915) 687-7202, or address your correspondence to:

Land Department Manager
Gulf Oil Corporation
P. O. Box 1150
Midland, Texas 79702

★ WHEN WILL THE WATER INJECTION PROGRAM BEGIN? WHAT IS THE COST? WHO PAYS FOR IT?

The construction is expected to begin in late 1984. It is estimated to cost approximately $60 million, all of which will be paid by the Working Interest Owners (companies) and at no cost to you, the Royalty Owner.

★ WHAT WILL HAPPEN TO INCOME I RECEIVE FROM WELLS THAT PRODUCE FROM ZONES OTHER THAN THE UNITIZED FORMATIONS?

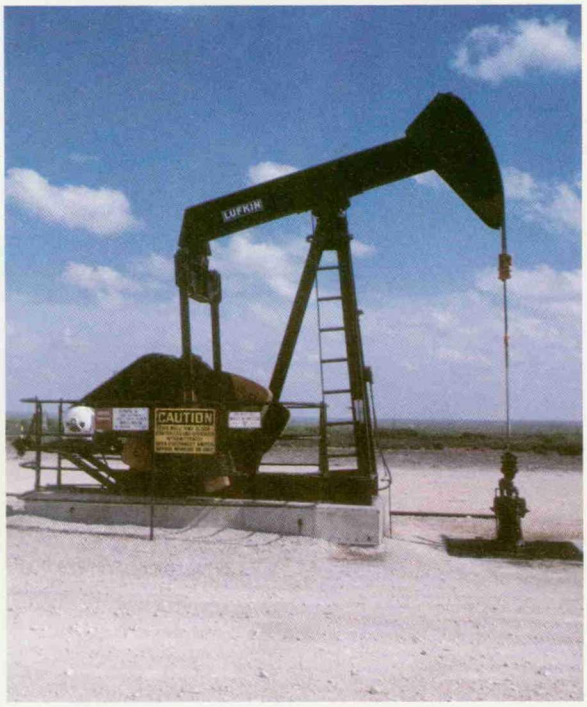
Income from gas wells or oil wells that produce from zones above or below the unitized formations will not be affected by this agreement.

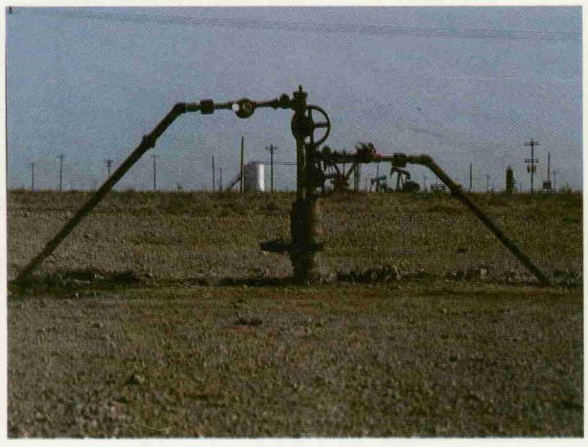
★ HOW DO I KNOW I WILL BE GETTING MY "FAIR SHARE" OF THE UNIT'S PRODUCTION?

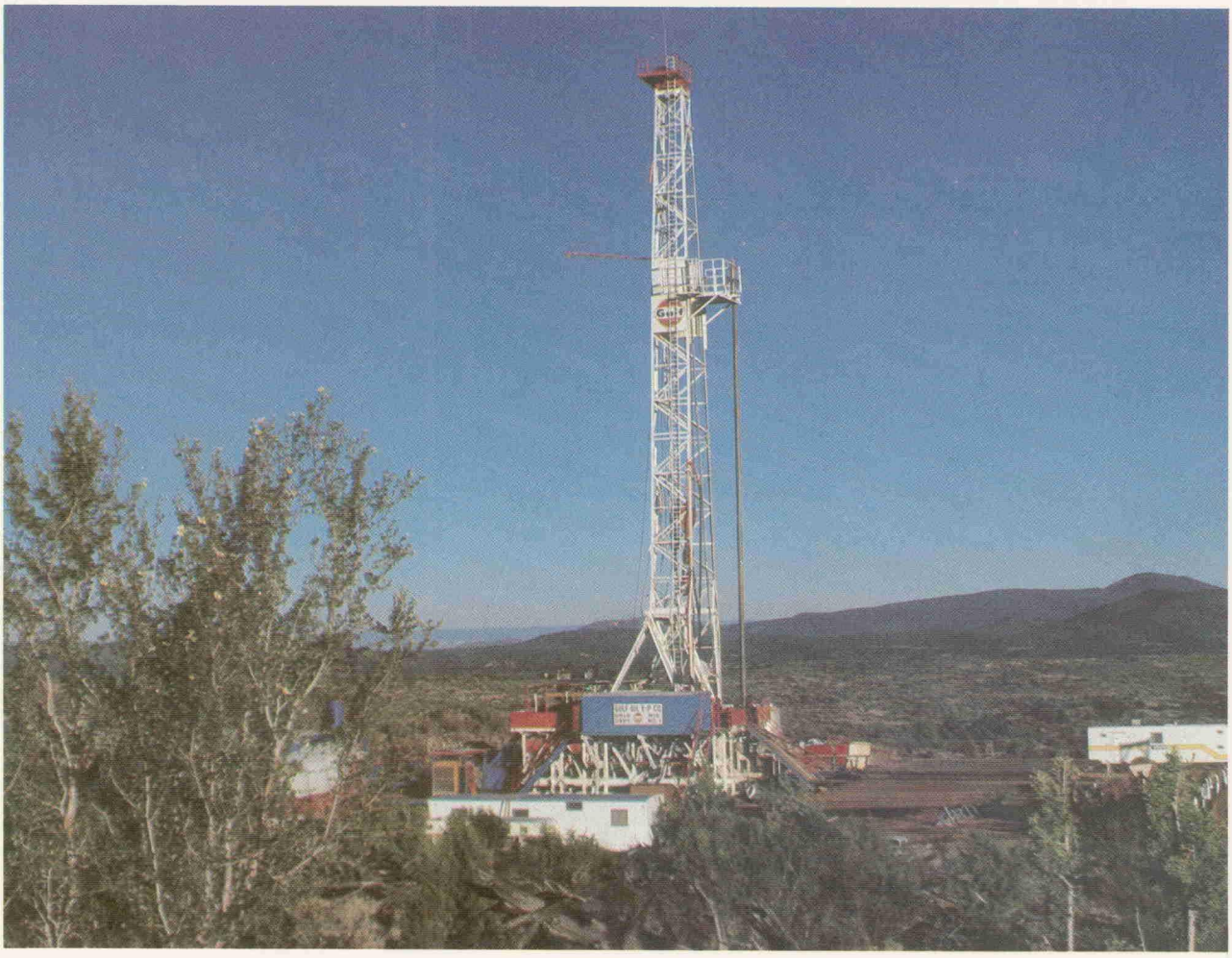
The companies owning an interest in the unit area include Gulf, Chevron, Exxon, Conoco, Cities Service, Getty, Amoco, Atlantic Richfield, Sun, Amerada Hess, Shell, Texaco, and others. Each of these companies competes with the others, each has a competent staff of geologists, engineers, accountants and attorneys, and each answers to a board of directors. Because of the competitive nature of the business, each of these companies must be assured that it is getting a fair and equitable deal or it will not join the unit. As a result of the numerous meetings and studies conducted since 1979, the majority of these Working Interest Owners have agreed that the formula, as set out in Section 13 of the attached Unit Agreement, fairly represents their interest in the tract and the unit. They are also convinced that their share of the production and revenues will increase by joining the unit.

The New Mexico Oil Conservation Division is required by law to assure that the royalty owners will be benefited and that the participation formula is fair, reasonable and equitable, and protects the rights of all owners of interest within the unit area before it may approve the establishment of this unit.

Since a Royalty Owner's interest in a tract is a set percentage, it will not change. The revenue received by the Royalty Owner will be based upon his percentage of ownership in that tract multiplied by the overall unit production allocated to that tract. For example, if the Royalty Owner's interest in a tract is 5% of that tract's production before unitization, this ownership will become 5% of the tract's interest in the overall unit's production after unitization.



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