BEFORE THE OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION ON ITS OWN MOTION TO CONSIDER THE PROMULGATION OF STATE-WIDE RULES GOVERNING THE OPERATION OF WATERFLOOD PROJECTS INCLUDING THE ASSIGNMENT OF PROJECT OR UNIT ALLOWABLES

CASE NO. 1787

STATEMENT OF HUMBLE OIL & REFINING COMPANY RELATIVE TO PROPOSED RULES

At the conclusion of the above case on October 16, 1959, Mr. A. L. Porter, Jr., Secretary-Director of the New Mexico Oil Conservation Commission, stated that anyone who had entered an appearance in the case might file a statement commenting upon the rules proposed by Mr. Dan Nutter and upon any rules or proposals made by any of the parties to the case. The Humble desires that the following statement be included as a part of the case:

The principal differences between the rules proposed by Mr. Nutter hereinafter referred to as the "Commission's proposed rules" and the rules proposed by the Humble are as follows:

(a) The number of wells to be included in each waterflood project.

(b) The arbitrary factors used in the Commission's proposed rules in arriving at the maximum allowable to be assigned to any waterflood project whereas Humble's proposed rules are based solely on the number of proration units in each project.

(c) The Commission's proposed rules would not be applicable to existing waterflood projects whereas Humble's proposed rules would be applicable.

It is believed that the rules proposed by Humble are more realistic and more flexible and that it will not be necessary under the proposed rules of Humble for the Commission to make as many exceptions as would be the case in the application of the Commission's proposed rules.

Furthermore, it would not be necessary under Humble's proposed rules for the Commission to give special consideration to buffer zones and to deal with special problems of unitization which will exist in the application of the Commission's proposed rules.

Using Mr. Nutter's rule of thumb estimate that 3500 barrels per day will affect the normal unit allowable by one barrel per day, the application of Humble's proposed rules will have the effect of increasing the normal unit allowable more than the Commission's proposed rules and would reduce the current production of only four waterflood projects, namely, Ambassador, Cities Service and the Graridge Units in the Caprock Queen field and the Graridge Unit No. 2 in the Artesia field.

Respectfully submitted,

HERVEY, DOW & HINKLE

By _____

Roswell, New Mexico
Attorneys for Humble Oil
& Refining Company

ATLANTIC

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MAILING ADDRESS
P. O. BOX 2819
DALLAS 21, TEXAS

October 27, 1959

New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

RE Case 1787, Regular Hearing
Docket 35-59, October 14, 1959

Gentlemen:

This letter is in accordance with permission given by the Commission to submit written comments on rules proposed in Case 1787 concerning proration of waterfloods. At this hearing The Atlantic Refining Company read into the record the attached statement giving our position relative to allowable allocation for injection projects. Briefly stated, we proposed that incentive be given for pressure maintenance programs as well as "stripper" type waterfloods. We stated that for the immediate situation, we generally concurred with the Commission Staff's proposed Rule 701 but that future meetings and hearings should be held for writing an allocation formula for all types of injection programs.

The Humble Oil and Refining Company presented a proposed Rule 701 at this hearing and it is on this rule that we specifically wish to comment. We do not object to Humble's proposed rule insofar as it applies to "stripper" type waterfloods only. It is similar to the rule proposed by the Commission staff in that it does prorate waterfloods. However, we do strongly oppose the Humble rule insofar as it applies to pressure maintenance projects. Our reason for this is that it gives no incentive for starting a pressure maintenance program at the proper time to attain maximum ultimate recovery. In this respect, the Humble proposed rule does not encourage the prevention of waste. As we understand it, it would give only the normal unit allowable with the appropriate depth factor for all types of injection programs the same as would be applied to primary production.

We urge, then, that the Humble proposed rule not be adopted for pressure maintenance type injection programs but that more study be given by the industry and the Commission toward adoption of an allocation formula that would give incentive to all types of injection programs. We refer you to our statement for more detail on this subject.

Yours very truly,

V. M. Hollrah

VMH:ow
Attach

THE ATLANTIC REFINING COMPANY

STATEMENT TO THE NEW MEXICO OIL CONSERVATION COMMISSION

October 14, 1959

While a great deal of progress has been made in proration practices in the past 30 years, one of proration's biggest deficiencies is being touched on at this hearing --namely, the allowables given injection projects.

We believe that a sound proration system has three objectives. They are:

(1) the prevention of waste,

(2) the protection of oil and gas property rights,

(3) the provision of reasonable incentives to find and produce the most oil and gas.

The allowable rules that the New Mexico Conservation Commission has adopted in the past applying to wells in reservoirs under primary depletion generally meet the three criteria for sound proration. First, they forbid the production of excessive amounts of oil, thereby preventing waste. Secondly, they assign allowables in accordance with the size of the tracts, thereby protecting oil and gas property rights. Thirdly, Rule 505 sets out your depth allowable yardstick, thereby clearly providing the incentive necessary to carry out deep exploration.

Injection projects are becoming more and more important to us every day--accordingly, we need an additional allowable yardstick that will do the same for injection operations as the depth yardstick and the field allocation formulas do for our primary recovery operations--namely, prevent waste, protect oil and gas property rights, and provide an incentive to produce the most oil. We would hope that this new yardstick would provide the correct incentive to undertake the best injection program at the best time, thereby increasing recovery and preventing waste.

In many reservoirs, a higher ultimate recovery can be effected if an injection program is undertaken early in its life rather than when it is near depletion. Take, for example, a deep reservoir with an undersaturated crude. It might be determined

early in the life of this field that the highest recovery could be attained by commencing the injection of high pressure gas early in the life of the field in order to obtain miscible displacement drive. But suppose the wells in the field are capable of producing for say ten years at top allowable without any type of injection. If this project is then to be undertaken and no additional allowable is to be assigned over the then current primary allowable the operator would receive no return on his investment for ten years. The result would be that the operator would choose not to enter into this injection program but would wait until such time as his wells no longer had the capacity to produce top allowable.

Another type of situation that operators may find themselves in is where they may have a choice between different types of injection programs into the same reservoir with one type giving a higher recovery than another but at the same time costing more money to undertake. In this type we need a higher rate for the one that gives the higher recovery to make it worth the extra expenditure. Otherwise, the return on the expenditure is too far down the line to make it worth while.

We propose that an allowable system be developed that would create an incentive to undertake bonafide injection programs in all reservoirs where such is beneficial regardless of the reservoir depletion stage. A formula might be developed whereby a "new reserve allowable" over and above the primary rate of production could be earned by instituting a secondary recovery or a bonafide pressure maintenance program. The amount of "new reserve allowable" to be earned should be commensurate with the amount of new reserves added as a result of the new program. We believe that such a formula can be worked out through a series of meetings and hearings, and we would like to see the Commission work in this direction.

We generally concur with your aims in proposed Rule 701, but we do wish to state one exception. The one exception is that we think additional allowable should not be

given for additional wells on a 40-acre tract. We are afraid that this might give an incentive to drill unnecessary wells. We would, therefore, omit the sentence starting in the second line at the top of page 3.

In conclusion, we wish to say again that as far as proposed Rule 701 goes, we generally concur with it for taking care of the immediate situation, however, we beg that further meetings and hearings be held in an attempt to complete the picture and give us a proper, realistic and determinable incentive for undertaking any fluid program that will increase recovery of oil and thereby prevent waste--regardless of the reservoir's stage of depletion.