

Statement 1787

#### SKELLY OIL COMPANY

#### **TULSA 2, OKLAHOMA**

PRODUCTION DEPARTMENT
C. L. BLACKSHER, VICE PRESIDENT

October 29, 1959

Re: Case 1787

#### AIR MAIL

Oil Conservation Commission State Capitol Office Building Post Office Box 871 Santa Fe, New Mexico

Gentlemen:

Skelly Oil Company wishes to submit the following statement in this case:

We are of the opinion that oil production rates can be controlled on many water flood projects on a long-term basis if the operator is informed of the control in advance, and development of a project is in stages so that certain stimulated wells may produce at capacity while the project as a whole can be produced within a pre-set oil production rate. The project production rate should be the standard unit allowable times the number of developed spacing units on the project without regard to each well's actual use or performance, or the average normal unit allowable during the last ten years for each Southeast New Mexico and Northwest New Mexico as suggested by the proposed revision of Rule 70l of the Commission's rules and regulations.

We recognize the advisability of adopting a system of assigning allowables on a project basis, preferably a unitized project, and consequently feel that oil production rates can be controlled on some project long-term basis where the operator is sufficiently informed of the control in advance.

Teffy truly yours,

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GWS/gl

cc: Ambassador Oil Corporation 3109 Winthrop Ave. - P. O. Box 9338 Fort Worth 7, Texas

cc: Mr. J. N. Dunlavey

GRARIDGE CORPORATION Carles 18 EX BUILDING October 29, 1959 New Mexico Oil Conservation Commission P. O. Box 871 Santa Fe, New Mexico Re: Humble's Proposed Rules For Waterflood Gentlemen: The waterflood rules which Humble has proposed have been reviewed, and it is our feeling that the adoption of such rules will retard the development of waterflooding in New Mexico. In reviewing our own projects in New Mexico, it is doubtful if we would have started the floods that are now successful if the rules as proposed by Humble were in effect. Any such rule which tends to retard waterflood development is felt by this company to be detrimental to New Mexico economy as well as to the ultimate oil to be recovered by all methods of secondary recovery. We feel that Humble is more or less admitting the fact that their rules are not workable in that they suggest a special credit be given to pilot waterfloods. This in itself indicates that they feel that pilot flooding should not be undertaken at slow rates, and, therefore, the bonus allowable. Graridge still maintains its position of capacity flooding in order to effectively and adequately recover the ultimate reserve from a depleted field. It has been our experience that unless floods are carried out in this manner that the maximum recovery will not result, and, therefore, waste will be encountered. Graridge recommends adoption of the Commission proposed rules except the portion of Section E pertaining to allowables. Very truly yours, GRARIDGE CORPORATION O. H. Reaugh OHR/if

Statement AMERADA PETROLEUM GORPORATION P. O. BOX 2040 TULSA 2. OKLA. LEGAL DEPARTMENT October 29, 1959 Mr. A. L. Porter, Jr. Secretary and Director New Mexico Oil Conservation Commission P. 0. Box 871 Santa Fe, New Mexico Re: Statewide Hearing Pertaining to Commission's Proposed Water Flood Rules Dear Mr. Porter: Enclosed is original and one copy of Amerada's statement pertaining to the proposed water flood rules which were the subject of statewide hearing for the month of October. Very truly yours, uslinels H. D. BUSHNELL HDB: MT Encl.

#### AMERADA PETROLEUM GORPORATION

P. O. BOX 2040

Tulsa 2, Okla.

LEGAL DEPARTMENT

October 29, 1959

TO: NEW MEXICO OIL CONSERVATION COMMISSION

# Statement Pertaining to Proposed Water Flood Rules

Amerada Petroleum Corporation agrees with the Commission's proposed water flood rules except for portions of Section E which we suggest the following changes or additions (as indicated by the underlines) for the reasons stated.

Section E 2 and 3: The term "40-acre" as there used should be substituted by the term "proration" unit or tract in order that these rules can apply to any pool regardless of the size of proration unit authorized.

Section E 2 should contain an additional provision permitting exceptions to this general rule, so that Rule 2 shall read as follows:

"The project area of a water flood project shall comprise the proration units upon which injection wells are located plus all proration units which directly or diagonally offset the injection tracts and have producing wells completed on them; provided, however, the Commission may authorize the inclusion of one or more proration units not directly nor diagonally offsetting an injection tract and having producing wells completed thereon, after notice and hearing and where the evidence shows there is a substantial response in such well or wells as a result of the water flood project."

Section E 3: In order to discourage the drilling of additional wells for the sole purpose of increasing the allowable, the additional allowable for any proration unit having two or more additional wells should be limited to not exceed one-half the area allowable factor times the appropriate proportional factor for the pool. Accordingly, this section should read:

"The maximum allowable assigned to any water flood project area shall be determined by multiplying the number of proration units in the project area times the Area Allowable Factor times the appropriate proportional factor for the pool. The allowable assigned to any water flood project area in which there are proration units containing more than one well shall be increased by an amount of oil equal to 0.333 times the Area Allowable Factor times the appropriate proportional factor for the pool for each such additional well on a proration unit, provided however, that the additional allowable for any such proration unit shall not exceed one-half the Area Allowable Factor times the appropriate proportional factor for the pool."

Section E 3, continued: Referring to next to the last unnumbered paragraph in this section, we concur with Humble's proposed exception, noted in paragraph 3 of its draft, but suggest a rewording of same to be inserted as a separate unnumbered paragraph in this Section 3, as follows:

"In order to permit rapid evaluation of the effectiveness of injection and the feasibility of entering into a secondary recovery or pressure maintenance project, the initial pilot project in any pool may be granted a temporary increase of allowable for only such a period of time as is deemed necessary by the Oil Conservation Commission to permit adequate evaluation of the project."

Section E 4: We suggest that the area allowable factor for the southeastern counties named in this rule be reduced from 42 to 38 barrels, because this lower figure is above the present allowable factor and higher than the average allowable factors which we can expect in the future.

P. 3

"The Area Allowable Factor for the counties of Lea, Eddy, Chaves, and Roosevelt shall be 38; and the Area Allowable Factor for the counties of San Juan, Rio Arriba, Sandoval, and McKinley shall be 52."

AMERADA PETROLEUM CORPORATION

H D Bushnell



Statement Case 1787

## CITIES SERVICE OIL COMPANY

CITIES SERVICE BUILDING
BARTLESVILLE. OKLAHOMA

October 28, 1959

Mr. A. L. Porter, Jr.
Secretary - Director
New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Re: Revision of Rule 701 of the Commission's Rules and Regulations

Dear Mr. Porter:

Enclosed is a copy of the statement made by Mr. E. E. Funk, Chief Secondary Recovery Engineer of our Company, when he testified in this matter at Roswell on October 15. This statement was given to the reporter at that hearing. Essentially our position, as can be seen from this statement, is a somewhat middle of the road policy regarding control of production.

If we can be of any additional help in this matter, please feel free to call on us.

Very truly yours,

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Alfred O. Holl Attorney

AOH o Enclosure

cc: Mr. E. E. Funk

Cities Service, as a fully integrated oil company, producing much of its oil by secondary methods, wishes to compliment the staff of the New Mexico Oil Conservation Commission for proposing rules designed to regulate waterfloods so that these projects will receive their fair share of the State's allowed oil production.

From our experience, operating a number of waterflood projects, we conclude that oil production rates can be controlled on many waterflood projects on a long term basis if the operator is informed of the control in advance and if the operator is given permission to develop his project in stages so that stimulated wells produce at capacity while the project as a whole does not exceed a pre-set oil production rate. The project production rate to be fair and workable, should be the standard state spacing unit allowable times the number of developed spacing units in the project without regard to each well's actual use or performance. This same level of oil production on a project basis is also fair and workable and should be applied to all other injection processes whether called secondary recovery or primary pressure maintenance and for all commonly injected fluids such as air, gas, LPG, and water.

The operator needs considerable leeway on development rate to permit him to initiate timely cooperative injection agreements with adjacent operators and to permit the use of peripheral or line drive injection well arrangements if such arrangements are deemed better than a pattern arrangement for the particular project.

A system of assigning allowables on a project basis is best suited to large projects. To this end it is recommended that the Legislature be asked to amend the statutes to authorize the Commission to conduct hearings and, after finding that the basis proposed is fair and reasonable, issue orders setting up a unitized project for a logical unit area in which a representative majority of the owners have voluntarily agreed to unitize.

We also recognize that in any recovery system conditions may arise under which special allowables and exceptions to the rules are necessary to protect correlative rights or prevent waste. The necessity for special treatment should be established through the normal hearing and Commission order procedure.

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W. P. MARSHALL, PRESIDENT

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A E PORTER JR=

SECRETARY OF THE NEW MEXTICO OUL CONSERVATION

COMMISSION SANTA FE NMEX=

IN CASE # 1787 SINCLAIR RECOMMENDS THE ADOPTION OF THE STAFF PROPOSAL ON WATER FLOODS MODIFIED BY THE INCLUSION OF THE CHANGES AND EXCEPTIONS SUGGESTED BY US AT THE HEARING PARTICULARLY A PROVISION FOR THE GRANTING OF ADDITIONAL ALLOWABLES WHERE SUCH IS NECESSARY THIS WILL GIVE THE COMMISSION EFFECTIVE CONTROL AND REGULATION OF WATER FLOODS WITHOUT PENALTZING THEIR DEVELOPMENT AND GROWTH- F F WRIGHT SINCLAIR OIL AND GAS CO.

# SUN DIL COMPANY SOUTHWEST DIVISION

S. M. GLADNEY MANAGER

T. F. HILL ASSISTANT MANAGER ... P. O. BOX 2880 DALLAS 21, TEXAS

A. S. RHEA SUPT.-OPERATING DEPT

October 28, 1959

Mr. A. L. Porter, Secretary-Director, New Mexico Oil Conservation Commission Santa Fe, New Mexico

> In Re: Closing statement relative to Humble's proposed Rule 701 in Case 1787

Dear Mr. Porter:

Attached is the statement of Sun Oil Company relative to Humble's proposed Rule 701 in Case 1787, the capacity waterflood case. This statement is submitted in accord with your instructions at the hearing.

Very truly yours,

SUN OIL COMPANY

A. R. Ballou

By flamille Dutten Granville Dutton

GD:mi

Attach.



### STATEMENT OF SUN OIL COMPANY CONCERNING HUMBLE'S PROPOSED RULE 701 IN CASE 1787

Preliminary to our comments on the subject proposal, we would like to reemphasize our general beliefs relative to waterflood projects.

- 1. Market demand waste is prohibited by statute just as is underground waste. To maintain the reasonable allocation required by statute where market demand proration is in effect, fields and units having similar reserves must have reasonably similar allowables. To permit production at capacity for one class of property while drastically restricting other classes having similar reserves is patently unreasonable.
- 2. Our independent studies corroborate the evidence in this case showing that a waterflood can be designed to obtain the maximum recovery of which this displacement mechanism is capable at any reasonable production rate.
- 3. The factual evidence clearly indicate the capacity waterflood allowable has affected the Southeast New Mexico normal unit allowable and that such effect will increase unless waterfloods are allocated.

At the close of the hearing we indicated our support for the staff's proposed Rule 701 with some slight modifications. Our study of Humble's proposal indicates that Humble has utilized the framework of the staff rule while eliminating the necessity for our recommended modifications relating to reduction of the Area Allowable Factor and elimination of additional allowables for additional wells on the proration units involved. We also believe that the Humble proposal is somewhat more flexible in its definition of project areas and that the project allowable more nearly limits its benefits to the area actually affected.

We continue to agree with Mr. Nutter that the stabilized project allowable is an incentive to secondary recovery and pressure maintenance projects which should be retained.

We still recommend that -- barring an unreasonable decline in the normal unit allowable -- the project allowable established upon instituting the waterflood be retained throughout the life of the project.

Therefore, we recommend the adoption of Humble's proposed Rule 701 with the above modification. We continue to believe that a statewide rule is subject to exception; but would recommend that such exception be granted only after the applicant has shown it to be necessary for reasons which are beyond his control.

LAW OFFICES
HERVEY, DOW & HINKLE

HINKLE BUILDING

ROSWELL, NEW MEXICO

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HIRAM M. DOW

S B CHRISTY IV

October 27, 1959

Mr. A. L. Porter, Jr. Secretary-Director New Mexico Oil Conservation Commission Box 871 Santa Fe, New Mexico

Re: Case No. 1787

Dear Mr. Porter:

We enclose an original and two copies of Statement of Humble Oil & Refining Company Relative to Proposed Rules to be promulgated in connection with the above case.

Yours very truly,

HERVEY, DOW & HINKLE

CEH:ke

Enc.

cc: Mr. S. F. Holmesly

Humble Oil & Refining Company

P. O. Box 2180 Houston 1, Texas

cc: Mr. Roy Baze

Humble Oil & Refining Company

P. O. Box 1600 Midland, Texas

cc: Mr. H. E. Meadows

Humble Oil & Refining Company

P. O. Box 1600 Midland, Texas