

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

APPLICATION OF AMERADA PETROLEUM CORPORA-  
TION FOR AN ORDER ESTABLISHING EIGHTY ACRE  
PRORATION UNITS AND UNIFORM SPACING OF  
WELLS IN THE HIGHTOWER DEVONIAN POOL, LEA  
COUNTY, NEW MEXICO CASE NO. 198

April 15, 1952

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CASE NO. ~~198~~ → 319

### STATEMENT OF FACTS

In November, 1949, Amerada filed its application for the establishment of 80 acre spacing units for the Hightower Devonian pool.

At that time the State BTB #1 well (NW/4 NW/4 Sec. 26-12S-33E) had been completed in the Devonian formation at a depth of 10,090 to 10,200 feet.

The Roach well (NW/4 SW/4 Sec. 26-12S-33E) and the Gulf N.M.M.I. #1 well (SE/4 SE/4 Sec. 22-12S-33E) were then drilling, but not yet completed. Both of these wells resulted in dry holes in the Devonian.

The application asked that four sections be covered (Secs. 22, 23, 26, 27-12S-33E) and that all wells be located in the center of the NW and SE quarter of each governmental quarter section.

#### 1. ORDER NO. 846

The application was heard by the Commission on November 1, 1949. There was no opposition. Evidence was offered in support of the allegations of the application.

On November 18, 1949, the Commission entered its Order 846 establishing 80 acre proration units comprising the E/2 and W/2 of each governmental quarter section. The order provided for wells to be located in the center of the NW and SE quarter of each quarter section with 150 feet tolerance. All wells were on the pattern locations.

The allowable for each 80 acre unit was a single top

allowable with deep well adaption as for a regular 40 acre unit, "until such time as the Commission may issue such further and additional orders as may be deemed necessary herein."

Paragraph 9 of the order provided:

"That the Commission retains jurisdiction of this case for the purpose of issuing such further and additional orders as may seem necessary to meet changed conditions, preclude inequities and preserve correlative rights; all upon the motion of the Commission or upon the petition of any interested operator upon public hearing, after notice as provided by law."

Exhibit 1 is a copy of Order 846.

## 2. ADDITIONAL DEVELOPMENT

Since the entry of the order one additional oil well has been completed in the Devonian formation. That is State BTE #1 (SE/4 SW/4 Sec. 23-12S-33E). Five other Devonian dry holes have been drilled:

- (1) Gulf N.M.M.I. (SE/4 SE/4 Sec. 22)
- (2) State BTF #1 (SE/4 NW/4 Sec. 23)
- (3) State BTH #1 (NW/4 NE/4 Sec. 26)
- (4) Roach (NW/4 SW/4 Sec. 26)
- (5) BTB #2 (SE/4 NW/4 Sec. 26)

Exhibit 2 is a map showing the present Devonian development.

## 3. ISSUES INVOLVED IN PRESENT HEARING

The Commission has now, on its own motion, requested that Amerada show cause why the 80-acre spacing order now in effect for the Hightower pool should not be revoked. Exhibit 3 is a copy of the Notice for the present hearing.

The order expressly provides that the Commission retains jurisdiction to make such further orders "as may seem necessary to meet changed conditions, preclude inequities and preserve correlative rights." Thus the Commission has itself defined the scope of this hearing.

The order is final except for changed conditions. There is no inference that the Commission intended to reconsider the same issues heretofore presented.

Therefore, the question now properly before the Commission is whether there is a change of condition by reason of subsequent development which justifies the revocation of the 80 acre proration units or which is causing inequities.

The question of the allowable was temporary in the order and subject to review at any time.

Also, there is before the Commission the question of whether a pressure maintenance program is feasible at this time.

#### 4. TESTIMONY OF JOHN A. VEEDER, GEOLOGIST

Mr. John A. Veeder is a geologist for Amerada Petroleum Corporation and is qualified to testify as an expert witness. The substance of his testimony is as follows:

(1) Since the last hearing one additional oil well and four Devonian dry holes have been drilled. One dry hole was drilled by Gulf. Exhibits 4, 5, 6, 7 and 8 are copies of Schlumberger logs of the following wells, respectively:

- 4 - BTE #1
- 5 - Roach #1
- 6 - BTF #1
- 7 - BTH #1
- 8 - BTB #2

(2) Exhibit 9 is a tabulation of the pertinent drilling data for the additional wells.

(3) Exhibit 10 is a structure map of the Hightower Devonian pool.

(4) From a study of all available geological data, it is my opinion that the Hightower-Devonian Pool has good porosity and apparently good permeability.

5. TESTIMONY OF R. S. CHRISTIE, PETROLEUM ENGINEER

Mr. R. S. Christie is Petroleum Engineer for Amerada Petroleum Corporation and is qualified to testify as an expert witness. The substance of his testimony is as follows:

(1) Exhibit 11 is a graph showing monthly oil and water production and bottom hole pressures of the Hightower-Devonian Pool to March 1, 1951.

(2) The pressure information indicates uniform withdrawals and that the drawdown has not been excessive. This means that there is little likelihood of channeling.

(3) It is my opinion that this pool has good permeability for this type of reservoir. The wells have high potential and the uniformity of the reservoir pressure indicates good communication.

(4) It is my opinion that this pool is under an effective water drive.

(5) It is my opinion that a Devonian well in this reservoir is capable of effectively draining an area of 80 acres.

(6) No waste is now being committed. There is no change in condition which justifies a revocation of the eighty acre spacing order.

(7) The average cost of the Devonian producing wells at Hightower has been approximately \$227,000 per well.

(8) The state is the only lessor and Amerada is the only lessee in the entire Hightower pool and no inequities now exist.

(9) It is my opinion that the allowable should remain as now provided.

(10) It is my opinion that a pressure maintenance program at this time would not increase the ultimate recovery and would not be economical.

Respectfully Submitted

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ATTORNEYS FOR AMERADA  
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