

# HUMBLE OIL & REFINING COMPANY

#41      990' FSL  
1980' FEL

30-22S-37E

Midland, Texas

~~February 5, 1965~~

FEB 16 1965

Request for Waterflood  
Expansion Approval

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

Attention: Mr. A. L. Porter, Jr.

Dear Sir:

Oil Conservation Commission Order No. R-2556 authorized Humble Oil and Refining Company to institute a waterflood project on the New Mexico State "M" Lease in Township 22 South, Range 37 East, NMPM, Lea County, New Mexico. Six wells, State M-23, 26, 28, 31, 37 and 38 were designated as injection wells.

This pilot flood has been in operation for fourteen months and good response in terms of improved oil production and reduced gas-oil ratios have been observed in all wells offset by two or more injection wells. None of the wells have suffered water breakthrough. The attached Commission Forms C-116 reflect the magnitude of the response between January and October of 1964. The State "M" Lease is offset to the east by the Ambassador Langlie Mattix Penrose Sand Unit and to the south by the proposed Skelly Penrose Unit "B". Expansion of the former Unit is in progress and it is understood that injection in the latter Unit is anticipated this year.

Based on performance of the pilot, waterflooding is indicated to be a feasible engineering and economic operation and therefore Humble desires to expand this flood to essentially all of the productive portion of the State "M" Lease. It is recognized that the northwestern extremity and southwestern tip of the proposed expansion have not responded sufficiently from this small pilot to comply with all specifics as set out in Rule 701. However, present day income to the State of New Mexico as well as Humble would be deferred approximately one year in order to meet all requirements without a hearing. Humble hereby requests the Commission to grant administrative approval to convert to injection the 13 wells listed on the attachment and also to use the new well listed for injection.

# HUMBLE OIL & REFINING COMPANY

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

The following attachments accompany this request in compliance with Statewide Rule 701.

1. Plat showing proposed injection wells and all other wells within two miles.
2. Logs of the proposed injection wells, except for one well not yet drilled.
3. Diagramatic sketch of a typical proposed injection well with a tabulation of required information on all proposed injection wells.
4. Tabulation of other pertinent information.
5. Evidence of sending copy of application to the State Engineer's office.
6. Commission reports showing production before and after flood response.

Your consideration of this request will be appreciated.

Very truly yours,

HUMBLE OIL & REFINING COMPANY

R. R. McCarty

RLB/mcb

Orig & 2 cc: Mr. A. L. Porter, Jr., Box 871, Santa Fe, New Mexico  
W/Attachments  
cc: N.M. State Engineer's Office, Box 1079, Santa Fe, N. M.  
W/Attachments  
cc: Mr. Joe Ramey, N.M.O.C.C., Box 1980, Hobbs, N. M.  
W/Attachments  
cc: Amerada Pet. Corp., Box 312, Midland, Texas  
Gulf Oil Corp., Box 1938, Roswell, N. M.  
Marathon Oil Co., Box 552, Midland, Texas  
Ambassador Oil Corp., Box 9338, Fort Worth, Texas  
Dalport Oil Corp., 930 Fidelity Union Life Bldg., Dallas, Texas  
Texas Pacific Oil Co., 2700 Fidelity Union Twr., Dallas, Texas  
Compass Exploration, Inc., 1645 Court Place, Denver 2, Colorado

Typical Injection Well  
New Mexico State "M" Lease  
Waterflood  
Humble Oil & Refining Co.  
Hobbs District  
Hobbs, New Mexico

Pressure  
Gauge

7" Surface Casing Set At  
Approximately 300', Cement  
Circulated To The Surface.

Inhibited Liquid Filled  
Annulus.

1.5" Nominal (1.9" O.D.)  
Internally Coated Tubing

2-7/8" Casing

Top Cement-Calculated 2600'

Tension - Type Packer Set At  
Approximately 3400'.

Perforations

Case 3219



STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS  
STATE ENGINEER

March 5, 1965

ADDRESS CORRESPONDENCE TO:  
STATE CAPITOL  
SANTA FE, N. M.

*Case 3217*

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

Dear Mr. Porter:

Reference is made to the application of Humble Oil & Refining Company dated February 16, 1965 seeking approval to convert to injection the 13 wells listed on the attachment and also to use the new well listed for injection. The wells are identified on the attachment as State M Lease Wells 4, 13, 14, 15, 16, 22, 24, 32, 33, 41, 42, 44, 45 and 46. The new well being No. 46.

This office offers no objection to the granting of the application provided injection is accomplished in the manner set forth in paragraph 2 of the Order R-2556 which resulted from the hearing on Case 2879 and further provided that in each well, including the new one, the permanent type packer is set well below the top of the cement surrounding the casing in which it is set.

Yours truly,

S. E. Reynolds  
State Engineer

By: *Frank E. Irby*  
Frank E. Irby  
Chief  
Water Rights Division

FEI/ma  
cc-Humble Oil & Ref. Co.  
F. H. Hennighausen