

Case 1309

J. M. HERVEY 1874-1952

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August 20, 1957

Mr. A. L. Porter, Jr., Director  
New Mexico Oil Conservation Commission  
State Capitol Building  
Santa Fe, New Mexico

Re: Maljamar Pilot Waterflood

Dear Mr. Porter:

Enclosed herewith please find three (3) copies of an Application of the Operators Committee of the Maljamar Cooperative Re-pressuring Agreement for an order approving an additional Pilot Waterflood project in the Maljamar Field of Lea County, New Mexico, and for the expansion of the project to include the entire Maljamar Re-pressuring Agreement area.


It would be appreciated if you would file this Application, and set the matter down for hearing at the September 18, 1957 hearing of the Commission.

If there is anything further which you may need in connection with this matter, please let us hear from you.

Very truly yours,

HERVEY, DOW & HINKLE

BY



HCB:wh

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

IN THE MATTER OF THE APPLICATION OF THE  
OPERATORS COMMITTEE OF THE MALJAMAR  
COOPERATIVE REPRESSURING AGREEMENT FOR  
AN ORDER APPROVING AN ADDITIONAL PILOT  
WATERFLOOD PROJECT IN THE MALJAMAR FIELD,  
LEA COUNTY, NEW MEXICO, AND FOR THE EXPAN-  
SION OF SUCH PROJECT TO INCLUDE THE ENTIRE  
MALJAMAR COOPERATIVE REPRESSURING AGREEMENT  
AREA CONSISTING OF APPROXIMATELY 13,760  
ACRES, IN TOWNSHIP 17 SOUTH, RANGES 32 AND  
33 EAST.

Case No. \_\_\_\_\_

APPLICATION

Comes the undersigned, Emery Carper and Ralph Gray, chairman and secretary respectively of the Operators Committee acting under and pursuant to the Maljamar Cooperative Repressuring Agreement, and hereby make application for approval of an additional pilot waterflood project within the limits of the Maljamar Oil Field, Lea County, New Mexico, and for the expansion of such project to include the entire area covered by the Maljamar Cooperative Repressuring Agreement; and in support thereof respectfully show:

1. That the Maljamar Cooperative Repressuring Agreement was made and entered into on the 3 day of September, 1941, by and between the owners of oil and gas leases in the Maljamar Oil Pool situated in Lea County, New Mexico, and was approved by the Secretary of the Interior on the 5 day of August, 1941, and has also been approved by the New Mexico Oil Conservation Commission by Order No. ~~A~~-485.

That the Maljamar Cooperative Repressuring Agreement was entered into for the purpose of inaugurating a pressure maintenance project and operation of a natural gasoline plant and a plant for the extraction of butane and propane. The pressure maintenance project has been in operation since April, 1942.

2. That there is attached hereto, made a part hereof, and for purposes of identification marked Exhibit "A", a plat showing the area embraced within the Maljamar Cooperative Repressuring Agreement, and the location of all of the wells drilled in said area and the wells

which have heretofore been used for the injection of gas in connection with the pressure maintenance project above referred to. Said plat also shows the oil and gas leases within the area and the owners of the oil and gas leases surrounding the cooperative area.

3. That the pressure maintenance project above referred to has been operated by the injection of gas into the Grayburg-San Andres Formations, which are the principal producing horizons in the Maljamar Oil Pool.

4. That in April, 1956, the Kewanee Oil Company made application to the New Mexico Oil Conservation Commission for an order granting permission to inject water into its Pearl Well No. 26 in the NW $\frac{1}{4}$ SW $\frac{1}{4}$  Section 30, Township 17 South, Range 33 East, N.M.P.M., and an order designated as R-841 was entered by the Commission on the 9th day of July, 1956, granting permission to the Kewanee Oil Company to inaugurate a pilot water flood project covering the oil and gas lease of the Kewanee Oil Company.

5. That due to the success so far attained in the pilot waterflood project of the Kewanee Oil Company, above referred to, the Operators Committee acting under and pursuant to the Maljamar Cooperative Repressuring Agreement, are desirous of inaugurating a second pilot waterflood project which would cover an area consisting of the W $\frac{1}{2}$ SE $\frac{1}{4}$  and the SW $\frac{1}{4}$  Section 21, E $\frac{1}{2}$ SE $\frac{1}{4}$  of Section 20, and the W $\frac{1}{2}$ NE $\frac{1}{4}$  and the NW $\frac{1}{4}$  Section 28, and the E $\frac{1}{2}$ NE $\frac{1}{4}$  Section 29, Township 17 South, Range 32 East. A plat of the proposed pilot area is attached hereto, made a part hereof, and for purposes of identification marked Exhibit "B". Said plat also shows the location of all producing wells drilled to and completed in the vertical limits of the Maljamar Oil Pool producing within the proposed pilot area and also the location of the proposed water injection wells. The two proposed injection wells designated as wells D and F on Exhibit "B" are being used at the present time for the injection of gas and these would be converted into water injection wells and six additional wells designated as A, C, E, G, H, and I on Exhibit "B" would be drilled for the purpose of injecting water at the location indicated on said exhibit. One of the proposed injection wells, indicated as water injection well B on Exhibit "B" and presently

designated as Buffalo Oil Company's Baish "A" 21 well, will be converted from an oil well producing from the vertical limits of the Maljamar Oil Pool to a water injection well in the proposed pilot waterflood project.

That there is attached hereto a copy of a generalized sample log of the 2 gas injection wells which it is proposed be converted to water injection wells, which copy is marked Exhibit "C" and made a part hereof. There is also attached hereto a radio-activity log of Buffalo Oil Company's Baish "A" # 21 oil well which it is proposed be converted to a water injection well, which log is marked Exhibit "D" and made a part hereof. It is indicated on these logs the depth at which casing is set in such wells. There is also attached hereto an exhibit showing the proposed casing program to be used in connection with the drilling of additional water injection wells and also the proposed method for testing casing before use of the water input wells which exhibit is marked "E" and made a part hereof.

It is estimated that approximately 500 barrels of water will be injected into the Grayburg-San Andres producing horizons in the Maljamar Oil Pool in each injection well.


6. The Operators Committee under the Maljamar Cooperative Repressuring Agreement has made application to the Commissioner of Public Lands for a water lease covering certain lands of the State of New Mexico situated in Township 16 South, Range 33 East, Township 16 South, Range 34 East, and Township 17 South, Range 33 East, and has also made application to the State Engineer for appropriation of the underground waters under these lands. These applications are now pending and the granting of the same are dependent upon the Oil Conservation Commission granting permission to inaugurate an additional pilot waterflood project. It is believed that upon granting said water lease and permit to appropriate the same that there will be ample water available to carry on the pilot waterflood projects as well as an expansion to eventually waterflood the entire area covered by the Maljamar Cooperative Repressuring Agreement.

The Kewanee Oil Company also desires to expand its initial pilot waterflood project as shown on Exhibit "A" by converting their Pearl B No. 21 well located in unit I Section 25, Township 17 South,

Range 32 East to a water injection well. It is anticipated that approximately 300 barrels of water per day will be injected into this well at a pressure of approximately 1800 p.s.i. It is the operator's plan to obtain water from the Maljamar Cooperative Repressuring Agreement proposed water supply wells to operate this pilot project.

7. The operators who are parties to the Maljamar Cooperative Repressuring Agreement are engaged in making a complete geological and engineering study of the Maljamar Pool, or area, on many aspects of secondary recovery, including waterflooding. It is anticipated that it will take approximately eight months to one year to complete this study and evaluate the results of the water pilot flood projects. It is anticipated that if the geological and engineering study and the results obtained from the pilot waterflood projects are successful, that the pilot projects will be expanded to encompass the entire area covered by the Maljamar Cooperative Repressuring Agreement which covers substantially all of the geological structure or reservoir from which the Maljamar Oil Pool is producing.

8. The results thus obtained in connection with the pilot waterflood project inaugurated by the Kewanee Oil Company have been encouraging and present indications are that it may be economically feasible to waterflood the entire Maljamar Oil Pool, and if so it is anticipated that a much greater recovery of oil and gas will be obtained than by the pressure maintenance project which has been carried on heretofore, and that said waterflood project will be in the interest of conservation and the prevention of waste.

 9. In connection with the pilot waterflood projects and any expansion thereof, it will be necessary to transfer the oil allowances of the designated water input wells where such wells are now producing oil to other wells on the same lease on which the respective wells are located, based on their allowable as of the first day of the month preceding the commencement of work, to convert each producing well to a water injection well.

10. Upon the inauguration of the second water pilot flood project in the area, applicant believes that it would be to the interest of all concerned that applicant be permitted to make additions to or deletions from the pilot areas and/or injection wells from time to

time which are deemed necessary to the successful operation and expansion of the pilot areas to eventually encompass the entire reservoir and that such additions or deletions should be approved administratively by the Oil Conservation Commission without notice and a formal hearing.

11. The operators of the pilot waterflood project will be the Operators Committee of the Maljamar Cooperative Repressuring Agreement and the various lease owners acting under the Maljamar Cooperative Repressuring Agreement whose names and principal addresses are:

Maljamar Cooperative Repressuring Agreement  
200 Booker Building  
Artesia, New Mexico

Allen & Fair Operators, Inc.  
P. O. Box 689  
Tyler, Texas

Buffalo Oil Company  
1500 First National Building  
Tulsa 3, Oklahoma

Carper Drilling Company, Inc.  
200 Carper Building  
Artesia, New Mexico

Drilling & Exploration Company  
800 San Jacinto Building  
Houston 2, Texas  
Attn: E. A. Roberts, Jr.

Kewanee Oil Company  
P. O. Box 2239  
Tulsa 1, Oklahoma


Ross Sears et al  
c/o Ralph Shugart  
102 Carper Building  
Artesia, New Mexico

Mrs. E. G. Woods  
P. O. Box 386  
Artesia, New Mexico

Respectfully submitted,

ATTEST:

  
Secretary, Operators Committee

  
Chairman, Operators Committee,  
Maljamar Cooperative  
Repressuring Agreement

HERVEY, DOW & HINKLE

By \_\_\_\_\_  
Roswell, New Mexico  
Attorneys for Applicant