

# Harvey E. Yates

112 No. First  
ARTESIA, NEW MEXICO

July 16, 1969

Mr. A. L. Porter, Secretary-Director  
New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico, 87501

*File 4209*

Re: Application to Inject Water into Queen Sands,  
McMillan Pool, Eddy County, New Mexico

Dear Mr. Porter:

Application is hereby submitted by Harvey E. Yates Company of Artesia for original authority to inject water into the Queen and Seven River formations for a re-pressuring program in the McMillan Pool, Eddy County, New Mexico, in a co-operative effort with Lillie Yates, also of Artesia.

Permission is sought to convert four wells to water injection located in Unit M of Section 5, Units I and J of Section 6, and Unit B of Section 7, T-20-S, R-27-E, and approximately 1½ miles South-east of Lake McMillan. The wells are:

Harvey E. Yates - Page & Yates #8	Unit M, 5-20-27
Harvey E. Yates - Page & Yates #6	Unit I, 6-20-27
Harvey E. Yates - Page & Yates #7	Unit J, 6-20-27
Lillie Yates - Lillie Yates #2	Unit B, 7-20-27

Cumulative production from the pool is 279,809 barrels oil thru May 1969, (initial production was from Yates Federal #2 in July 1949), and production has declined to 165 BOPM from six pumping wells. The other nine wells are presently shut-in, several on account of excessive water production.

The principal oil pay is the uppermost sand members of the Queen formation, stratified shore-line type stratigraphic traps nosing easterly with apparent water-oil contacts at +2537' and +2610' (sea-level elevations). There are no core data available for this pool, and Page & Yates No. 8 is the only well with an electric log. A core analysis from the S. P. Yates-Riggs No. 3, Unit K of Section 12, T-20-S, R-26-E, however, shows porosities of 12.4 - 24.2 percent (weighted average of 15.8 percent) and a permeability variation of 0.4 to 272 md, (49 percent having permeabilities of less than 5 md).

Original oil-in-place is estimated at 639 STBO/ac-ft and primary production at 72 STBO/ac-ft, or approximately 11.3 percent of oil-in-place.

It is anticipated that injectivity will be 120 BWPD per well at 400 psi well-head pressures. For the pilot operation injection fluid will be produced water. Other sources of make-up water will be negotiated for as the feasibility of the waterflood program is proven.

DOCKET NUMBER

Date 8-15-69

Mr. A. L. Porter, Secretary-Director

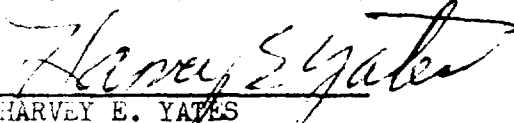
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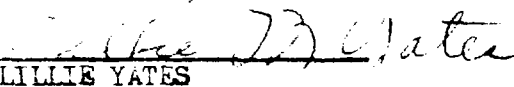
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A plat showing the location of the proposed injection wells and the location of all other wells within a two-mile radius, and indicating the lessees and producing formations is appended and marked Exhibit 1. Diagrammatic sketches of the proposed injection wells and all pertinent data are attached hereto. Copies of this application have been sent to the USGS (surface owners).

Respectfully submitted,

  
HARVEY E. YATES

  
LILLIE YATES

cc:

A. L. Porter, 3 copies

U. S. G. S., 4 copies

H.E.Y. file, 2 copies

L. Yates file 1 copy