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316 BUILDING OF THE SOUTHWEST
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U. S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

Nov. 8, 1976

Harvey E. Yates Company, Inc.
Suite 1000
Security National Bank Building
Roswell, New Mexico 88201

In Re: Morrow Completion Summary
(Corrected 11/6/76)
Pennzoil Federal No. 1
Eddy County, New Mexico

Gentlemen:

Completion operations started on Procedure No. 1 on March 30, 1976 to test two lower Morrow zones (11,828' to 11,835' KB and 11,844 to 11,850' KB). A tubing conveyed perforating gun to perforate 10 shots from 11,844' to 11,850' KB was run and fired.

The well did not respond naturally and required a 250 gallon acetic acid treatment before obtaining fluid entry into the well. This zone tested gas and formation water, which prevented commercial gas production.

This zone was squeezed off with cement. A Cement Bond log was run, which indicated good bonding thru the next zone (11,828' to 11,835' KB). A tubing conveyed perforating gun was run, and a dry test occurred as before and required an acid breakdown and acid treatment before fluid production was obtained.

Swab tests recovered formation water with gas too small to measure. This zone was squeezed with cement on April 16, 1976.

Operations were started on completion of the upper Morrow Sands April 19, 1976. These zones were conventionally perforated at selected intervals from 11,539' to 11,678' KB with 20 shots. The different zones were broken down individually using a retrievematic packer and retrievable bridge plug.

After a short test period, the packer and retrievable bridge plug were pulled. The final tubing string was run and the perforated interval was reacidized using 7 1/2% MS acid with ball sealers and nitrogen. The well was flow tested to clean-up prior to running C.A.O.F.