



MARATHON OIL COMPANY

PRODUCTION - UNITED STATES AND CANADA

P. O. Box 2409  
Hobbs, New Mexico  
November 30, 1970

RECEIVED

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D. S. S.  
ARTESIA, OFFICE

New Mexico Oil Conservation Commission  
P. O. Drawer "DD"  
Artesia, New Mexico 88210

Attention: Mr. Bill Gressett, Supervisor

Re: Annual Packer Leakage Test -  
North Indian Basin Unit No. 1,  
Upper Penn-Morrow Gas Dual  
Completions, Indian Basin Field,  
Eddy County, New Mexico

Dear Sir:

The annual packer leakage test conducted October 19/23, 1970, on the above captioned well indicated that possible communication existed between the Morrow (lower zone) tubing and the Upper Penn (upper zone) tubing. A pressure chart (Chart No. 1) and a Packer Leakage Test form depicting pressures and flow data recorded during this test are enclosed for your information and consideration. It is the opinion of this office that this data may represent a leak in the Otis circulating valve (or sleeve) located in the Morrow tubing string at a depth of 8913'. (See enclosed schematic diagram of downhole equipment.) This sleeve is just above the Otis type "WA" permanent packer at 8930' and is used as a means of circulating fluids to kill the Upper Penn. zone during workovers.

In support of the opinion that the communication indicated in this well is the result of this circulating sleeve leaking, this office respectfully submits the following facts:

1. The pressure data on Chart No. 1 indicates a pressure drawdown of only 208 psi on the Morrow tubing when the Upper Penn was flowed at a rate of 3.996 MMCF per day on Flow Test No. 1 and no drawdown on the Upper Penn when the Morrow was flowed and finally died on Flow Test No. 2. Since this appeared to be only a small leak according to these surface tubing pressures, it was decided that bottom-hole pressures and gradients in the Morrow tubing might indicate where the leak was located.

As a result of these BHP's it was determined that the Morrow tubing was loaded with fluid from approximately 7200' to the bottom when the Upper Penn was shut-in and stabilized. Also, the Morrow BHP's indicated that an