MARTIN YATES, III 1912 - 1985 FRANK W. YATES 1936 - 1986



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December 5, 1995

Subject:

Director William LeMay New Mexico Oil Conservation Division P.O. Box 2088 Santa Fe, New Mexico 87503

David Ross AIT Federal =1 -- Injection Profile Survey Results

As per the request from the OCD, Yates Petroleum has performed a radioactive tracer injection profile on the subject well. The test was conducted on November 20, 1995, under my direction and was witnessed by Mr. Ben Stone of the Santa Fe OCD office and by Mr. Ray Smith of the Artesia OCD office.

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The test was performed by Cardinal Surveys Company and incorporated both radioactive tracer analysis and temperature analysis.

The clear results of this survey indicate that <u>all</u> of the injected water is entering the Delaware formation. Furthermore, the top perforations are not receiving any fluid at all. The temperature and radioactive tracer data show that no fluid is escaping above the top of the Ramsey sand at 4500'.

Ben Stone requested that I also provide a copy of the 1992 profile survey on this well. This older survey also shows that the fluid remains in the Delaware formation. Mr. Stone also requested the attached copy of a report on the Cabin Baby No. 1.

It is my understanding that YPC was required to run the survey because the NMED raised a concern over rising fluid levels in the P-18 monitor well.

The P-18 appears to be an old potash corehole that has been converted into a monitor well for the Culebra dolomite member of the Rustler formation. Attached is a copy of the data that concerns the NMED. It is very clear that there are two periods during which this monitor well was "building-up" the fluid level in the wellbore.

The first period runs from 1977 to early 1987 and peaks at a water level of +/-620' from the surface. The well was then "pumped" in 1987 in order to obtain a water sample for the "Background Water Quality" report for WIPP. The report provided me with