Geohydrology Associates, Inc.

March 18, 1991

Mr. Donnie Brown
Manzano Oil Corporation
P. O. Box 2107
Roswell, New Mexico 88210

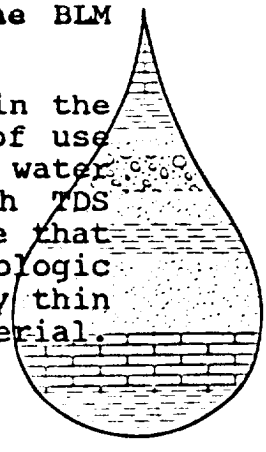
Dear Mr. Brown:

As per your telecommunication of today, I have reviewed our files and documentation for information pertaining to the presence of fresh water at your proposed site in Section 2, T. 21S., R. 28E. On the basis of the available data, it is my conclusion that there is no potable ground water at that site.

Ground-Water Report No. 3 published by the New Mexico Bureau of Mines, U.S. Geological Survey and New Mexico State Engineer (1952) identifies a few scattered stock wells in that area. However the table of chemical analyses shows that these wells were sampled during the era of 1948-1950. This was very early in the development of the potash industry in that area. The water quality in most of that area has subsequently deteriorated; there are no domestic wells. According to Dr. Larry Squires, a major landowner and cattle producer in that area, stock is watered by surface tanks which entrap runoff or by diversion from fresh-water pipelines that service the potash industry.

Our firm conducted three comprehensive studies of the ground-water resources in the Nash Draw area in 1978-1979. These studies were contracted by the Bureau of Land Management and are quite voluminous. They include data from Ground Water Report No. 3 and up-dates on both water quality and water levels. Copies of these reports are available from the BLM in Roswell.

In summary, the potable ground water that was present in the 1940's has been depleted and/or degraded as a result of use and mining activities near Nash Draw. Although some water may still fall in the range of slightly saline with TDS ranging from 3,000 to 10,000 mg/l, there is no evidence that potable water is present. Also, the extensive geologic mapping conducted in the area shows that there is a very thin veneer of unconsolidated aeolian and alluvial material.



4015 Carlisle, N.E. • Suite A • (505) 884-0580
Albuquerque, New Mexico 87107

These deposits are underlain by the Magenta and Forty-Niner Members of the Rustler Formation, both of which contain massive beds of gypsum. In conclusion, I believe that any potable water that once existed in the vicinity of the proposed Manzano Oil location has long since been depleted or contaminated by potash development. Therefore I do not believe that the expense of utilizing surface casing in an exploration well is warranted.

Sincerely,

GEOHYDROLOGY ASSOCIATES, INC.

T. E. Kelly
President

TEK/kc