

ACOMA AND LAGUNA INDIAN RESERVATIONS

New Mexico

Deep Groundwater Hydrogeochemical Investigation

Alberto A. Gutiérrez served as principal in charge of this project while serving as President of GCL, predecessor to Geolex, Inc.

GCL provided the Acoma and Laguna Indian Reservations with geochemical and isotopic analyses of the deep groundwater systems to determine their age, origin, and circulation patterns. To determine these aquifer properties, neon, argon, krypton, deuterium, tritium, and several sulfate and carbonate species were analyzed.

Geologic fieldwork included analysis of complex faulting in the area and its effects upon groundwater movement. GCL incorporated field survey, U.S. Geological Survey, and state of New Mexico data and procedures to accurately sample designated aquifers and develop a means of defining QA/QC parameters.

The products of the study included potentiometric surface maps of aquifers, determination of age and source of aquifers, determination of regional groundwater movement pattern, and determination of groundwater quantity and potable water supply.

Major Project Elements:

- Groundwater modeling
- Program/Project management/QAQC
- Property audit
- Hydrology/Hydrogeology

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