



State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division

**Case Nos. 24278, 24277, 24123, 23775, 23614-23617, and 24018-24027
OCD Exhibit No. 14**

Proposed Investigation and Monitoring Plan Regarding the Capitan Reef Aquifer and Disposal in the San Andres Formation in the Area of Interest

Only limited data has been obtained in the area of interest since Hiss completed the initial study of the Capitan Reef and the associated Hobbs Channel. The record of water level data has been sporadic and inconsistent while the proper sampling of ground water is extremely rare. The OCD proposes that a monitoring and sampling program be developed to satisfy three major goals:

1. Determine the hydrologic relationship between the Capitan Reef and Hobbs Channel;
2. Determine any impacts to water quality if commingling does exist between disposal fluids injected in the San Andres and the Capitan Reef; and
3. Characterize the Capitan Reef in this area to determine the current status as protectable with the intent of either establishing a monitoring plan for continued management as an USDW or considering the possibility for Aquifer Exemption for the portion of the Capitan Reef from the Hobbs Channel to the New Mexico-Texas state line.

Suggested general approach: immediate actions and long-term projects:

1. Immediate: Establish a sampling program using existing monitoring well. The USGS established a network of production wells that were recompleted with
2. Immediate: Explore opportunities for sampling events of Capitan Reef and San Andres formation water for wells to be drilled in the area.
3. Immediate: Develop a comprehensive workplan and submit request for proposal for consultant. As part of an immediate action of the workplan, include consideration of plugged wells in the vicinity for the possibility of re-entry for conversion to monitoring wells for either the San Andres or the Capitan Reef.
4. Long-term: new monitoring wells (along with funding for sampling) specifically dedicated to the Capitan Reef in the area of interest. Definition of models to be used to demonstrate any communication or lack of communication between the two features. Consider the feasibility for the use of remote sensing and geophysical tools for obtaining additional subsurface information with the drilling of new wells.
5. Long-term: based on the findings and if required, prepare a monitoring plan using the new and existing network to ensure no migration of injected fluids of degradation the Capitan Reef; or
6. Long-term: based on initial findings, prepare an Aquifer Exemption for the portion of the Capitan Reef that qualifies with the acquired data.
7. Long-term: integrate findings (any continued monitoring) of the investigation with Aquifer Mapping Project managed by the New Mexico Bureau of Mines and Mineral Resources.

Ultimately the product of the effort is to provide more accurate information to be used in permitting both UIC Class II disposal wells and enhanced recovery wells while meeting the OCD's obligation to resolve the issues regarding the management for this portion of the Capitan Reef complex as protectable waters.