

State "31" Well No. 4  
Lea County, New Mexico

- V. A map has been attached (Exhibit A) showing all wells and leases within two miles of this proposed disposal well. A circle around the proposed well representing the area of review (one-half mile radius) is shown. It should be noted that there are no wells within two miles of our State "31" #4 that have been drilled to the Devonian formation.
- VI. There are no wells within the area of review that have penetrated the zone of interest.
- VII. 1) We anticipate the average daily volume of water disposal to be 1750 BWPD initially. The maximum foreseeable volume of disposed water is 2300 BWPD.  
2) This will be a closed system.  
3) Average injection pressure should be no more than 750 psi and the maximum anticipated injection pressure during the life of the well is 2000 psi. Our Devonian disposal well in Section 20 has been taking 1700+ barrels of water per day on a vacuum. We are hoping this new well will behave similarly.  
4) Water to be injected is Penn produced water.  
5) An analysis of Devonian formation water is attached (Exhibit B). There is no Devonian oil or gas production within one mile of our proposed disposal well.
- VIII. Geological Data: The proposed disposal zone is named for its geologic age: Siluro-Devonian. The Siluro-Devonian is a limestone that is dense in approx. the upper 200 feet and develops intracrystalline and vugular porosity deeper within the formation. In the Baum Field Area, the Siluro-Devonian has only been penetrated at the extreme edges of the field. The anticipated top of the Siluro-Devonian will occur at 13,500 feet. No well in the vicinity (5-mile radius) has fully penetrated the entire Siluro-Devonian section. Wells outside the 5-mile radius exhibit approx. 700 feet of Siluro-Devonian formation. The Ogallala formation with a maximum depth of approximately 300 feet below the surface is the only source of drinking water in this area.
- IX. Proposed Stimulation Program: We anticipate stimulating the Devonian with approx. 3000 gallons of 15% HCl. This acid stimulation will be conducted via a workstring and below a packer.
- X. Logs - A copy of all open hole and cased hole logs that will be run on this well will be sent as soon as they are available.