

**VENT\_238**

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# United States Department of the Interior

## GEOLOGICAL SURVEY

Water Resources Division  
 Room 229, Federal Building  
 Carson City, Nevada 89701  
 April 5, 1982

Mr. Peter Morros  
 Nevada State Engineer  
 Department of Conservation and  
 Natural Resources  
 201 S. Fall Street  
 Carson City, Nevada 89701

Dear Pete:

This is in reference to the Diamond Valley field trip of March 10, 1982, by Jim Harrill of this office, personnel from your office, and the Bureau of Land Management. The purpose of the trip, in response to your request, was to observe hydrologic conditions that might be related to decreasing spring flow at the Thompson Ranch.

I have attached a typed copy of Jim Harrill's field notes for your inspection.

The conclusions we have reached are essentially the same as those discussed in Water Resources Bulletin 35, pages 30 and 50-52. Sustained pumping from the South Diamond Subarea is probably responsible for the general decrease in water levels and spring discharge. Accelerating this condition is the combined effect of the discharge from the shot holes and the 1976-77 drought.

To assist you in defining the changing hydrologic regimen, you may wish to consider the following suggested monitoring program.

1. Periodic flow measurements of the remaining large springs and selected smaller springs, with continuous monitoring for short-term characterization.
2. Install water-level recorders on several wells in the valley.
3. Declining water levels can be tracked through the use of remote sensing by documenting the drying up of areas of natural discharge.



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Additionally, it would be useful to prepare maps showing the distribution of pumpage and the net change in water levels.

I will be happy to discuss this with you at your convenience, and if you have any questions please give me a call.

Sincerely,

Terry Katzer  
Acting District Chief