

MEMORANDUM

New Mexico Office of the State Engineer

Water Use and Conservation Bureau

October 4, 2001

To: Brian Wilson, P.E., Water Use and Conservation Bureau Chief

From: Patrick J. Romero, Water Master I

Subject: Canyon Country Estates Subdivision, Grant County

The Canyon Country Estates Subdivision proposal is a request to develop a 280.86-acre parcel into a 46 lot residential subdivision. This parcel is located Southeast of Silver City, N.M., in Sections 1,2,11, and 12 of T18S, R14W and is accessible via Rosedale Road. It was reviewed pursuant to the Grant County Subdivision Regulations, and the New Mexico Subdivision Act.

The subdivider proposes that his subdivision will be supplied with domestic water via individual domestic wells. He proposes drilling these wells. In his submittal, the subdivider has provided a water availability plan. The plan includes well log records for 17 wells drilled within ¼ mile of this proposed subdivision. Several of the wells (5) used, as their principal water bearing strata, shale structure. This shale proved to produce water in very low amounts (0.1 to 3.0 g.p.m.). The Grant County Subdivision Regulations require that, for any subdivision utilizing wells drilled into formations which are known to produce less than 2.0 g.p.m., the developer must utilize a community water system, or provide a storage system for those wells which are low producers. (Appendix A.D.2). The developer has chosen to the latter alternative. The developer should note that he will not be able to develop lots which have wells which produce less than 0.75 g.p.m., as this is two times the amount of water which is required by each lot. This restriction is also seen in Appendix A.D.2

The subdivider has not calculated the maximum annual water requirements, pursuant to Appendix A, Section B. This is a very simple procedure, as the developer need only multiply the number of lots he has by 0.6 acre-feet per year, unless he wants do more complex calculations as prescribed in the Office of the State Engineer Technical Report No. 48 entitled "Water Conservation and Quantification of Water Demands in Subdivisions" (Wilson, 1996).

In Section Appendix A, Secion E.2.d of the Grant County Regulations, it states that the subdivider is required to provide a geohydrologic report if the State Engineer has determined that the aquifer has not been shown to be able to provide the maximum annual water requirements of the subdivision. The low producing wells in the shale

formations in the immediate area leads me to conclude that this is the case. This report shall demonstrate that water is available for this development. This report should include well logs, well tests, geologic cross-sections, and a 40-year schedule of effects. The subdivider has failed to supply this report. The requirements of this report are found in Appendix A, Section E.3. The developer has stated that the aquifer being drilled into has a life expectancy of 40 years. He has provided no evidence on which to base this claim.

It is my conclusion that the subdivider has not demonstrated that sufficient water is available to meet the requirements of his development. A favorable opinion to this effect should be withheld.