

August 22, 2003

Dominic Gonzales
Santa Fe County
P.O. Box 276
Santa Fe, NM 87504-0276

CERTIFIED MAIL
RETURN RECEIPT
REQUESTED

Reference: Luna Rosa Equestrian Facility

Dear Mr. Gonzales:

The Office of the State Engineer has re-reviewed the proposal for the Luna Rosa Equestrian facility pursuant to the Santa Fe County Land Development Code (SFCLDC). A positive opinion for this development was withheld by this office in a review dated February 26, 2003. It is the opinion of this office that the subdivider's water supply proposal now complies with the SFCLDC. In accordance, a **positive** opinion is hereby issued.

The Luna Rosa proposal is a request to develop a 50-acre lot into an equestrian facility. It is located approximately $\frac{1}{4}$ of a mile east of US 285, across from the Eldorado Subdivision, in Projected Sections 21 and 28 of T15N, R10E, N.M.P.M. It will be accessible via Ranch Road.

The developer has calculated the maximum annual water requirements of his development as 2.04 acre-feet per year, pursuant to Article VII, Section 6.6.2. of the SFCLDC. In performing this calculation, the number of persons living on site should have been 2.5 persons per household, or 7.5 persons, instead of the 5 persons used. While the developer claims that 5 people will be living on the site, later residents might number more. To reflect this, the maximum annual water use calculation should be appropriately modified to 2.24 acre-feet. Restrictions on irrigated area as listed in the water budget, number of horses on site (30), and the number of residences on site (3) should be specified in the land use covenant to ensure water use will not exceed the amount available.

The SFCLDC requires the developer to supply a geohydrologic report. Article VII, Section 6.4.2 of the code details the minimum requirements for this report. While Santa Fe County mapping of the area indicates that this development is in the Basin Fringe Zone, the geology recorded in the well logs indicates that, by definition, it is in the Homestead Zone. The report submitted was prepared by Glorieta Geoscience. The report included well logs, drawdown and recovery well test data, geologic cross-sections, water level contours, and results of 100-year schedule of effects model. The author concluded that water will be available for the 100-year period prescribed by the county.

While I had concerns regarding the maximum annual water requirement calculation, the claimed saturated thickness of the well, the undated (and un-submitted to OSE) well log, and the ignoring of well RG18563 (which this office inquired about in our previous review), these issues were not

Page 2
August 22, 2003
Luna Rosa Equestrian

substantial enough to cause available drawdown to be exhausted in the 100-year period prescribed by the County.

Based on the well test results and a simple Theis model, the Luna Rosa well appears to have sufficient available drawdown to meet the annual water use of the development, for the 100-year period prescribed by the county. Impermeable boundaries and aquifer compartmentalization have been observed in other wells in the area, causing low and failing well yields; thus, the performance of this well should not be viewed as representative of the area. In addition, the reader of this review should not consider it as an endorsement of the GGI conceptual or MODFLOW model presented in the report; it is based on our own Theis modeling of the subject well.

If you have any questions regarding this opinion, please feel free to call me at (505) 827-6790.

Sincerely,

Patrick J. Romero
Water Resource Engineer

Cc: Brian C. Wilson, P.E., Water Use and Conservation Bureau