

Description of aquifer test for Hughes Section 4 well.

A single-well constant rate test of the well was conducted by Jim Harrill and Alan Welch of the Nevada Water Science Center. Data were obtained from Technical file drawers for the Dayton Valley Hydrographic Area located in the Nevada Water Science Center. Results of the aquifer tests will be used in the development of a numerical ground-water flow model of the Middle Carson River basin, project # 9705-D29BE. Specifically, the estimated transmissivity will be used to develop a relation between transmissivity and specific yield. The relation is planned to be used with data from driller's logs to develop a preliminary distribution of transmissivity for the model.

The well is located at 39.361304° N, 119.402669° W, NAD 83, in the Stagecoach subbasin of the Dayton Valley Hydrographic Area, about 1.8 miles southwest of Stagecoach, Nevada; NWIS site ID [392141119240601](#). The well is completed in a basin-fill aquifer to a depth of 400 feet below land surface (see attached Nevada driller's log # [15381](#) for construction details).

The well was completed on February 2, 1976. The constant-rate test was begun on December 15, 1981 at a rate of about 25 GPM for one hour. It is not known if the well was in active use at the time of the aquifer test. Water levels were recorded using a transducer. The methods of measurement of water levels and discharge rate, location of the discharge of pumped water, and trends in pre-test water-levels are not known.

Time-drawdown data were analyzed using an Excel spreadsheet program (Halford and Kuniansky, 2002). The Cooper-Jacob analysis was used for the constant rate tests. Plots of the time-drawdown data combined with the estimated best-fit straight line used to estimate T, and time-drawdown data are shown in attached copies of the spreadsheet.

Results of the test indicate a hydraulic conductivity and transmissivity of 1 ft/day and 350 ft²/day, respectively.

References Cited

Halford K.J., and Kuniansky, E.L. 2002, Documentation of spreadsheets for the analysis of aquifer pumping and slug test data: U.S. Geological Survey Open-File Report 02-197, 54 p.