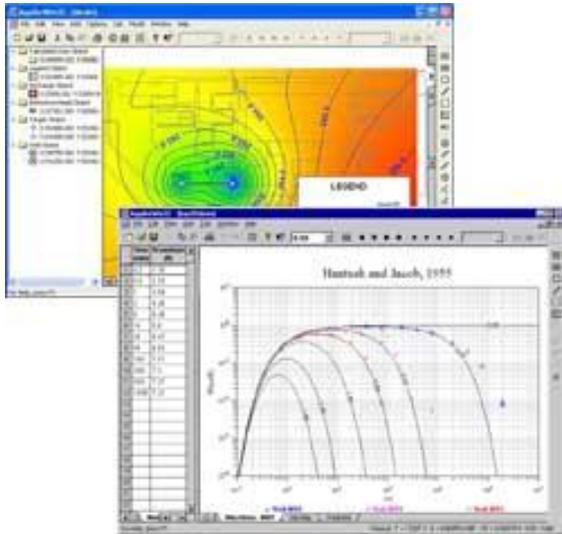# Aquifer^{win32}

The Ultimate in Aquifer Test Analysis!

Aquiferwin32 is the most sophisticated and most Windows-compliant application for pumping test analysis, slug test analysis and step test analysis. In addition, Aquifer win32 performs analytical groundwater flow modeling and pumping test simulations. Aquiferwin32 combines powerful data management capabilities with everything you would expect in a Windows program; it was designed and programmed specifically and exclusively for 32-bit Windows operating systems.

The suite of available analyses is extensive and continually increasing. Analyses include: Hvorslev, Bouwer & Rice,Black, Cooper, Bredehoeft & Papadopulos,KGS Model,Thiem, Cooper and Jacob,Theis,Papadopulos and Cooper,Hantush and Jacob, Hantush,Neuman, Mench,Eden & Hazel,Birsoy and Summers.

Unique Features

- Aquiferwin32 does not require defining wells, simply import or enter the time/drawdown data into the spreadsheet, fill in the radial distance and pumping rate on a property sheet and either match the data manually or click the optimize button. It is that easy!
- To manually match data to type curves, simply depress the left mouse button, hold it down and drag the data to match it to type curves. You do not even have to activate the procedure with a menu item as in some products. During this operation, all annotations,

legends and the optional internal grid of the graph disappear to allow fewer distractions during the matching process. Go to full screen mode via the View/Full Screen menu and the internal part of the type curve graph is expanded to fill the entire screen to make manual matching even easier.

- For multiple well analyses, no other pumping test analysis software provides for a site plan to plot well locations over a basemap. Once defined, a multiple well analysis allows you to manually or automatically match each monitoring well individually by simply toggling among them. The appropriate data is constantly visible and editable in the split-window spreadsheet adjacent to the graph. You can select an individual data point by double-clicking the mouse within the graph and that point will be selected in the spreadsheet. You can also drag a rectangle around a range of data points on the graph to select them in the spreadsheet. (You would most likely do this to give the weight the points to give them less significance during optimizations.)
- For multiple well analyses, you can optimize across all monitoring wells for whichever parameter or parameters you want. In a leaky-confined analyses, you might optimize Transmissivity and Storage coefficient while leaving r/B free to vary among individual wells
- We are unaware of any other pumping test analysis software which has more options for analyzing and presenting your results. No other pumping test analysis software is more customizable with respect to legends, printed headers and footers, saving your defaults to the system registry, symbol control on each and every data point, generation of traditional type curve suites as seen in the literature. (Remember, if the axis labels are Time and Drawdown, it is not a type curve.)Aquiferwin32 supports variable pumping rates on all pumping test analyses involving type curves so you can analyze the drawdown and recovery data together or account for fluctuations in pumping rate during the test.

We are unaware of any other pumping test analysis software which:

- has a full implementation of derivative analysis in which you can generate suites of 1st order derivative type curves, do manual curve matches of 1st order derivative data to those type curves and perform an optimized match of the 1st order derivatives.
- includes pumping test simulations with contour maps of drawdown and drawdown versus time graphs at any number of monitoring wells.
- extends the analytical solutions into a full featured modeling environment with contour maps of hydraulic head or drawdown, color floods of head or drawdown and particle tracking. The modeling environment also optimizes calibration targets and is ideal for presentation of image well theory. How can you effectively demonstrate image well theory without a plan view contour map?