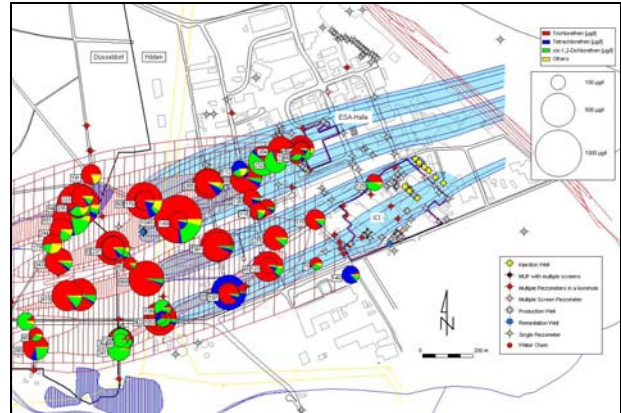


Development of the hydrogeologic data base and evaluation system HYDRODYNAMIK [HD] for efficient visualization and evaluation of field data

Project Location:	Calgary
Client(s):	self directed computer program development
Date Completed:	ongoing since 1995
Project Budget:	\$ 1,500,000



Capture zones of pump and treat wells (blue), pie diagrams of CH-contamination, and presumed plumes of dissolved Chlorinated Hydrocarbons (red hatching).

Project Summary

Hydrogeological and subsurface contamination investigations usually generate a flood of data, which may be difficult to document, visualize, and interpret, in particular if many years of historical data are also to be taken into account. When a large project required the determination of sources of CH-contamination in an area with six major industrial sites with altogether more than 1,000 piezometers, 100,000 water level readings, and 20,000 chemical analyses, it was decided to develop a novel kind of computer program for hydrogeological data evaluation. The program was intended to facilitate timely concept building based on all available data, permitting them to be accessible for inspection, in graphical and tabular form, at the click of a button.

The program HD closes the gap between field data and numerical models of the field site. It allows the hydrogeologist to formulate concepts directly based on the whole body of data present. HD has also been written in such a manner to facilitate, with error checking, the transfer of data from paper or distributed electronic form into a coherent electronic system.

The data encompass maps, borehole data, borehole geology data, borehole geophysical data, piezometer construction data, water level data, chemical data for water, soil and soil air, pumping data, and precipitation data. Cross-sections may be drawn and altered with a click of a button. All graphs may be printed in report ready format. HD has been successfully used at many large and small sites in Europe and North America.

Services Provided

- * Development and case testing of the data visualization and evaluation program HD.

Deliverables or Results

- * Operational program HD.