

## ABSTRACT

This thesis deals with hydrogeology of three karst regions in Czech Republic – the valley of Albeřický brook, Dyleň karst and Javoříčko – Mladeč karst. The main goal of thesis was to give accuracy to hydrogeological situation in selected territories through the localization of the springs, where the occurrence of seepage into the watercourse was presumed. The side goal was to determine the origin of the waters, captured in the water collecting area of Čerlinka at the eastern edge of the Javoříčko – Mladeč karst.

The basic method of research was lengthwise measurement of temperature and conductivity. Although the method itself is easy to perform while not time-consuming, it gives precise localization of hidden springs. In Javoříčko – Mladeč karst, the method was supplemented with installation of piezometers to observe the direction of a flow between the watercourse and its banks. Also there was performed an analysis of older data on chemistry of the waters.

The result of lengthwise measurement of temperature and conductivity is the localization of several potential springs of karst origin in Albeřice valley and Dyleň karst. In spite of expectations, there were low water levels found in the region of Javoříčko\_Mladeč karst, meaning that the watercourses were often dry or frozen. Chemical data analysis brings ambiguous conclusions, which are caused dominantly because of divergence of results based on analysis of chemical components versus results based on  $\delta^{18}\text{O}$  and  $\delta^2\text{H}$ .