

## **APPLICATION OF GEOELECTRIC AND ELECTROMAGNETIC SURVEYS IN A DEPRESSION SYSTEM INVESTIGATION NEAR SOPRON**

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Detailed geomorphological mapping on the carbonate terrain between Sopron and Lake Fertő found unusual, active depression systems. The landforms such as complex systems of cylindrical structures and small caves reminds to karstic forms but the physical and geochemical properties of the sarmathian lajta limestone and the rather fast evolution (infilling and erosion) made the assumption of the karstic origin very questionable. The main aim of this paper is to prove the origin and assess the future evolution of landforms. In lack of any evidences of karstic or non karstic origin, several geophysical methods have been applied at a potentially suitable study area. Underground cavity and fracture systems possibly connected to these landforms were investigated by different geoelectric and electromagnetic methods. Results of geophysical exploration were checked and evaluated by partial exhumation of the subsurface objects and structure of the study site. Resolution power and proper scaling of different methods are also discussed.

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