



## **High frequency magnetotelluric and geoelectric researches in the Provita de Sus landslide area**

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In the Provita de Sus area, high frequency magnetotelluric and geoelectric (Vertical Electric Soundings) measurements have been performed in order to delineate the landslide area. The high frequency magnetotelluric method uses the time variations of the natural electromagnetic field propagating inside the Earth and induces a secondary electromagnetic field, measured at the surface by special devices, in order to investigate the Earth's shallow electric conductivity structure. We performed these measurements aiming to point out the slide interface, as well as its the depth, and to establish the dip and strike of a relatively evident fault system from the studied area. The high frequency magnetotelluric data have been obtained in the frequency range 24 KHz – 1Hz by using a GMS 06 devices and the MAPROS software. For the geoelectric measurements we used the IntV3 resistivimeter, Schlumberger type array. This device version is designed for geophysical appliances allowing the soil resistivity measurements, under natural conditions of climate and land morphology. The field measurements led to a series of potential difference values expressed in micro V. The interpretation is based on the apparent resistivity resulting from the field measurements by using standard relation. The results highlight the usefulness of the geoelectric method for the landslide areas delineation, taking into account its user-friendliness, having all the technical facilities for measurement, processing and interpretation. The results are presented along two resistivity cross-sections, placed perpendicular and parallel to landslide surface.