

## **GEOPHYSICAL INVESTIGATIONS OF GROUND WATER IN REGIONS OF RECENT VOLCANISM**

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The Central volcanic plateau in Armenia is a typical region of recent volcanism. The differentiation of lava rocks by electrical conductivity depending on the degree of their humidity, the groundwater mineralization and the difference of the electrical resistance of lava and sublava water resisting formations allows to use geophysical methods widely there. They are successfully used for: - mapping of the relief of sublava water resisting rocks and determination of the main ways of flow of underground water streams into artesian basin (electrical sounding, profiling) - determination of the places and the magnitudes of concentrated water losses from water reservoirs and channels (spontaneous potential electric field, charged body, profiling) - determination of water streams cross-section (electrical sounding and profiling) - mapping and estimating the thickness of riverlake deposits which fill local depressions among effusive formations, being of interest as reservoirs for the ground water accumulation (electrical and seismic sounding) - investigation of the well sections, especially to discover and to characterize the water bearing collectors (geophysical investigations of wells) Interception of waters of river valleys with powerful groundwater flows on high levels allows usage of this water for supply and also influences hydrodynamic regime of plain territories below. This problem is solved using methods of mathematical modeling with large usage of information obtained by geophysical methods.