

## **Geoelectric in Identifying Ground Water Quality**

**Hamid KAHPOOD**

Water Resources Section, Civil Engineering Dept., Power Water Institute of Technology, Tehran, Iran

**Jafar NAJIHAMMODI**

Water Resources Section, Civil Engineering Dept., Power Water Institute of Technology, Tehran, Iran

**Abstract.** Increasing population, fast development in industry and agriculture demand continuous needs for water. However, the amount of water in nature is fixed and limited. Contaminations of water resources (surface and ground) nowadays is a real worldwide problem. Therefore, it is necessary to control the water quality and safe guard its resources, specially the ground water that could be considered as a standby reserve and that could be discovered and allocated by geophysical methods such as geoelectrical methods. However, there are different geoelectrical methods used for this purposes, one of which is the SCHLUMBERGER'S RESISTIVITY METHOD that is normally used for finding ground water. Thus, this method was chosen in this case to study the ground water quality in SW TEHRAN CITY. Samples from different wells were taken simultaneously, while taking measurements of the aquifer resistivities. A sound correlations were found between the CAT IONS and the IONS of the aquifer and the AQUIFER'S RESISTIVITY. Therefore, it was sought( when further research confirm this idea) that it may be suitable to use the resistivity method as a tool to allocate the quality of the aquifer's water before drilling. Thus, this method would be a direct, time consuming and economically sound method for the management to decide upon the development of an aquifer.