



Application of electrical tomography for determination and characterization of prominent areas for extraction of groundwater

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Abstract

The proposed geoelectrical approach for determination and characterization of prominent areas for extraction of groundwater is based on the different electrical resistivity properties of these zones in comparison to those of the remaining parts of the rock massif. The same characteristic can be applied with high credibility for the differentiation of sub-surface areas with different water saturation and water abundance, which is a very important benchmark in the search for promising sites for construction of water wells. The high efficiency of the proposed approach for mapping prominent zones is illustrated by the results of the performed electrical tomography study in the area of the state hunting grounds Palamara, located in Northeast Bulgaria in the heart of the Ludogorie Mountain. The presented results confirm the applicability of the proposed methodology for measurement, data analysis and interpretation.

Приложение на електротомографията при определяне и характеризиране на перспективни участъци за добив на подземни води

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Ключови думи: електротомография, приповърхностно картиране, хидрогеоложки модели, подземни води