Science Publications

American J. of Environmental Sciences
Quarterly Publication

Title: Use of 2D Multi Electrodes Resistivity Imagining for Sinkholes Hazard Assessment along the Eastern Part of the Dead Sea, Jordan

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Source: American J. of Environmental Sciences 3(4): 230-234 , 2007

Abstract: Sinkholes and subsidence are natural phenomena can be occurred in shallow geology sediments at different regions in the world. Sinkholes assessment is one of the most difficult near subsurface investigations. Geophysical prospecting is appropriate method to determine environmental and geotechnical problems. 2D multi electrodes resistivity imagining with Wenner-Schulmberge array was conducted within active sinkholes area. The objective of the survey is to detect features combined with sinkhole formation like zone of weakness, cavities and fractures. Soil in the study area contains alluvial, conglomerate and silty clay which represent good target for resistivity survey. The interpretation of resistivity data along the profiles show different model of the resistivity variation in active sinkhole zones compared with inactive zones in the study area. The deformation in the layer continuity and the direct contact between high resistive and low resistive layers can appear only in the subsidence area or active sinkhole zones.