of thermal infrared airphotos, in corralation with the zones of structural discontinuities, identify linear underground water channel movements. These zones are recognized as photo – lineaments on the airphotos and by field observations, and they are persistent in all petrological formations.

The application of this method can be employed in selecting favourable areas for hydrogeological investigations.

CONTRAINTES DANS LE CHOIX D'UN MODÈLE DE SIMULATION DE L'AQUIFÈRE DE SARIGHIOL (MACÉDOINE – GRÈCE)

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L'aquifère quaternaire de Sarighiol (partie méridionale du grand bassin de Ptolemaïs) présente des caractères géologiques complexes qui rendent la simulation mathématique difficile. Le milieu aquifère est hétérogène (lentilles de conglomérats ou de sables ou de galets, enchassés dans des sédiments marneux ± imperméables). Les limites sont de nature différente, géologiques au S à l'W et à l'E, hydrodynamique au Nord (caractérisée par une crête piézométrique nette entre le bassin de Ptolemaïs ss au N et celui de Sarighiol au Sud).

Aussi, outre les données chiffrées classiques, requises pour le bon fonctionnement de toute simulation, le modèle doit définir très précisément les conditions aux limites et la géométrie du milieu. Des données géologiques et géophysiques disparates et souvent contradictoires ont été utilisées dans un premier temps pour définir, la forme du bassin et son contenu.

Des résultats obtenus, dépend le choix du modèle le plus performant.

GROUNDWATER POTENTIAL INVESTIGATION OF THE VOLVI BASIN (CENTRAL MECEDONIA – CREECE)

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In the present work the hydrogeological conditions are studied and the groundwater potential of the Volvi basin is determined, with as much approximation as the collected deta permitted.

From a tectonic point of view the basin belongs to the Servomacedonian zone. The geological structure of the area includes, mainly, Paleozoic metamorphosed rocks (gneisses, crystaline schists, amphibolites etc). Mesozoic granite intrusions, Neogene sedimentary rocks as well as the Quaternary deposits have a significant extension as well.

From a water bearing formation point of view the Quaternary deposits and especially the alluvials are considered the most significant aquifers of the basin.

Based on the data of wells sensuses, on boreholes lithological logs and pumping tests, which were collected and evaluated, in relation with the geological and other data, the map of the differential potential of the alluvial aquifers was prepared.

With the piezometric measurement data, an isopiezometric map of the alluvial aquifers was constructed for the low (Autumn) groundwater level.

The annual level chenge of the groundwater was found to fluctuate from 0,5 m to 3,3 m.

The thickness of the water bearing formations is between 15-58 m with an average of 30 m. The regulating groundwater reserves of quaternary aquifers were found to be 29,5 x 10^6 m^3/year, the geological reserves were estimated 489 x 10^6 m^3 and the exploitable ones 54 x 10^6 m^3/year.

The volume of water which is being pumped from the alluvial aquifers, by means of wells, is estimated to 11 x 10^6 m^3/year. Consequently, there is an annual surplus of groundwater potentiel of 43 x 10^5 m^3, which can be used, by constructing new deep wells, for drinking and irrigation purposes.

ENGINEERING GEOLOGY EVALUATION OF A ROAD'S SLOPES. AN EXAMPLE FROM THE KALAMATA – SPARTI ROAD

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The road net slope stability of a Country affects directly the road trasport and consequently the economy of the Country. An enginaering geology mapping and evaluation of the stability risk of these slopes will contribute much to planning and control of these phenomena and ultimately to the economy of the Country.

In this direction, a method of mapping and evaluation of the road slope stability is presented in this paper. The factors that have been taken into account for the classification are the height and the inclination of the slope, the kind of the rock, the kind of the instability, the volume of the unstable mass and the safety factor. An application of the method is also given for the Kalamata-Sparti intercity road. A map of the instability risk is prepared for this road. From this example it comes out that the method is simple, easily applied and the results very encoureging.