The drainage systems were delineated from topographic maps, 1:50000 in scale, using the crenulation lines in order to delineate the streams which are not shown on the maps. The network was ordered according to Strahler's ordering system and the drainage systems of 3rd order were depicted to study quantitatively using factor analysis. For this purpose, twelve (12) morphometric parameters were measured and calculated, describing the dimensions, the shape, the relief and the degree of dissection of the network.

From the factor analysis, two (2) factors were extracted, the factor of dimensions and the factor of relief and their factor scores were plotted one by one at the mouth of each drainage basin, replacing the original values of the parameters. These scores were joined together by isolines, forming a new map consisting of four (4) geomorphological units, depending on the dimensions and the relief of the basins. These units are consisted of basins having: a) high relief and small dimensions, b) high relief and large dimensions, c) low relief and small dimensions and d) low relief and large dimensions. From each of these units, the drainage basins which belong to each unit, were depicted and their morphometric parameters were analyzed again using factor analysis. From this analysis, two factors were extracted for the units of high relief basins and three factors for the units of low relief basins. Two important parameters (the perimeter (P) and the raggedness number (Rn)), and three parameters (the total stream length (æL), the local relief (Hb) and the drainage density (D)) were distinguished for the units of high relief basins and the units of low relief basins subsequently. The values of these parameters were plotted one by one at the mouth of the basins of each unit and were joined together by isolines, forming a new isoline map, showing the spatial distribution of these parameters in each unit.

From the study of this map was found that the NW part of the study area has a tendency to provide high overland flows and large amounts of suspended sediments, because it shows more rapid erosional processes, compared to other parts of the study area.

## INVESTIGATION OF THE GROUND-WATER REGIME OF THE LIMENSTONES, STAVROS AREA, IERAPETRA A PROPOSAL FOR THE CALCULATION OF STORAGE-COEFFICIENT AND REAL EVAPOTRANSPIRATION

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The aquifer of the rectystallized limestones (a part of the ophiolitic nappe according

to Aubuin and Dercourt, 1965 and Fytrolakis 1980) has been investigated. This aquifer is trapped between impermeable neogene formations.

The hydraulic gradient, as calculated from our isopiezometric curves-map, is equal to 0.08; the hydraulic condactivity of the aquifer, according to a pumping test, is about $10^{-3}m^2sec^{-1}$. So, it is an aquifer of moderate capacity.

The evaluation of the fluctuations of the absolut ground water level during the period 1984-1990 shows a negative ground-water budget; the mean annual drawdown (hl) of the water level is about 7,5 m.

A method for the calculation of the storage coefficient (n) is proposed, based on the real evapotranspiration (ETr), the surface extension of the water table and its mean annual drawdawn. Furthermore, we propose a method for calculating the real evapotranspiration, when the surface extension of the water table, the storage coefficient and the mean annual drawdown are given.

So the deficite water-volume was calculated to $72 \cdot 10^3 m^3/y$, corresponding to ta pumping of $Q=15m^3/h$ for 7 months yearly, around the clock.

Because of the importance of this aquifer to the town of Ierapetre, especially in the summertime with the high touristic consumption, a better more rational use of the ground-water is very important. The adequate knowledge of the surface of the aquifer and the storage coefficient can help us to a better evaluation of the aquifer's capacity was well the estimation of a possible artificial recharge with water-quantities otherwise lost through the runoff.

## OBSERVATIONS HYDROGEOLOGIQUES DANS LA REGION DE MESSOGIA (ATTIQUE, GRECE)

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La région étudiée est constituée de diverses formations qui ont un comportement hydrogéologique different. Les sédiments quaternaires présentent des differenciations en ce qui concerne leur comportement hydrogéologique. Il dépénd de leur lithologie et de leur épaisseur. Ces qui se trouvent au pied d' Hymette sont constituées des brèches a ciment carbonaté. Elles se comportent plutôt comme des formations macropérmeables à cause de leur karstification. Dans la région de le plaine de Messogia il y e des conglomerats a grands et divers élements. Ils affleurent dans une grande étendue et leur épaisseur au centre du bassin dépasse les 80m. Dans ces formations se développe un riche aquifère qui se decharge par des sourses de contact dans la région