monzogranite - syenogranite - alkali granite, gabbro - monzonite - quartz monzonite phases. The early are related tholeiitic and calc-alkaline phases were succeeded by the rift related late alkaline phases. Two distinctive type porphyry mineralization systems were formed related with arc magmatism and following rift magmatism. The Dereköy porphyry copper mineralization which is centered at the arc related tonalitic porphyry stocks. The Ikiztepeler (Demirköy) stockwork type molybdenite deposits associated with alkali granite phase is related with the rift magmatism.

THE VOLCANIC FORMATION AQUIFERS OF THE AREA NORTH-EAST OF VERMIO MOUNTAIN (PELLA COUNTY).

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The Pliocene volcanic formations, north-eastwards of the Vermio mt., are derived from the volcanic centers of the Voras mt. They are exposed on an area measuring about 100 km^2. They are also mantled by Quaternary deposits that form the Thessaloniki - Gianitsa plain. The maximum thickness of these volcanic deposits is approximately 200m.

From lithological point of view, the volcanic formations are consisted of a) volcanoclastic formations, of trachy to trachyandesit composition (zone of compact volcanic stones) and b) fine grained volcanic tuffs.

A dense network of faults and fractures appears on these formations causing an important system of aquifers.

From the well measurements it was resulted that the yield is from 90m^3/h to 150m^3/h and the specific yield is from 2m^3/h/m to 15m^3/h/m.

From pumping tests it was drawn that the coefficient of transmissivity takes values from $2{,}3.10^{-4}$ m^2/sec to $1{,}2.10^{-2}$ m^2/sec and the coefficient of permeability K fluctuates from $4{,}6.10^{-6}$ m/sec to $1{,}6.10^{-3}$ m/sec.

From our investigations it was found that these formations present a high infiltration coefficient, related to the high porosity.

The above hydrogeological parameters in relation to the geological structure of the study area (thick and extension of these formations, the important lateral water supply, form the surrounding karstic mass of Vermio and Paiko) cause favourable conditions for the development of rich aquifers with high water potential. The determination of this water potential does not consist part of the present study.