INFLUENCE OF TECTONICS ON AQUIFERS IN FRACTURED HARD ROCKS : A CASE STUDY FROM KANDY DISTRICT

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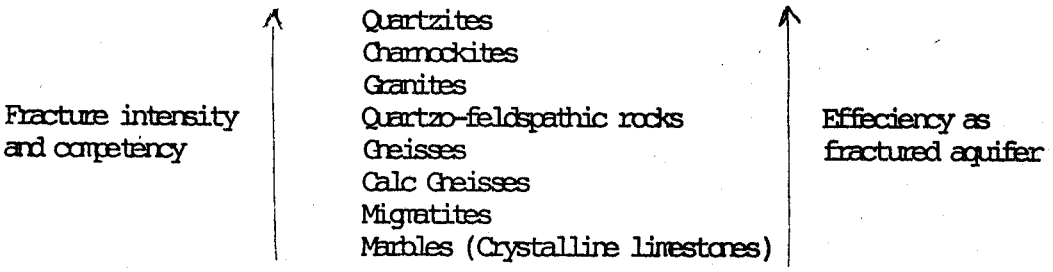
Boreholes drilled to depths of 50m and 100m along the axial regions of anticlinal and synclinal folds and tectonic lineaments of the metasedimentary terrain of the Kandy District were examined. The lithological, hydrogeological and tectonic features of the borehole sites were studied to ascertain the relationship between tectonics and the nature of aquifers.

The boreholes drilled along the tectonic lineaments yielded favourable results with amounts of water ranging from 50 1/min. to over 1000 1/min whereas in the axial regions of folds the yields were poor. It was observed that the fracture intensities were higher along the lineaments than in the axial regions of the folded structures. Hard rocks of the study area can be grouped according to their (a) fracture intensities and competencies and (b) efficiencies as fractured aquifers as follows :



Thus it is seen that quartzites are the best fractured aquifers in the study area. However, marble also tends to be a good aquifer in the presence of solution cavities.

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