

Hydrology - Open-File Report 29

Six-Month Interim Report for SCWRC-USGS Cooperative Project; Evaluation of the Use of Surface Geophysics, Geomorphic Data, and Remote Sensing Methods to Predict Yields of Ground Water From Piedmont Aquifers in South Carolina

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INTRODUCTION

This interim report describes the work undertaken during the first six months (January 1988 – June 1988) of this cooperative project. Presented are preliminary findings, problems encountered and proposed or implemented solutions, and the proposed direction of work for the next 12 months.

The project is being undertaken as described in detail in the Project Proposal, Appendix 1, to evaluate ground-water exploration methods applicable in the Piedmont. Reasonable water supplies for public supply and industry can be had in the Piedmont if properly located. If successful and cost-effective exploration methods can be demonstrated, then potential ground-water users could be encouraged to utilize that resource for their primary or back-up water supply.

The project objectives include: (a) the selection of a small drainage basin in which to conduct the various ground-water exploration techniques as well as perform low flow studies; (b) inventory wells in the basin; (c) perform lithologic-geomorphic terrain analysis; (d) perform remote sensing lineament mapping; (e) conduct surface geophysical surveys; (f) analyze the results; (g) develop a ground-water availability map and test it with well inventory data; and (h) evaluate exploration methods.

Copies of this report are available in the SCDNR's Columbia office.