

## Hydrology - Open-File Report 35

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### Using Electric Logs to Predict Ground-Water Quality in the Sand Aquifers of the South Carolina Coastal Plain

By  
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#### ABSTRACT

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Information on the mineralization of ground water may be obtained by means of electric logs of wells without the expense of collecting water samples for analysis. Formation factors, which can be determined empirically by comparing electric-log resistivity readings with water-sample specific conductance, may then be applied elsewhere in an aquifer or area to predict the total mineralization where only an electric log is available. The reliability of predictions is a function of the number of control wells for which the formation factor has been calculated. As of early 1990, a formation factor of 2.4 seems to be the best value to use for the Coastal Plain aquifers.

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