

CHAPTER II.

THE QUALITY OF SOME WATERS OF THE COASTAL PLAIN OF NORTH CAROLINA.

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INTRODUCTION.

The available information on the chemical composition of the ground waters of North Carolina is so small that no general statements can be presented concerning the quality of the waters likely to be encountered over extensive areas, and discussion has necessarily been limited to the characteristics of the comparatively few samples that have been tested. The results are given in two tables, the first including field assays, and the second more detailed analyses. The field assays were made by L. W. Stephenson and B. L. Johnson according to the methods outlined in Water-Supply Paper, U. S. Geological Survey, No. 151, and the results obtained may be considered approximate in character. A part of the detailed analyses were performed by J. R. Evans, in the branch laboratory of the U. S. Geological Survey at the University of Georgia, Athens, Ga., on samples collected by B. L. Johnson, of the U. S. Geological Survey, during the progress of field investigations. The remaining analyses, performed by several analysts and procured from various sources, have been recomputed to ionic form in parts per million in order that the data may be easily compared.

DISCUSSION OF ANALYSES.

BEAUFORT COUNTY.

The five chemical analyses, 1 to 5, Table 2, show waters that differ considerably. Analysis 1 indicates a sodic, calcic, alkaline water; analysis 2, a calcic, alkaline water of great temporary hardness; analysis 3, a sodic, alkaline water very suitable for laundering; analysis 4, a calcic, alkaline, saline water; and analysis 5, a soft, magnesian, alkaline, saline water.

The assays of Beaufort County waters are recorded in Table 1. Assays 2, 4, and 5 indicate waters very high in carbonates; assays 7, 8, and 9 show waters with less carbonates; and assay 3 denotes a water tolerably high in chlorides and carbonates; assay 6 shows a remarkably soft water. Most of these waters that were assayed have considerable color and little or no sulphates.