

lowing their more porous layers, and as rapidly as their porosity permitted would be drained away. Under the conditions that exist, however, the mass of the Coastal Plain materials remains constantly saturated with relatively motionless water to within a relatively short distance of the surface, the exact distance depending upon local conditions. The upper limit of the saturated portion is known as the water table.

In the geologic section to which reference was made above it will be observed that a great mass of materials underlying the region adjacent to the coast are of marine origin. When these were deposited they must have been saturated with sea water to the extent permitted by their porosity. It is believed that these beds have never been above sea level, and that the salty waters originally imprisoned in them have never had opportunity to escape from their confinement. An attempted representation of the manner in which this imprisonment has been effected is given graphically in Fig. 17, p. 344. Either the pressure of the sea water, whose specific gravity is greater than that of fresh water (1.027), upon the submerged beds of the Coastal Plain, or the impervious character of the strata, or both together, assisted by the retarding effect of friction, have been sufficient to overcome the hydrostatic pressure from the landward direction. In places at least it is believed that not only has the pressure of the ocean water been sufficient to prevent movement in the direction of the ocean, but that it has actually forced the salty sea water backward into materials which have originated in less brackish or nonbrackish water. The dotted portion of the line in the geologic section, which indicates the upper limit of the salty, noncirculating waters, has been drawn hypothetically, for the reason that no well data are obtainable which indicate its exact position in this portion of the Coastal Plain. The lack of this information is due to the fortunate circumstance that where the data are wanting an abundant supply of good water can be obtained in almost all cases at shallower depths than the postulated upper limit of salty waters.

This great body of noncirculating, salty water serves as an effectual barrier to the passage downward along the inclined beds beyond the limit indicated (see Fig. 17, p. 344) of the waters entering them from the surface. It is believed that above this limit the waters, having been prevented from passing farther down the beds, are able, on account of the pressure from the accumulated mass of water behind them, to pass very slowly oceanward in an approximately horizontal direction through not only the porous sand beds, but likewise the less pervious, compact sand and clay beds, and to enter and mingle with the ocean