

BERTIE COUNTY.

Topography.—Topographic maps of the U. S. Geological Survey cover but a small part of the area of Bertie County. Such data as are available indicate that the surface is made up of three Pleistocene terrace plains. The lowest, the Pamlico plain, with elevations not exceeding 25 feet, has a limited development along the north side of Roanoke River and possibly along Cashai River; the next higher, the Chowan plain, with elevations of 30 to 50 or 60 feet, is developed in a belt of undetermined width north of Roanoke River along the entire southern border of the county and also along Cashai River; the third or Wicomico plain, at elevations of 60 to 100 feet, forms the surface over the remainder of the county. These several plains are more or less dissected by stream erosion. Broad stretches of swamp land of recent origin border Roanoke River.

Geology.—Miocene deposits consisting of gray or greenish-gray sands, drab clays, and shell marl, underlie the greater part of the county beneath a thin covering of the sands and sandy loams which make up the Pleistocene terrace formations. The latter are the Wicomico, Chowan, and Pamlico formations. In the extreme western part of the county along Roanoke River the compact, drab or greenish drab clays and gray, arkosic sands of the Patuxent formation (Lower Cretaceous) rise a few feet above water level and probably immediately underlie the Chowan formation, which here borders the river. The Patuxent beds pass beneath the Miocene, becoming deeper to the eastward.

Water Resources.—The basal, sandy portions of the Pleistocene formations furnish the greater part of the supply of water for domestic use. Driven wells are gradually taking the place of open wells, and with the exception of Aulander the villages now contain more of the former than the latter. The wells range in depth from 8 to 35 feet, with a few as deep as 60 feet. Those exceeding 35 feet derive their water from the underlying Miocene. The water from the Pleistocene beds is almost everywhere soft; in places it is ferruginous. Many springs occur along the scarps and in the stream valleys, but they are small and unimportant.

A few deep wells have been drilled in Bertie County. Seven or eight years ago at Windsor a 2½-inch pipe was sunk 250 feet, obtaining a small flow which, after continuing for about three months, suddenly stopped, due to the entrance of sand into the pipe. In 1905 a deep well was drilled for the town near the one above described. The elevation of the mouth of the well above sea level is about 10 feet. A small flow was obtained at a depth of 250 feet and an 8-inch casing