

on a sand spit between the Neuse and Trent rivers opposite New Bern, the colored population obtain their drinking-water from shallow wells 10 to 20 feet in depth. The water here is liable to surface pollution, and all shallow open or driven wells in this place should be condemned and a supply obtained from deeper sources. Many wells have been sunk to the porous water-bearing Eocene limestones and sands and a few to Miocene beds, the latter being in the extreme northeastern part of the county. A good supply is usually obtained. Flows have been obtained only in the extreme southeast.

Detailed information regarding a considerable number of these deeper wells is given in the table of well data.

Additional notes are included regarding artesian conditions at New Bern and a number of other places.

New Bern has a water system owned and operated by the city. The plant was installed about the year 1892, but was later much improved. The supply is obtained from 6 wells each 94 feet in depth which tap the water-bearing Eocene limestones underlying the city. The wells and pumping plant are situated on the western edge of the city. The water is pumped to a standpipe of 250,000 gallons capacity, at the plant, from which it flows directly into the mains by gravity, giving when full a tank pressure of approximately 45 pounds per square inch. Connections can be made in case of fire whereby the water can be pumped directly into the mains with a pressure of 90 to 125 pounds. The wells are said to be inexhaustible, but when the pumps are run at full speed the water level can be lowered 25 feet. About 50 per cent of the inhabitants are supplied with city water. There are 750 private taps, 10 horse fountains, and 76 fire hydrants. The maximum capacity is 1,200,000 gallons per day. The Blade Lumber Company, the Pine Lumber Company, and the New Bern Cotton Oil and Fertilizer Mills each have deep wells which are connected with the city system, and in the case of an overstrain on the wells of the city waterworks these companies assist by pumping directly into the mains. In portions of the city not reached by the waterworks the city maintains public wells. Many of these are drilled wells sunk in the bottom of shallow open wells. A number of years ago a well was drilled at the pumping station to a depth of over 300 feet. Mr. A. B. Wallace, a driller at New Bern, reports that salty water was found in this well in shell-rock at about 300 feet below the surface. According to N. H. Darton,¹ the water-bearing beds at New Bern consist of alternating layers of sand and shell-rock. Large supplies of water are obtained from these shell-rock layers and water-bearing sands. The first shell-

¹U. S. Geol. Survey Bull., No. 138, p. 199.