

The depths at which the basal Cretaceous beds would be encountered can only be determined by drilling. In the extreme western part of the county it is probable that they would be reached somewhere between 100 and 200 feet below the surface. Eastward they become deeper, and in the extreme east probably occur at a depth of 500 feet or over. There is good reason to believe these beds would prove to be the source of water of excellent quality.

COUNTY.

Yield per minute.		How obtained at surface.	Use.	Geologic horizon and character of water-beds.	Remarks.
Flow—gallons.	Pump—gallons.				
$\frac{3}{4}$	-----	flows.	drinking.	Miocene; fine white sand.	Will rise to 12 ft. above sea level. Another horizon at 130 ft. See water assay No. 98, table 1, pp. 498, 499.
-----	-----	-----	not used.	Miocene; white sand.	Another horizon at 130 ft.
1	-----	flows.	domestic.	Miocene; fine white sand.	Will rise to 10 ft. above sea level. Another horizon at 105 ft.

ported unsatisfactory. However, on the low ridge surrounding Lake Mattamuskeet some fairly good shallow well water is obtained.

At Fairfield the landholders have cisterns, but the tenants use open wells. The water from the latter is unsatisfactory. Some of the dug wells a short distance from Fairfield furnish dark, reddish-brown water, the color being due to vegetable matter. Similar colored waters are obtained at Middletown and Engelhard, where it is used chiefly for watering stock. Storm tides flood a considerable portion of the section around Middletown, at which times wells in the flooded areas are filled with salty water. In shallow wells located near the shores of the sound the level of ground water is said to vary with the tide. At Ocracoke on the banks the land is low and the shallow well water salty and unsatisfactory. Cistern water only is used here.

Many deep wells have been drilled in the more thickly settled parts of the county. Small flows are obtained at some places, and in all cases where flows do not occur the water rises to within a short distance of the surface. Detailed information has been obtained concerning a considerable number of the deep wells, and this has been arranged in tabular form. (See table below.)

Middletown is well supplied with artesian water. That from the deeper horizons, after first reaching the surface, emits an odor of hydrogen sulphide. The high iron content renders much of the deeper water unsatisfactory for cooking and laundry purposes.

At Engelhard the conditions are about the same as at Middletown.