The above well was drilled by W. H. Gray & Bros. of Chicago, Ill. Drilling was started on September 9, 1905, and the last sample was taken May 6, 1907. In a letter transmitting the samples, the method of drilling is described by T. T. Allard, the officer in charge at the time the well was begun, as follows: "The system of drilling is the rotary hydraulic. Water, in which a large quantity of clay has been thoroughly stirred, is pumped down to the bottom of the drill on the inside, and washed up the cuttings on the outside. The clay penetrates and seals the sand and prevents caving.

"The method so mixes the material as to render it difficult to obtain satisfactory samples of the thin strata."

The well is owned by the United States Government.

THE TERTIARY FORMATIONS.

By Benjamin L. Miller.*

HISTORICAL REVIEW.

By the earliest writers, Maclure, Olmsted, and others, no attempt was made to differentiate the strata of the Coastal Plain, but instead they were considered to constitute a unit which received the name of the "alluvial formation." In Europe certain deposits had received the name of Secondary and Tertiary, and in 1824 John Finch, in an article[1] entitled "A Geological Essay on the Tertiary Formations in America," ventured the statement that the "alluvial formation" of Maclure contained representatives of both of these divisions. Later writers recognized the division of Coastal Plain deposits into Cretaceous ("Secondary") and Tertiary strata, but as the separation was made on the basis of the lithology or at most the genera of the fossils preserved in the deposits, further subdivisions were impracticable, without more detailed studies of the fossils. At this stage Say, Conrad, and Lea began their paleontologic investigations of the Atlantic Coastal Plain. Conrad[2] in 1832 described a few fossils from New Bern, North Carolina, which he referred to the "Upper Marine" or "Upper Tertiary," while Lea, in his "Contributions to Geology," published in 1833, referred certain beds in Alabama to the Eocene as defined by Lyell in England. This is the first reference to Eocene strata in this country, and is, therefore, of much importance in the literature of the entire Coastal Plain, although no reference is made to the North Carolina deposits.

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*Except part on Lafayette formation, by L. W. Stephenson.

[1]Amer. Jour. Sci., vol. 7, 1824, pp. 31-43.

[2]Fossil shells of the Tertiary formations of North America, vol. 1, No. 1, 20 pp., 6 pls. Philadelphia, 1832.