

## PRE-CAMBRIAN CORE

It may be assumed that if one were to drill deep enough anywhere in Florida he would find a complex mass of folded and faulted schists, gneisses, and possibly marbles like that which underlies the Piedmont region in Georgia. These are the altered and metamorphosed rocks that composed the ancient continent of Appalachia, the progenitor of eastern North America. No well in Florida has yet reached this hypothetical core, and any discussion of it is necessarily speculative. A well in Pierce County, Georgia, some 40 miles north of Nassau County, Florida, entered hard, unweathered granite at a depth of 4340 feet (Schuchert, 1943, p. 453). This rock, however, may be younger than pre-Cambrian.

## PENNSYLVANIAN(?) SERIES AND OLDER

Metamorphic rocks were first discovered in Florida (Gunter, 1928) in a boring drilled in 1926 to 1928 by the Ocala Oil Corporation in sec. 10, T. 16 S., R. 20 E., in Marion County about 3 miles south of York. This hole entered mica schist at a depth of about 4100 feet, passed through it into white quartzite somewhere above 4500 feet, and remained in quartzite to a depth of 6180 feet, where drilling was discontinued (Cooke and Mossom, 1929, p. 44). These rocks are probably of Paleozoic age. Campbell (1939a, p. 95), however, suggests a correlation with similar rocks in Cuba that Dickerson and Butt (1935) assigned to the Jurassic. A sample of red mud taken between 4000 and 4100 feet, above the mica schist, may represent an oxidized subsoil, or it may be derived from a red shale. A description of an incomplete set of cuttings from this well was published by Cooke and Mossom (1929, pp. 44, 45).

The Hilliard Turpentine Company well no. 1, drilled by the St. Mary's River Oil Corporation from 1936 to 1940, 4 miles northwest of Hilliard (NW $\frac{1}{4}$  NW $\frac{1}{4}$  SE $\frac{1}{4}$  sec. 19, T. 4 N., R. 24 E.) penetrated 80 feet of hard black splintery shale between the depths of 4640 and 4720 feet, then 88 feet of fine-grained, dense sandstone (4720-4808 feet), then diabase to the bottom of the hole at 4824 feet (Campbell, 1939a, b; Schuchert, 1943, p. 454). The black shale contains ostra-