in maintaining a proper water depth for sediment formation, because all rock, even to the bottom of the deepest test well, is composed of shallow-water marine sediments. In the Superior Oil Company well, excellent oölitic layers were found at several levels, including some below 6,000 feet. (It will be remembered that the formation of oölitic grains requires a very precise shallow-water environment.)

However, during the times when the sea level was lower, and major parts of the Banks were exposed, sediment production was stopped, except around submerged edges of the Banks. Also there were times when the water was too deep for efficient sediment production. For example, during the interglacial period which immediately preceded the last glaciation of North America, when there was no longer a very great quantity of water stored as ice at the poles, the sea level was substantially higher in the Florida-Bahamas area than it is now. This is evidenced in the existence of the Florida "keys," which are old reefs which grew during the period of higher sea level, and then died when they were permanently exposed by the lowering of the water.[13] During periods when any great change of sea level occurs, carbonate sediment production rates are decreased. Just how many periods of lower sedimentation rates there were on the Bahama Banks, we do not know.

Now, to come back to the question of the age of the Banks, the rocks from the bottom of the deepest test wells have been classified as Lower Cretaceous by geologists. The Cretaceous Period is usually dated as much older than the minimum formation time we have stated above. We admit that these Banks could well be much older than the minimum time required for forming the sediments. As pointed out above, there were long delays due to environmental changes. We will allow the reader to choose between the minimal formation time stated above, and the older dates which can be found in standard geology textbooks. However, we do not see in such lengths of time the necessity of an evolutionary sequence such as is often visualized in the standard geologic timetable. This principle was discussed briefly in the subsection "Evolution and Time," in Chapter 4 above.

The Dolostone Sections in the Bahamian Stratigraphic Column

Now that we have seen some of the characteristics of a major geologic structure which is composed of limestone and dolostone, we should consider a few of the specific features of these two kinds of rock.

When the drilling records of the Superior Oil Company's deep test well in the Bahamas are examined, we find several very thick sections of dolostone, as well as considerable thicknesses of limestone. One of the dolostone sections is 3,600 feet in thickness.[14] It is of course somewhat layered, but there is very little material other than dolostone.

The exact method by which these thick deposits of sediment were dolomitized is not known. However, the familiar types of shallow-water sediments and fossils making up the dolostone layers tells us