

1. Drilling records from the sedimentary carbonate deposits of the Great Bahama Bank, off the coast of Florida. This is a multilayered deposit of various forms of limestone and dolomite somewhat in excess of 14,500 feet in thickness. In the deeper parts, dolomites alternate with limestones, with evidence of erosion between four major cycles of deposition. Identifiable fossils were found to a depth of at least 10,600 ft. Alternations between limestone and dolomites in this and similar formations indicate at least a corresponding number of changes of environment during deposition and during the process of dolomite formation. Also, the unconformities, at the levels where erosion is revealed, must represent significant amounts of time. ¹

2. The distribution and rates of formation of the small, spheroidal bodies known as ooids, oolites, or ooliths. (The term oolite is more properly used of rocks containing the individual ooids.) Most ooids are concentrically laminated, around a core of extraneous material such as a grain of sand, a small shell fragment, or a recrystallized fecal pellet. Oolitic limestone, with oolites of various types, appear at numerous levels in the Great Bahama Bank and in many other carbonate deposits. ²

3. The similarities between the order of deposition of present day marine sediments, and the order found in deep subsurface sedimentary deposits in oil fields. These similarities are now being used by oil research geologists for understanding and predicting the arrangement of older deposits deep in the earth. This research also deals with paleoecological topics, such as the faunal associations and ecological succession found in ancient strata, and compares them to modern faunal associations observed in shallow-water depositional environments. Even though we can not accept all the tenets of uniformitarianism, the close similarities between modern marine carbonate deposition and these ancient deposits demand that we recognize slow, natural deposition as accounting for many thick carbonate deposits in the oil fields. ³