Rainbow basin are not only very numerous but also very uniform over a wide area. Davies and his associates found that particular sets of the couplets of microlayers could be recognized and identified in the drilling cores of two or more wells located at various distances from each other. In fact, from cores brought up from a depth of approximately 4,475 feet, a short distance to the east of the Rainbow oil fields, they were able to correlate laminations from two wells which are spaced at 25 kilometers apart (Davies, 1973, p. 3528, 3532-3535).

Another important time-indicating feature of the evaporite coverings of the Rainbow area reefs is the presence of vertically repeating sabkha cycles in the part which is designated "covering no. 3" in Figure 1. A sabkha cycle is a set of layers of different, but related, types of anhydrite, together with a layer of dolomite. For the past two decades these cycles have been observed in the process of formation by evaporative processes on the Trucial Coast of the Persian Gulf, and have been extensively studied by petroleum geologists. The amount of time required to form one sabkha cycle has been found to be approximately 3,000 years. In the Rainbow area, as well as in many other oil producing areas, sabkha cycles which are very similar to the ones now being formed are found, one above the other, in the evaporite coverings. In the Rainbow oil fields, wells drilled into and around one of the large atoll reefs passed through a set of 20 recurring sabkha-type cycles. These comprise approximately 150 feet of the "covering no. 3" of Figure 1. Some of the cycles are continuous for a distance of more than six miles across and beyond the reef, and their layers can be matched from well to well (Bebout, 1973, p. 302, 304, 322-324). So, here again is abundant evidence not only for long periods of time, but for tranquil environmental conditions which allowed uniform layers to be laid down over wide areas.

As for the total length of time necessary for forming the entire 650-foot evaporite covering of these reefs, far more than 100,000 years must be recognized, in the light of the clear records of the natural processes which are revealed by the drilling cores (compare Wonderly, 1977, p. 83, 90-93). And when one considers the time required for forming the entire 6,000-foot sedimentary column of the Rainbow area, starting with the foundation sediments beneath the reefs, there is no room to doubt that some millions of years are represented.

THE GREAT BAHAMA BANK

The Great Bahama Bank is a very large carbonate sediment buildup which lies slightly to the southeast of Florida and to the northeast of Cuba (Figure 2). This bank is a flat-topped structure approximately 80 miles wide, over 300 miles long, and more than 17,000 feet thick. Andros Island, the largest island on the Bank, lies near the eastern edge of the main part of the platform-like top. The Great Bahama Bank has very steep sides which plunge rapidly into deep water on both the east and west, but all across the platform the water is only 3 to approximately 25 feet in depth (Hollister, 1972, p. 876-888). This carbonate platform is maintained in its present shape and form by an elaborate set of active growth processes—most of which are biological—which are constantly adding sediments.

Several test wells have been drilled into the Great Bahama Bank. One, made by the Superior Oil Company (Bahamas Oil Co. Ltd.) in 1947 penetrated 14,585 feet of carbonate sediments without reaching the igneous basement rock, and a later well was drilled to a depth of 17,847 feet by