

8. Nevins has completely neglected fully 80% of the total stratigraphic column in the locality of the Capitan reef. (The reef itself makes up less than one-tenth of the column at many well sites on the reef.) Such a neglect invalidates his conclusions concerning the age of the reef. Since this reef is a huge oil reservoir many oil wells have been drilled into it. A considerable number of these wells have first contacted the top of the reef at depths of 3,000 feet, and over. Then we must not forget that beneath the reef there are sometimes more than 15,000 feet of sedimentary rock, consisting of numerous distinct layers of limestone, *dolomite*, sandstone, shale, etc., alternating with each other ^{(as shown in Figure 1, at the end of this paper).} Most of these deep layers possess identifiable fossils.

Thus we are faced with the problem of explaining not only the reef itself, but also the other nine-tenths of the stratigraphic column of which it is a part.⁹

9. It is absolutely necessary that we reckon with the great deposit of ~~the~~ laminated anhydrite which filled the basin in the center of the Capitan reef, and covered the inner sides of that reef. Nevins ~~made~~ ^{MAKES} reference to parts of this deposit (p. 236 & 238) but does not seem to understand the significance of them with regard to ~~the~~ ^{rate of} deposition. An example of this is his statement that there are layers of evaporites intertonguing with the inner sides of the Capitan reef.

Actually, the intertonguing ~~of~~ the inner reef walls (on the basin side) with evaporite minerals (mainly anhydrite), is one of the strongest reasons why the Capitan reef could not have been formed rapidly. Rapidly moving water does not deposit highly soluble substances such as anhydrite, and certainly does not precipitate the many thousands of alternating ^{MAKING UP} anhydrite and calcium carbonate micro-layers ~~which make up~~ ^{are} the evaporite deposits which associated with the Capitan reef.

The article by H.S. Cave, which is one of the sources which Nevins recommends most highly in his paper, explains that the intertonguing of anhydrite with the reef represents normal conditions, in which periods of reef growth alternated with periods of deposition of evaporites. Even though Cave felt that the Capitan limestone does