

10. Ibid., p. 15, 73-75, 143-145.

11. Further evidence of the calm nature of the basin during the deposition of these layers is found in the fact that the latter contain no large amounts of terrigenous (land-derived) sediments, and no evidence of volcanic activity.

12. Ibid., p. 214-287. One will note that the ratios of calcium carbonate to calcium sulfate in these tables are not always exactly the same, nor do they exactly correspond to the ratio shown in Table 1. This is because of the fact that the sea water did not evaporate to exactly the same concentration for each cycle. Thus, in some cycles the sea water gave up more of its calcium sulfate than in others. A related fact which is of interest is that, on the eastern side of the Delaware basin, evaporation frequently reached the point at which common salt (NaCl) begins to precipitate, so that on that side of the basin there are salt layers interbedded with the banded anhydrite. (Ibid., p. 11-12.)

13. Gerald M. Friedman has recently reported finding algal mats growing on the bottom in brine that is precipitating calcium sulfate in the form of gypsum. This is forming alternating gypsum and organic layers in shallow water near the southernmost tip of the Sinai Peninsula. (G. M. Friedman, "Generation of Laminated Gypsum in Sea-Marginal Pool, Red Sea" (abstract), American Association of Petroleum Geologists Bulletin, v. 57 (1973), p. 780.

14. Dean, "Petrologic and Geochemical Variations," p. 29-32, 288-307.

15. In some couplets there are two organic layers close together, with calcium carbonate between. However, it is rather obvious that this merely represents two periods of prolific growth of aquatic organisms, with only a short interruption between. (Ibid., p. 66-67, 148-149.)

16. Ibid., p. 12-13, and Figure 7.

17. Since the calcium carbonate and organic matter make up only about 20 per cent of each couplet, there are approximately 1,000 feet of actual anhydrite in this 1,300 foot of banded anhydrite on the western side of the basin. Dean estimated that 200,000 years for forming this amount of anhydrite requires a marine evaporation rate (2 meters per year) which is very similar to that known for most arid regions of today (Ibid., p. 144).

18. For a description of the alternating layers of salt and anhydrite, of which the Salado Formation is largely composed, see W. B. Lang, "Basal Beds of Salado Formation in Fletcher Potash Core Test, Near Carlsbad, New Mexico," American Association of Petroleum Geologists Bulletin, v. 26 (1942), p. 63-79; and also "Cycle of Deposition in the Salado Formation of the Permian of New Mexico and Texas," by the same author, American Association of Petroleum Geologists Bulletin, v. 60 (1949), p. 1903.