



FIGURE 4.16. Evidence for secular changes in seawater composition. (A) Secular variation in three main types of marine evaporites, two that contain magnesium sulfate bitterns and one that doesn't (Zharkov, 1984; Hardie, 1990) (courtesy of L. A. Hardie). (B) Comparison of secular changes in ooid and cement mineralogy (Figure 4.12) and magnesium sulfate-bearing evaporites (A) above. From L. A. Hardie (1996). Periods of aragonite seas correspond to magnesium sulfate-bearing evaporites; periods of calcite seas correspond to KCl evaporites with no magnesium sulfate.