of uranium, the shrinking merchant market and shift in the economics of the world uranium industry calls for a reexamination of his role in the industry both in the U.S. and in the world.

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Deep-Sea Oxygen Isotope Record and Sea Level Fluctuations

The oxygen isotopic composition of deep-sea microfossils reveals two trends for the past 100 m.y.: a long term (10^8 years) increase in the δ18O content of deep-sea benthic foraminiferal carbonate which suggests a progressive cooling of polar regions related to changes in ocean basin–continent geometry, and the poleward shift of land area since the Cretaceous; and 10^6-year step-like fluctuations in the δ18O content of planktonic and benthic microfossils related to changes in the area of shelf seas, relative and eustatic sea level, and polar glaciation.

Benthic isotopic results, after correction for probable ice volume effects in the Oligocene and post-middle Miocene, correspond closely to sea level fluctuation. This correlation appears to be the result of climatic (largely temperature) effects caused by changes in global albedo patterns. During the sea level highstands in the Cretaceous and early Tertiary, shallow seas covered more than 50 × 10^6 sq km which maximized heat storage in the ocean. The planetary thermal gradient was low, with polar regions producing warm bottom waters (<10°C). In this regime, sea level fluctuations controlled climate.

The cause of the sea level fluctuations is unclear. After the middle Eocene, falling eustatic sea level, the reduction of shelf storage in the ocean. The planetary thermal gradient was low, with polar regions producing warm bottom waters (10 to 15°C). In this regime, sea level fluctuations controlled climate. The cause of the sea level fluctuations is unclear. After the middle Eocene, falling eustatic sea level, the reduction of shelf storage in the ocean. The planetary thermal gradient was low, with polar regions producing warm bottom waters (10 to 15°C). In this regime, sea level fluctuations controlled climate.


Carboniferous-Permian Boundary in Southwestern United States

Carboniferous and Permian rocks are exposed in several long sections in southeastern Nevada, the most accessible and best exposed section being in North Arrow Canyon, Clark County. Carboniferous and Permian strata, in steeply dipping beds along the nearly level canyon, are rich in many fossils which have been studied by specialists and students for several years. The section is considered excellent as a reference stratotype for the Carboniferous-Permian boundary in the western cordilleran region.

The sections to the north in east-central Nevada lack most of the late Carboniferous while those to the east in western Arizona contain only a few marine zones. The section to the south near Lee Canyon is more complete but not as well exposed, and access is difficult.

Fusulinids are among the fossils well represented in the succession; they include a progressive series of species and genera from early Millerella to advanced Triloculites in the Car-