whorl collapsed. Only slight fracturing was observed in inner whorls. In places, the outer whorl was completely closed, the shell being flattened on top and bottom. In other specimens, chomata (internal structures) acted as a brace, preventing total flattening. At several places where the shell is particularly badly crushed, another fossil is in surface contact with the fusulinid. As compaction proceeded, grain-to-grain contacts (where stress was localized) changed to those along a surface; strain was realized by brittle failure of the fusulinid. No pressure solution took place. The major compressional stress, oriented normal to bedding, led to horizontal stresses away from the center of each fusulinid; extension cracks and buckling of the wall near the polar ends resulted. Most other fossils and the micrite matrix had sufficient strength to withstand later compaction, in part because of early submarine cementation. However, individuals belonging to this one fusulinid genus were selectively crushed during limestone compaction because of inherent weaknesses in the structural architecture of the shell. *Pseudoschwagerina?* was a large fusulinid with a thick, heavy wall; outer whorls were inflated, making it comparatively hollow. Septa which supported the wall were thin, straight (unfluted), and widely spaced.

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Petroleum Engineering–Geology Synergism: Key to Discovering Large Reserves in Mature Basins

No abstract available.

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Kef Anticline—Box Folding in Tunisian Atlas, Clue to Regional Tectonic Style

Near Le Kef, Tunisia, Triassic gypsum and supratidal carbonates with subordinate terrigenous clastic rocks and metabasites (so-called ophites) form the highly deformed core of a northeast-southwest anticlinal structure. The competent enveloping strata, chiefly massive limestone and marlstone, range in age from Aptian-Albian to early Tertiary. The Triassic rocks are multiply deformed and so dismembered as to be best described as tectonic breccia. The Kef anticline, as well as numerous analogous features in the northern Tunisian Atlas, commonly has been interpreted as a diapiric structure emplaced into the younger cover rocks during the early deformation phases of the Alpine orogeny (i.e., Late Cretaceous to Paleogene) and partly reactivated during the Neogene (late Alpine). Our detailed mapping and structural analysis of the Kef structure suggest modifications of this model involving the following major elements: (1) local or regional unconformity between Triassic and Cretaceous strata, (2) regional decollement gliding in part localized within the Triassic evaporite-rich sequence, and (3) late-phase box folding of both the highly deformed Triassic assemblage and the more competent cover rocks.

The unconformity between Triassic and Cretaceous rocks is preserved only locally, for late brittle faulting along the margins of the anticline and local bedding-plane thrusts between the competent cover and the incompetent core are common. However, where well-preserved, a distinctive bedded sedimentary carbonate breccia overlies the Triassic assemblage. This sedimentary breccia is in turn conformably overlain by Aptian-age rocks and, thereby, indicates major pre-Aptian uplift and erosion prior to the main phase of deformation in the Tunisian Atlas. The nature of this uplift is problematic, but pre-Aptian diapirism is a viable hypothesis. According to this model, diapirism was restricted to pre-Aptian time, whereas compressive buckling and associated lateral shortening are Neogene deformation mechanisms superimposed on earlier halokinesis.

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Geologists and Politics—A Matter of Survival

In 1976, legislation to decontrol natural gas failed by four votes in Congress. In 1978, legislation to permit federal exploration in the Arctic Wildlife Range failed by two votes. Also in 1978, a proposal to consider the Natural Gas Policy Act separately from other parts of the National Energy Plan failed by the vote of 206 to 205. Many times energy legislation is approved or disapproved by very narrow margins.

Geologists, with some notable exceptions, are largely inactive in the political process. What a waste, as no one has greater potential to be effective. No one understands the occurrence, distribution, discovery, and production of oil and gas better than geologists. In the meantime, domestic supplies of oil and gas decline in the face of increasing federal intervention.

AAPG has recognized the necessity for becoming active in politics and has created the Committee of Strategic Affairs. Other geologic organizations are similarly active. A compelling argument can be made that all geologists should mobilize in a massive assault on energy issues in an attempt to arrest the decline. Changing just a few votes in Congress would do the job.

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Radiolaria—Present and Past Indicators of Distance from Shore, Water Depths, Currents, Water Masses, Upwelling, Eutrophy, and Tectonism

Certain living radiolarian species and taxonomic groups identified in plankton tows from North Atlantic, Gulf of Mexico, Caribbean, Pacific, and Antarctic waters are useful biologic indicators of physical oceanographic parameters. Changes in dominance and diversity of these radiolarians may signal: (1) distance from shore or position on shelf; (2) relative depths (e.g., above and below seasonal and permanent thermoclines); (3) direction, strength, and provenance of cur-