Mancini et al., 1989) as early Danian low-stand channel-fill deposits, overlain by a transgressive surface with a *Thalassinoides* burrow-fabric and transgressive deposits, respectively. However, the situation is more complex, as illustrated in Figures 3 and 4. Over most of the outcrop, the Danian transgressive surface overlies paraconformably the Prairie Bluff Chalk, but the same surface also overlies the coarse-grained basal Clayton sand bodies (Fig. 3). Within the 200- to 400-m-wide tilted blocks, bounded by the small normal faults mentioned above, the bedding planes of the Prairie Bluff Chalk are not disturbed and remain mostly parallel. However, near the faults, bedding is chaotic, displaying a mixture of soft and semisoft sediment deformation. In some rotated, about 5-m-wide, domains, the bedding planes are tilted vertically and are truncated by the Danian transgressive surface (Fig. 4). Some of these faults also offset the basal Clayton sands but do not offset the early Danian transgressive surface. Drag along these faults plastically deforms—even overturns—the basalmost layers of the Clayton basal sands. In some of the faults Clayton sands have been injected. The next coarse sand deposit of a younger part of the Clayton Formation again truncates the tilted bedding planes of the basalmost Clayton layers, showing that movements along the fault plane occurred during deposition of the Clayton basal sands.

The lowermost infillings of <3-m-wide and <1-m-thick "pockets" of the basal Clayton sands consist of a poorly sorted conglomerate containing Cretaceous macrofossils and Prairie Bluff chalks clasts, in a matrix of coarse sands. Some of the chalk clasts are plastically deformed, in particular near the base. Characteristic components of the sand matrix are green, sparry calcite-filled spheroids and droplets, 2 to 3 mm in diameter, with an external lining of clay minerals (Fig. 5A). The spheroids contain internal cavities, also filled with sparry calcite.

Identical spheroids were found in the nearby outcrops of Shell Creek and Lynn Creek, and those were interpreted as altered splashform tektites, by analogy with spheroids from Beloc and Mimbral filled with bubble-cavity–rich glass (Pitakpaivan et al., 1994).

The basal conglomerate has the appearance of a mass-flow and is found only at those places where the Prairie Bluff Chalk is slumped and deformed. The bottom of the "pockets" follows the slump structures of the deformed Prairie Bluff Chalk. The conglomerate is overlain and truncated by 10- to 50-cm-thick lenticular layers of very poorly sorted, poorly graded, parallel-laminated coarse sandstones and pebbly sandstones, rich in Cretaceous macrofossils and chalk clasts. The laminated textures are typical for high current strength (upper flow-regime) and rapid sedimentation. The sand matrix dominates, but the typical bubbly spheroids of the underlying conglomerate matrix were not found. As mentioned above, the lowermost layers were drag-tilted near the faults and truncated by the overlying sand layers. The geometry of the sand bodies filled with conglomerates and sandstones is asymmetrical. They appear as triangular wedges in cross section, with their thickest part at the southern end, near the faults (Fig. 4). The pockets with spheroid-rich conglomerate occur only at the southern—thickest—end of the wedges. At none of the bedding surfaces or in the sandstone layers were borings or *Thalassinoides*-type burrows observed other than those penetrating down from the Danian transgressive surface.

A few symmetrical channels filled with graded conglomerate and nonlaminated coarse sand—with chalk boulders as large as 90 cm—are also paraconformably overlain by the Danian transgressive surface. The infilling layers are not deformed in contrast to the triangual wedges and are thus presumably younger. Those channels are incised into the underlying chaotically bedded part of Prairie Bluff Chalk and presumably also

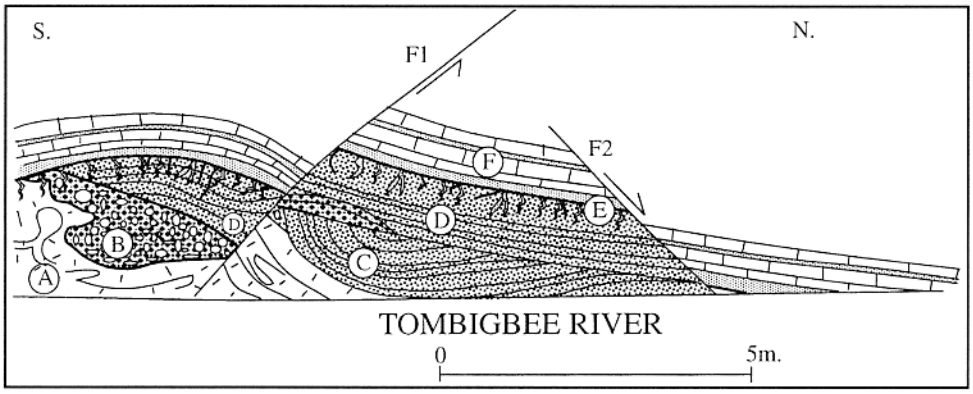

Figure 3. Moscow Landing, Alabama. Line drawing (after a photograph) of one of the spherule-(altered tektites–) bearing K/T complex channels. A, Deformed chalks of the Prairie Bluff Formation. B, Spherule-bearing conglomerate "pocket," or deformed channel. C, Coarse-grained pebbly sandstone–filled channel, upturned near fault F1. D, Subsequent coarse laminated pebbly sandstone and coarse sandstone layer, truncating the upturned end of channel C. E, Transgressive surface truncating B–D channels as well as a symmetrical channel (not shown) of the preceding low-stand incision. Borings penetrate into the upturned end of channel D. F, Clayton Formation graded sandstones, limestones, and phosphatic lag deposits.