

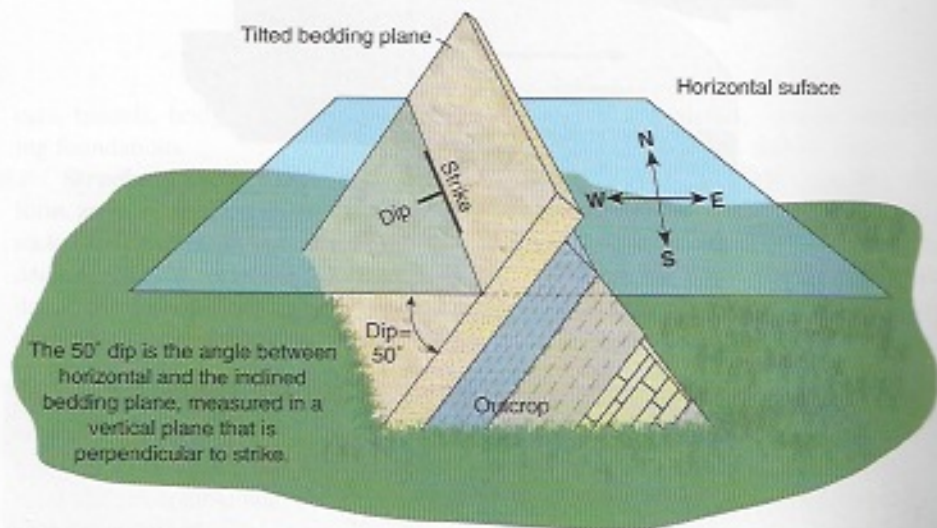


**FIGURE 14.2**

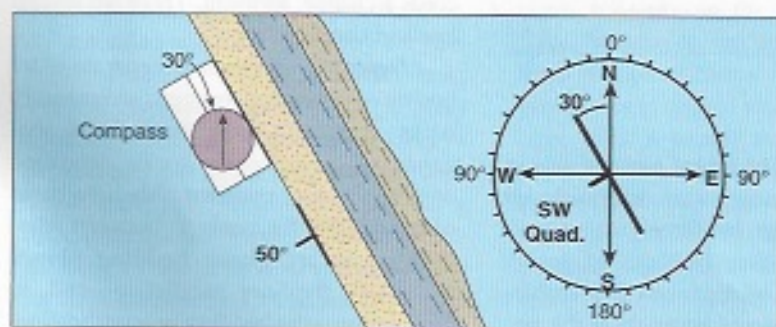
The steeply inclined surface in the center of the photograph is a fault contact. It cuts the sandstone and mudstone layers of the Haymond Formation (Pennsylvanian) near Marathon, Texas. Width of area shown is about 1.5 m.



A. Outcrop



B. Perspective view



C. Map (overhead) view

erosion surfaces. These **unconformable** contacts can be uneven rather than planar, and can juxtapose very different rocks with very different orientations (see *Unconformities* in Chapter 13).

An **intrusive contact** separates intrusive igneous rock and the rock that it intruded; intrusive contacts are either **concordant** (parallel to layers in the intruded rock) or **discordant** (cut across layers in the intruded rock).

Rocks separated by a fault are in **fault contact** (Fig. 14.2). In the simplest case, the fault is exposed as a flat surface, and its orientation is apparent. However, faults commonly are expressed as zones along which rocks are brecciated (broken into angular fragments), or even pulverized, so that fault orientation may be difficult to determine. Even more commonly, faults, like other types of contacts, are buried beneath soil or sediment. In such places, their orientation,

**FIGURE 14.3**

A. Outcrop of Mississippian Bluefield Formation near Covington, Virginia. The sedimentary layers are inclined to the left, or southwest. B. Simplified diagram showing the inclined layers protruding through a horizontal plane. The intersection of the inclined layers with the horizontal plane creates a line that defines the strike of the bed. This line trends 30° west of the north arrow. The beds dip 50° below the horizontal plane. C. When viewed from above, as on a map, the strike and dip of the bed are shown with a T-like symbol. The top of the T parallels the strike, and the leg of the T points toward, and parallels, the dip direction. The dip angle is 50°. Comparison of the strike and dip symbol with the compass directions shows why the attitude of this bed is written as N30°W, 50°SW.

