

Editor's Note: This new section of the bulletin will periodically feature scenes of geological interest in Kansas and from anywhere else in the world, or for that matter, on other planets in our solar system. All readers are encouraged to submit such images along with short, explanatory captions as illustrated below. Send all submissions via electronic format (images as jpegs, and separately, text in Microsoft Word or WordPerfect format) to the technical editor, Sal Mazzullo, at either salvatore.mazzullo@wichita.edu or dolomite@cox.net.

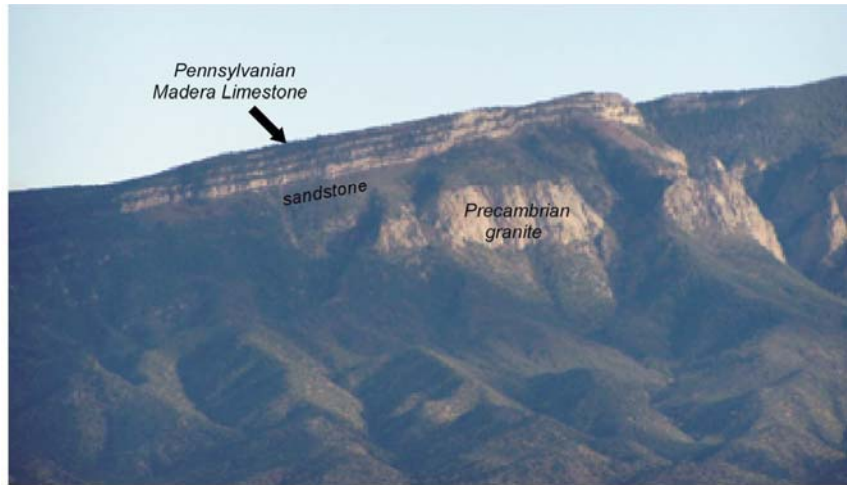


Fig. 1

The Great Unconformity

Perhaps our science's greatest unconformity is the one exposed at Siccar Point in the British Isles by virtue of the fact that it was here that James Hutton envisioned the significance of unconformities and the vastness of geologic time (a.k.a. "deep time"). Yet, there also are other great unconformities in the stratigraphic record, for example, the ones at the top of the Arbuckle and at the top of the Mississippian in the subsurface of Kansas. Below both of these unconformities are hydrocarbon reservoirs that have produced much oil and gas here and elsewhere in the mid-continent. The unconformity illustrated in Figure 1, known as "New Mexico's great unconformity", is exposed along the west face of Sandia Mountain in Albuquerque, New Mexico. The bedded rocks at the top of the peak overlying Precambrian granite are Desmoinesian (Cherokee) limestones in the Madera Formation. Poorly exposed in the slope between the limestone and granite are basal Pennsylvanian sandstones variously analogous to productive Morrowan and/or Cherokee sandstones in Kansas.

Sinkhole in Sandstones

This is very difficult for a carbonate guy like me to say, but not all sinkholes are developed in carbonate



Fig. 2

rocks. Figure 2, taken along Interstate 40 just west of Santa Rosa, New Mexico, illustrates a sinkhole in Triassic sandstones. In this area, shallow subsurface dissolution of underlying Permian evaporites resulted in collapse of overlying beds, in this case, sandstone. The geologic scenario here is virtually identical to that proposed by Dr. Robert F. Walters for the sinkholes around Hutchinson, Kansas, that is, collapse of surficial beds due to dissolution and/or mining of the subsurface Permian Hutchinson Salt.

submitted by Sal Mazzullo