

Ancient and modern tectonism in the central Virginia Piedmont: Geologic investigations following the 2011 M5.8 Mineral, Va. Earthquake

Five years ago, an M_w 5.8 earthquake struck near Mineral, Virginia, triggering a multi-agency investigation into this rare, large eastern U.S. earthquake and its geologic setting. Why did it occur where it did, and how often do quakes of this magnitude occur in central Virginia? Geologic mapping and ancillary studies reveal a history of tectonism extending from the early Paleozoic to the Quaternary, with reactivation of ancient structures in the geologic framework probably contributing to modern seismicity.

Bill Burton has been studying and mapping the geology of the Appalachians for over 30 years, primarily focusing on tectonic history, but also applying knowledge of geologic framework to ground-water issues and neotectonism.