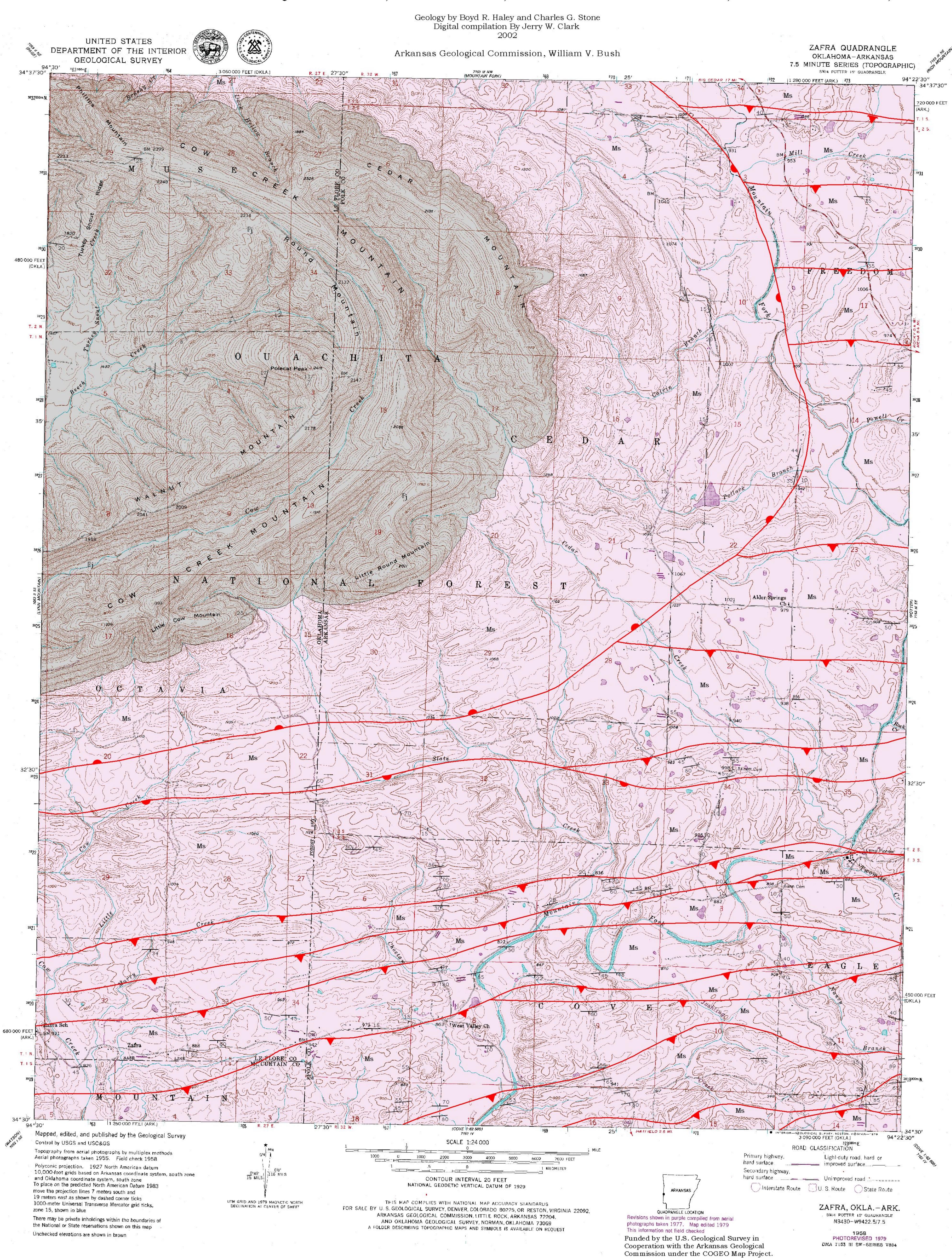
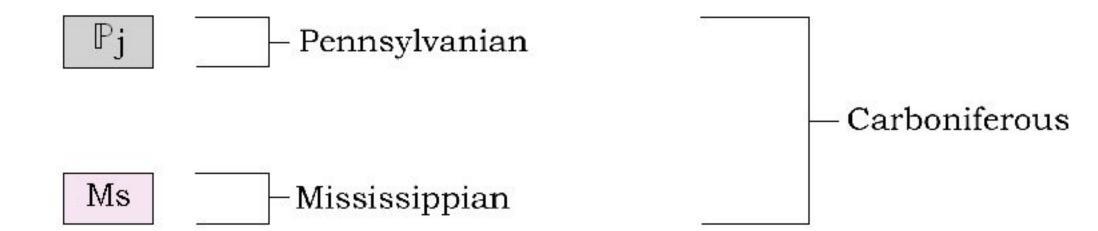
GEOLOGIC MAP OF THE ZATRA QUADRANGLE, POLK COUNTY, ARKANSAS AND McCURTAIN, LE FORE COUNTIES, OKLAHOMA



COORELATION OF MAP UNITS

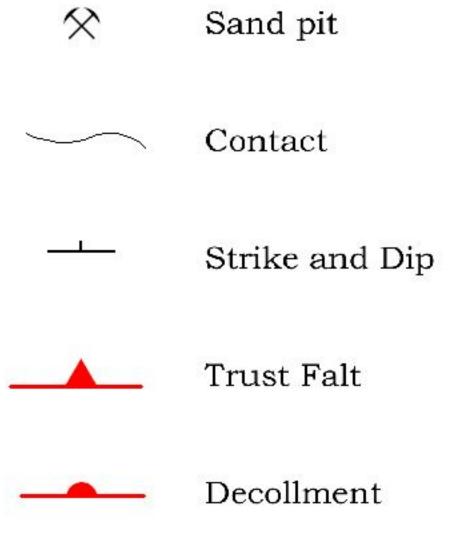


DESCRIPTION OF MAP UNITS

Jackfork Sandstone (*Pennsylvanian*) - The Jackfork is thin to massive beddedd, fine-to coarse-grained, brown, tan, or bluish gray quartzitic sandstone with subordinate brown silty sandstones and gray-black shale. Toward the north of its outcrop area the shale units of the lower and middle Jackfork takes up more of the section and the sandstones are more lenticular, often ocurring as chaotic masses in the shale. Minor conglomerates composed of quartz, chert, and metaquartzit ocur notably in the southern exposures of the formation. The Jackfork rest conformably on the Stanley. The formation is generally found to be between 3500 to 6000 feet thick.

Stanley Shale (Mississippian) - The Stanley Shale is composed predominantly of grayish-black to brownish-gray shale, with lesser amounts of thin to massive fine-grained, gray to brownish-gray feldspathic sandstone. Weathering causes the shale to turn olive-gray and the sandstone to become more porous and brown. Interbedded layers of thin black siliceous shale and chert are present and are used to subdivide the formation in other areas. Locally, volcanic tuffs (primarily the Hatton Tuff Member) and a quartzose sandstone-chert conglomerate unit (Hot Spring Sandstone Member) are present in the lower Stanley. Cone-in-cone and calcareous silty concretions are in shale. About 8,500 feet of the Stanley is present in the quadrangle. All of the formation is exposed except for about 1,600 feet of the upper portion and 1,200 feet of the lower portion. Most of the Stanley is Late Mississippian (Chesterian) as indicated by the presence of conodonts and plant fossils. The formation is a deepwater marine turbidite sequence derived primarily from a landmass (Llanoria) that existed along the southern margins of the Ouachita trough.

SYMBOLS



REFERENCES

Haley, B. R., & Stone, C. G., 1994 Geologic Map of the Little Rock Quadrangle, Pulaski County, Arkansas; AGC Open File Report Scale 1:24,000

McFarland, J. D., 1998, Stratigraphic Summary of Arkansas; Arkansas Geological Commission Information Circular 36, 39p

