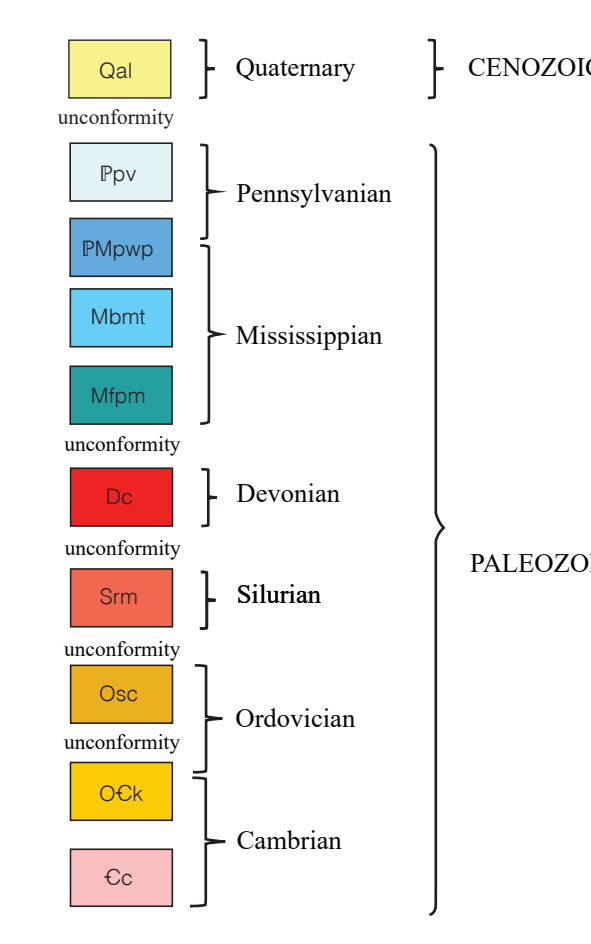


CORRELATION OF MAP UNITS



DESCRIPTION OF MAP UNITS

- Qal** Alluvium (Quaternary)—Unconsolidated deposits of sand, silt, clay, gravel, and cobbles. Not shown on the cross sections.
- Ppv** Pottsville Formation (Lower Pennsylvanian)—Lower part of formation is white or tan, fine- to coarse-grained, crossbedded quartzose sandstone and quartz-pebble conglomerate in mostly massive beds; quartz pebbles up to an inch in width. Upper part of formation is white to pale tan, very fine- to fine-grained, locally micaceous sandstone interbedded with siltstone and some coal; bedding is mostly thin and is locally irregular.
- PMpwp** Parkwood and Pennington Formations undifferentiated (Upper Mississippian and Lower Pennsylvanian)—Parkwood Formation: tan to white, fine- to medium-grained, mostly crossbedded sandstone, interbedded with brownish-gray, thin-bedded shale, mudstones, and siltstones. In a few locations, thin wisps of carbonaceous material are locally abundant. Pennington Formation: Typically gray shale interbedded with maroon and olive-colored mudstones (not exposed and presumed covered in quadrangle).
- Mbrnt** Bangor, Monteagle, and Tusculum Limestones undifferentiated (Middle and Upper Mississippian)—Bangor Limestone: Medium-gray, medium- to thick-bedded, calcareous micrite that is commonly cross-laminated and locally bioclastic. Monteagle Limestone: Light-gray, cross-bedded oolitic limestone in massive beds, with thick interbeds of bioclastic limestone (not exposed in quadrangle). Tusculum Limestone: Light-gray, medium- to thick-bedded, bioclastic or micritic limestone with locally abundant chert nodules or concretions (not exposed in quadrangle).
- Mfpm** Fort Payne Chert and Maury Shale undifferentiated (Lower and Middle Mississippian)—Fort Payne Chert: Typically white, massive chert in thin to medium, irregular (locally nodular) beds. Chert is locally suggy; most exposures contain locally abundant crinoid columns. Maury Formation: Bluish-green-gray, saprotic clay shale (not well exposed in the quadrangle).
- Dc** Chattanooga Shale (Upper Devonian)—Black, dark-gray, or dark, chocolate brown, fissile shale and very thin-bedded mudstone. Ductile deformation is evident in most outcrops, tectonic thickening/thinning is likely throughout.
- Sm** Red Mountain Formation (Silurian)—Rusty tan or brown (and locally greenish-gray), very thin- to thin-bedded shale, siltstone, and fine-grained sandstone. Outcrops commonly are stained rusty orange or limonitic yellow color from iron oxide staining. Pervasive ductile deformation of the formation is apparent throughout the quadrangle.
- Ock** Sequatchie Formation and Chickamauga Limestone undifferentiated (Middle and Upper Ordovician)—Sequatchie Formation: Mostly saprotic, rusty, purplish-maroon shale and thin siltstone and porous, friable sandstone. Medium-bedded, dark-gray lime mudstone is also exposed, which includes locally abundant brachiopod fragments. Chickamauga Limestone: Medium-bedded, purplish-gray and pale, greenish-gray mottled lime mudstone. Locally includes basal Attala Chert Conglomerate Member, which is composed of rusty, purplish-red, locally poorly sorted, subspherical, chert clast conglomerate.
- Ock** Knox Group undifferentiated (upper Cambrian and Lower Ordovician)—Carbonate outcrops (attributed to basal Copper Ridge Dolomite) consist of pale- to dark-gray, fine-grained, thin- to thick-bedded, dolograins and dolomitic, which is locally porous to cavernous and interlayered with irregular beds of white chert. Residual chert typically is white, massive, blocky chert that is commonly stained to a rusty red in spots and is locally pitted with dolomite rhomb molds and slightly bluish, medium-gray, somewhat vitreous chert, which is locally mottled or interlaminated with the white massive chert. Chert residuum commonly exposed in an orange-brown to dark-reddish-brown clay soil and is locally brecciated.
- Cc** Conasauga Formation (middle and upper Cambrian)—Thick-bedded, light-gray, fine-grained, sucrosic, dolograins that weathers to dull brown and is vuggy to cavernous throughout.

SYMBOLS FOR GEOLOGIC MAP

- Contact, located very approximately, showing location of control point (contact exposed or closely located)
- Contact, concealed beneath mapped units
- Thrust fault, located very approximately, sawteeth on upper plate
- Thrust fault, concealed beneath mapped units
- Trace of anticline axis, located approximately
- Trace of syncline axis, located approximately
- Strike and dip of bedding
- Strike and dip of overturned bedding
- Strike and dip of horizontal bedding
- Strike and dip of vertical bedding

SYMBOLS FOR CROSS SECTIONS

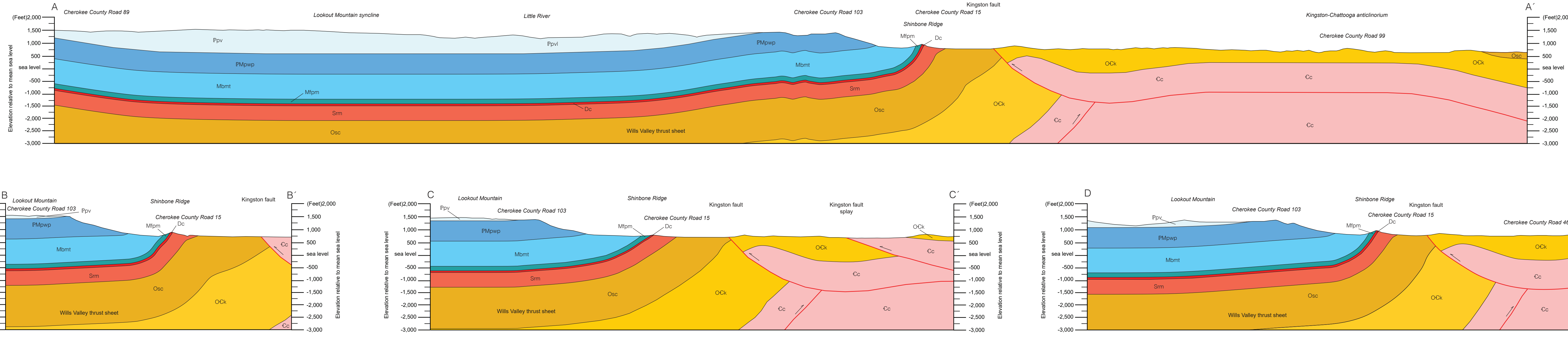
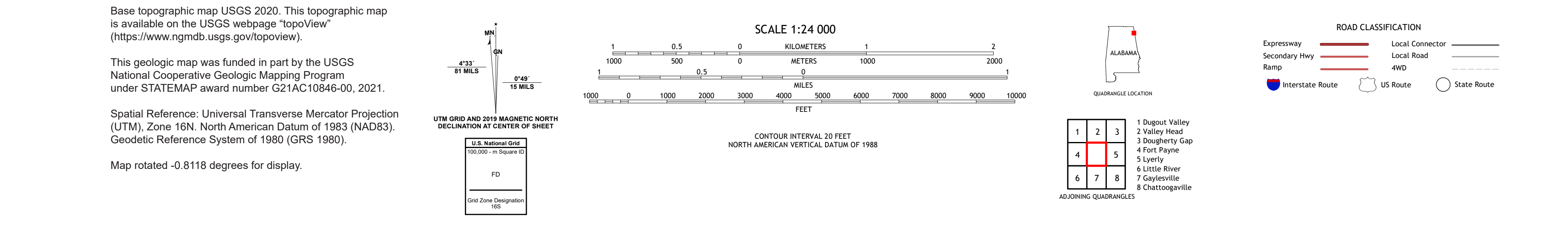
- Stratigraphic contact
- Fault showing relative movement

For additional geologic information (including detailed rock descriptions and outcrop photos, etc.), please refer to the accompanying report: Cook, B. S., 2024, *Geology of the Jamestown 7.5-minute quadrangle, Cherokee and DeKalb Counties, Alabama, and Chattooga County, Georgia*: Alabama Geological Survey Quadrangle Series 80, 34 p.

A copy of this map and report is available from the GSA Publications office (<https://www.gsa.state.al.us/ogb/publications/>).

This map was compiled for a scale of 1:24,000 and any digital enlargement of the map to scales greater than 1:24,000 will not increase accuracy and can cause misrepresentation. Map and associated digital data files may be updated in future years.

Map files are version dated, and users are responsible for obtaining the latest version of the map and associated data. Geologic map information was collected and recorded in the field by the Geological Survey of Alabama mapping staff and this map reflects an interpretation of the geology based on that data collected at the time of field mapping. Year field mapping was completed: 2022.



**GEOLOGIC MAP AND CROSS SECTIONS OF THE JAMESTOWN 7.5-MINUTE QUADRANGLE, CHEROKEE AND DEKALB COUNTIES, ALABAMA, AND CHATTOOGA COUNTY, GEORGIA**

by  
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 2024



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