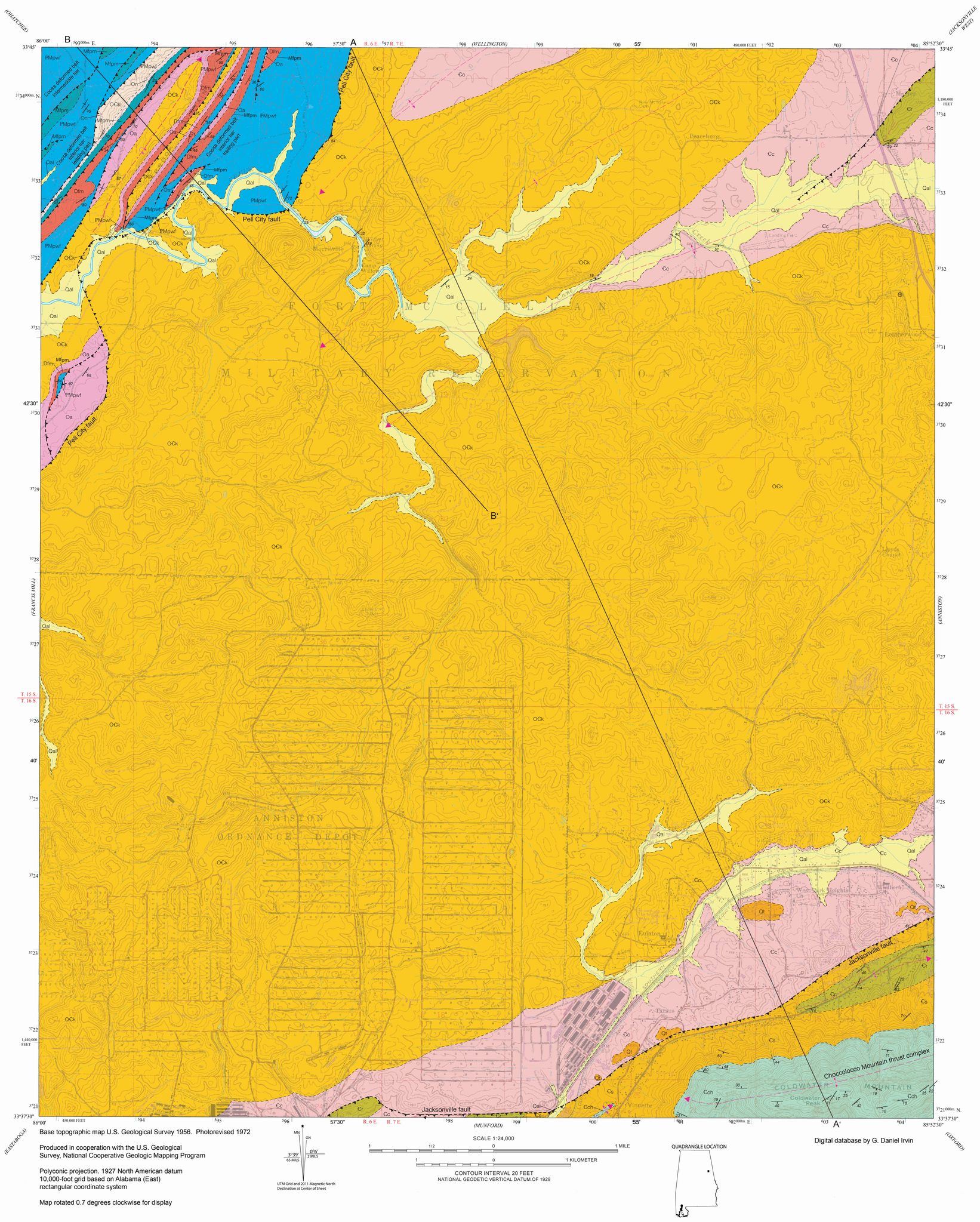

CORRELATION OF MAP UNITS

Qal, Qt	Quaternary	
unconformity		
PMpwf	Pennsylvanian	PALEOZOIC
Mfpm	Mississippian	
unconformity		
Dfm	Devonian	
unconformity		
Oa	Ordovician	
unconformity		
On		
OCkl, OCk		
Cc	Cambrian	
Cr		
Cs		
Cch		

DESCRIPTION OF MAP UNITS

Qal **Alluvium (Quaternary)**—Unconsolidated clay, silt, sand, gravel, and cobbles, including clasts of local bedrock. Mapped only along larger streams.

Qt **Terrace deposits (Quaternary)**—Yellowish-brown sandy clay and gravel. Includes subrounded to rounded oblate quartz and quartzite pebbles and cobbles.

PMpwf **Parkwood Formation and Floyd Shale undifferentiated (Upper Mississippian and Lower Pennsylvanian)—Parkwood Formation:** Medium- to dark-gray shale and mudstone with interbedded brownish-gray, very fine to fine-grained sandstone that is partly micaceous and argillaceous. **Floyd Shale:** Black, fissile clay shale with rare interbeds of dark-gray, argillaceous, micritic limestone.

Mfpm **Fort Payne Chert and Maury Formation undifferentiated (Lower and Middle Mississippian)— Fort Payne:** Light-gray, weathering white to buff, thin- to nodular-bedded chert with molds of pelmatozoan columnals. **Maury Formation:** Dark-gray, massive clay shale that locally is manganese stained.

Dfm **Frog Mountain Sandstone (Lower and Middle Devonian)**—Light- to medium-gray, fine- to very coarse grained quartzose sandstone with interbeds and partings of green to gray, purple to red-brown clay shale and reddish-brown-weathering, hematitic silty shale to shaly siltstone.

Oa **Athens Shale (Middle Ordovician)**—Dark-gray to black, fissile to platy, graptolite-bearing shale, and interbedded medium-gray, fine- to very coarse grained sandstone that is partly cherty and partly argillaceous.

On **Newala Limestone (Knox Group) (Lower Ordovician)**—Light-gray calcareous dolomite to dolomitic limestone with quartz sand in laminae.

OCk **Knox Group undifferentiated (Upper Cambrian and Lower Ordovician)**—Light- to dark-colored, dense to cavernous chert residuum commonly preserving textures of carbonate rocks; light-medium-gray, fine- to medium-crystalline, thin- to thick-bedded dolomite with nodules and stringers of medium-gray chert; light-gray micritic limestone; gray-white sandy (coarse to very coarse rounded quartz grains) chert.

OCkl **Knox Group lower part (Upper Cambrian and Lower Ordovician)**—Light-gray to tan chert, generally in thick beds; locally, coarse grained sandstone with rounded quartz grains in chert matrix.

Cc **Conasauga Formation (Middle and Upper Cambrian)**—Bluish-gray to dark-gray, cavernous, drusy, and dense chert residuum. Light-yellowish-gray, yellowish-gray, and light-medium gray, thin-bedded, fine- to medium-crystalline dolomite. Lower part contains pale-olive mudstone and shale with interbedded medium- to dark-gray, thin- to medium-bedded micritic to argillaceous limestone.

Cr **Rome Formation (Lower Cambrian)**—Pale-reddish-purple, grayish-red, and light-olive-green fissile shale with thin interbeds of very fine grained, locally micaceous, rippled sandstone and siltstone.

Cs **Shady Dolomite (Lower Cambrian)**—Medium- to dark-gray, thin- to massive-bedded, fine-crystalline dolomite. Chert residuum from the Shady is pale yellowish orange, moderate yellowish brown to moderate orange pink, commonly with dense to cavernous and spongy textures. The lower part of the Shady Dolomite includes pale-yellowish-orange, light-brown, and pale-red variegated clay, silty claystone, and shale.

Cch **Chilhowee Group (Lower Cambrian)—Weisner Formation:** Light-gray to light-pinkish-gray, thin- to medium-bedded, locally thinly laminated, partly crossbedded quartzose sandstone. Some beds contain white to grayish-pink quartz pebbles. Upper part at the contact with the overlying Shady Dolomite consists of pale-yellowish-brown to light-olive-brown, very coarse grained, poorly sorted, iron-cemented conglomeratic sandstone and pink to pale-red shale. **Wilson Ridge Formation:** Quartzose sandstone, feldspathic sandstone, and silty mudstone.

SYMBOLS FOR GEOLOGIC MAP

- Contact, located very approximately
- Contact, concealed beneath mapped units
- Thrust fault, located very approximately, sawteeth on upper plate
- Thrust fault, concealed beneath mapped units
- Trace of syncline axis, located approximately, arrow showing direction of plunge
- Trace of anticline axis, located approximately, arrow showing direction of plunge
- Water boundary
- Strike and dip of bedding
- Horizontal bedding
- Vertical bedding
- Strike and dip of overturned bedding

SYMBOLS FOR CROSS SECTIONS

- Stratigraphic contact
- Fault, showing relative movement

Base topographic map U.S. Geological Survey 1956. Photorevised 1972

Produced in cooperation with the U.S. Geological Survey, National Cooperative Geologic Mapping Program

Polyconic projection. 1927 North American datum
10,000-foot grid based on Alabama (East) rectangular coordinate system

Map rotated 0.7 degrees clockwise for display

UTM Grid and 2011 Magnetic North Declination at Center of Sheet

SCALE 1:24,000

CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

QUADRANGLE LOCATION

Digital database by G. Daniel Irvin

GEOLOGIC MAP AND CROSS SECTIONS OF THE EULATON 7.5-MINUTE QUADRANGLE, CALHOUN COUNTY, ALABAMA

by

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2013

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State Geologist