UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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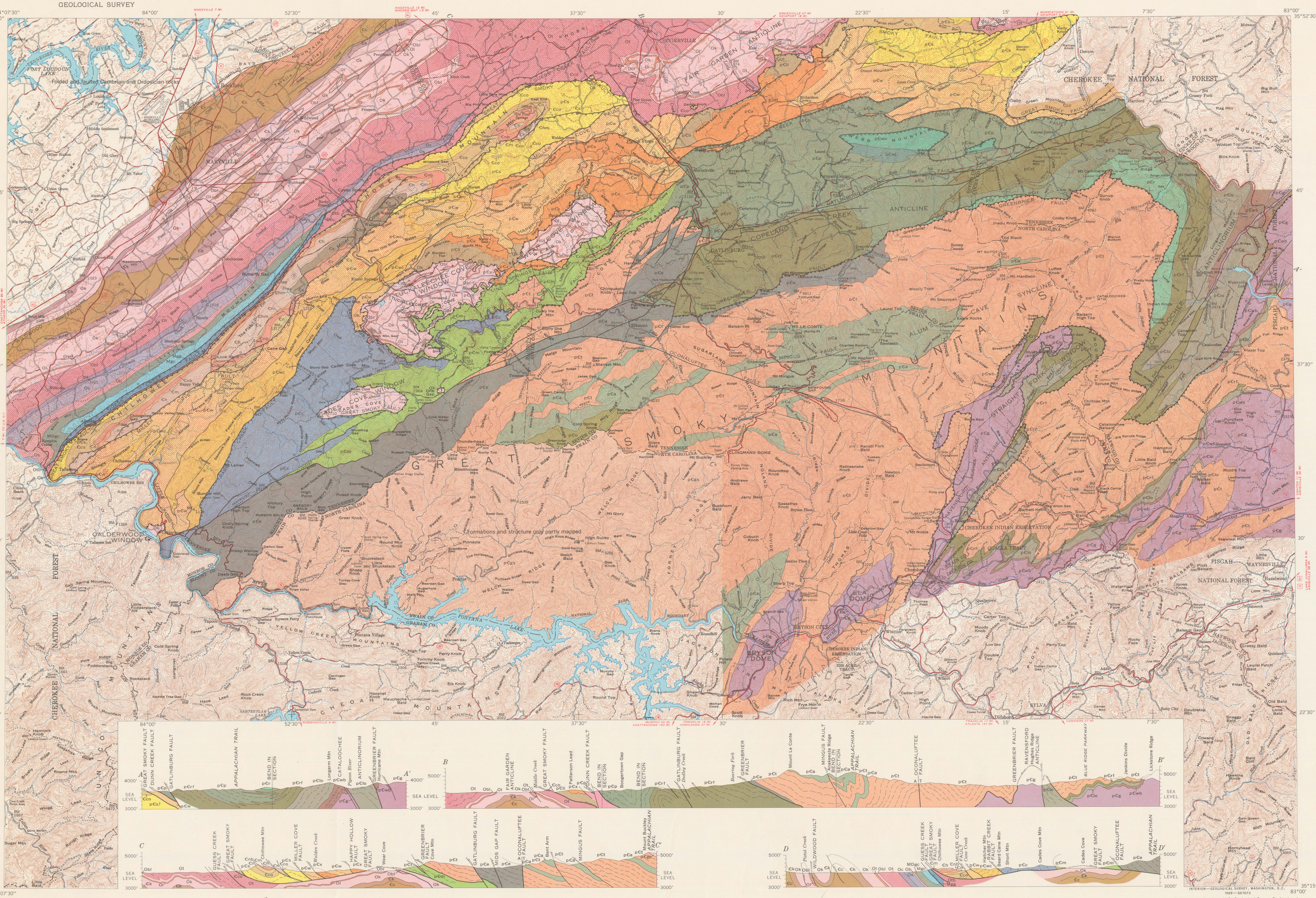
PLATE 1



Base from U.S. Geological Survey, Great Smoky Mountains National Park and Vicinity, 1961

Geology compiled from U.S. Geological Survey Professional Paper 349, parts A–D, and U.S. Geological Survey Geologic Quadrangle Maps 130, 131, and 163

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D.C.
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GEOLOGIC MAP AND STRUCTURE SECTIONS OF THE GREAT SMOKY MOUNTAINS NATIONAL PARK AND VICINITY TENNESSEE AND NORTH CAROLINA

SCALE 1:125 000

CONTOUR INTERVAL 100 FEET
DATUM IS MEAN SEA LEVEL

EXPLANATION

SEDIMENTARY ROCKS

DEVONIAN AND MISSISSIPPIAN — Upper Devonian to Upper Mississippian

- Mgc — Greasy Cove Formation
- MDgc — Grainger Formation and Chattanooga Shale (at base)
- Mgg — Greasy Cove and Grainger Formations undifferentiated

UNCONFORMITY

ORDOVICIAN — Middle Ordovician

- Ob — Bays Formation
- Os — Sevier Formation
- Oc — Chota Formation
- Ot — Tellico Formation
- Obl — Blockhouse Shale
- Otb — Tellico Formation and Blockhouse Shale undifferentiated
- Ol — Lenoir Limestone

UNCONFORMITY

Lower Ordovician — Knox Group

- Ok — Upper part includes Jonesboro Limestone, Mascot Dolomite, Kingsport Formation, Longview Dolomite, and Chepultepec Dolomite

CAMBRIAN — Middle and Upper Cambrian

- €k — Lower part includes Copper Ridge Dolomite
- €c — Conasauga Group

Lower Cambrian

- €r — Rome Formation
- €s — Shady Dolomite

Chilhowee Group

- €hm — Helenmode Formation
- €h — Hesse Quartzite
- €m — Murray Shale

CAMBRIAN(?) — Lower Cambrian(?)

- €nb — Nebo Quartzite
- €n — Nichols Shale
- €co — Cochran Formation

DISCONFORMITY(?)

PRECAMBRIAN — Later Precambrian — Ocoee Series

Walden Creek Group

- p€s — Sandsuck Formation
- p€wc, p€w — Wilhite Formation. *Coarse-grained rocks, p€wc, shown separately in the western part of the area*
- p€x — Shields Formation
- p€li — Licklog Formation

SEQUENCE BROKEN

Great Smoky Group

- p€u — Unnamed sandstone
- p€a — Anakeesta Formation
- p€t — Thunderhead Sandstone
- p€e — Elkmont Sandstone
- p€gs — Great Smoky Group, undivided

SEQUENCE BROKEN BY FAULTS

- p€c, p€wu, p€wl, p€r — Formations of the Ocoee Series not assigned to groups, separately identified in different parts of the area: Cades Sandstone, p€c; rocks of Webb Mountain and Big Ridge, upper part, p€wu, and lower part, p€wl; Rich Butt Sandstone, p€r

Snowbird Group

- p€p — Pigeon Siltstone
- p€rf — Roaring Fork Sandstone
- p€lo — Longarm Quartzite
- p€wb — Wading Branch Formation
- p€m — Metcalf Phyllite

UNCONFORMITY

Earlier Precambrian

- p€g — Basement complex. *Chiefly gneiss, schist, and granitic rocks*

INTRUSIVE IGNEOUS ROCKS

PALEOZOIC(?)

- d — Metadiorite

Contact
Dashed where approximately located

Great Smoky fault

Fault related to Great Smoky fault

Greenbrier fault

Fault related to Greenbrier fault

Thrust faults
Dashed where approximately located. Sawteeth on upper plate

Gatlinburg and related faults
U, upthrown side; D, downthrown side of high-angle reverse fault; arrows show relative movement where strike-slip component is dominant

Unclassified high-angle and low-angle reverse fault
Dashed where approximately located. U, upthrown side; D, downthrown side

Unclassified transcurrent fault
Showing relative horizontal movement. In section: T, toward observer; A, away from observer

North Carolina (Great Smoky Mountains Nat. Park.). Geol. 1:125,000. 1969.
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