NORTH CAROLINA
DEPARTMENT OF CONSERVATION AND DEVELOPMENT
Roy G. Sowers, Jr., *Director*
DIVISION OF MINERAL RESOURCES
Stephen G. Conrad, *State Geologist*

GEOLOGIC MAP SERIES 1

EXPLANATION

Qal	Alluvium
Qco	Colluvium; rock debris mantles, talus, and block fields.
	Unconformity
dd	Diabase dike (thickness on map not to scale).
	Unconformity
gr	Post-metamorphic granitic to granodioritic plutons.
peg	Pegmatite bodies with microcline, quartz, plagioclase, and muscovite, locally with garnet and other minerals.
	Unconformity
qfg	Quartz-feldspar gneiss, muscovite-feldspar gneiss, and minor muscovite schist.
sgn	Mica schist with minor garnet and sillimanite, hornblende schist, and feldspathic gneiss. Great lateral variability.
hg	Hornblende schist and hornblende plagioclase gneiss, commonly with thin compositional layering.
BREVARD ZONE	
mgs	Muscovite-garnet schist, muscovite-chlorite-garnet schist, muscovite-biotite-garnet schist, and rarely, thin quartzite layers. Schists locally contain kyanite, staurolite, and graphite. Schists typically with "fish-scale" or "button" cleavage habit.
mu	Muscovite schist and muscovite-quartz-biotite schist, locally with scattered garnet and graphite. Typically coarser grained than mgs and lacking "fish-scale" cleavage. Thin layers of hornblende schist and feldspathic gneiss. Laterally equivalent to mgs.
fg	Foliated granitic gneiss with minor biotite schist and gneiss and quartz-feldspar gneiss.
bg	Biotite gneiss and schist with prominent compositional layering, locally with coarse muscovite schist, hornblende gneiss, and foliated granitic gneiss. Heterogeneous composition.
qz	Quartzite and muscovitic quartzite. Laterally equivalent to bg.

Contact, dashed where approximate

Fault, dashed where approximate. Arrows show apparent relative horizontal movement.

Silicified mylonites in shear zone

Major antiformal fold axis

Major synformal fold axis

PLANAR STRUCTURES

Compositional layering

Schistosity

Gneissic foliation

Rock cleavage of undetermined origin in quartzite or gneiss.

Axial plane and/or axial plane cleavage

Generalized attitude of crumpled compositional layering.

Joints

LINEAR STRUCTURES

Crinkle fold axis

Long axis of pebbles, rods, boudins, augen, etc.

Minor antiformal fold axis

Minor synformal fold axis

Mineral elongation lineation

MINERAL LOCALITIES

SM Sillimanite

GR Graphite

TA Talc, commonly with tremolite, or actinolite, or chlorite, or serpentine.

TM Tourmaline in quartz veins

FE Massive magnetite, hematite, or limonite, usually in pieces of float.

MU Coarse-grained muscovite

Topographic base mapped, edited, and published by the Geological Survey, U.S. Department of the Interior in cooperation with the North Carolina Department of Conservation and Development.

Geology mapped in 1965 and 1966

ROAD CLASSIFICATION
Heavy-duty — Light-duty
Medium-duty — Unimproved dirt
U.S. Route — State Route

GEOLOGY OF THE PILOT MOUNTAIN AND PINNACLE QUADRANGLES, NORTH CAROLINA

By
David E. Dunn and Peter W. Weigand

1969