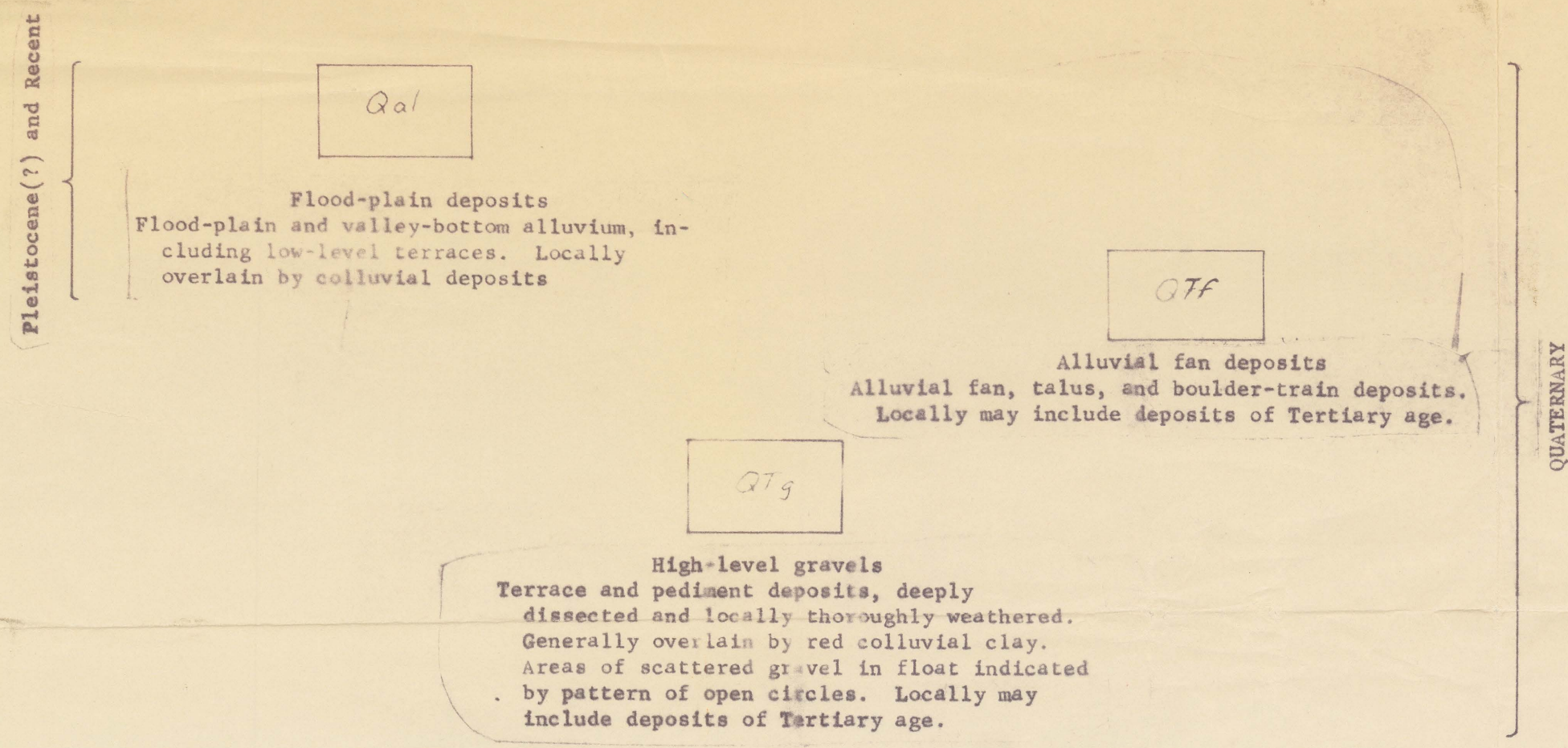


EXPLANATION



BLUE RIDGE THRUST SHEET

GRANDFATHER MOUNTAIN WINDOW

BREVARD FAULT ZONE

INNER PIEDMONT BELT

TABLEROCK THRUST SHEET

Pzg

Granodiorite and pegmatite. Coarse- to very coarse-grained white muscovite granodiorite, containing various proportions of potassium feldspar.

MIDDLE OR UPPER PALEOZOIC

cs

Shady Dolomite. Thick-bedded to massive, white, light gray, blue-gray or buff-gray crystalline dolomite containing thin light-gray or greenish phyllitic partings.

cu, cm, ccl, cq

Chilhowee Group

cu, upper quartzite unit, thin- to thick-bedded, medium- to fine-grained, white, greenish-gray or bluish-gray sugary quartzite and arkosic quartzite containing partings and thin interbeds of blue phyllite. Contains some massive beds of white and blue-gray vitreous quartzite with Scolithus.

cm, phyllite unit, lustrous blue phyllite, containing interbeds of fine-grained light gray or blue-gray quartzite.

ccl, lower quartzite unit, thick- to thin-bedded, fine- to medium-grained white, gray, or greenish quartzite and arkosic quartzite, containing interbeds of green sericite phyllite, and a few thin beds of quartz-pebble conglomerate in lower part.

cq, thin tectonic slices of fine-grained white, gray or light green quartzite and arkosic quartzite intercalated with gneisses along faults southeast of the Grandfather Mountain window.

Pzpcg

Phyllonitic schist and gneiss. Lustrous green or silvery-gray sericite-chlorite schist containing altered muscovite porphyroclasts, interlayered with fine-grained biotite gneiss. Lacks pegmatite.

qm

Quartz Monzonite. Medium-grained, light- to medium-gray, massive to gneissic biotite quartz monzonite. Probably equivalent to the Toluca quartz monzonite.

agn

Henderson Gneiss. Fine- to medium-grained, strongly foliated and lineated biotite quartz monzonite gneiss, commonly containing augen of feldspar jacketed by quartz and plagioclase and strongly aligned parallel to lineation.

um

Ultramafic rocks. Fine- to medium-grained dark green amphibole-talc-chlorite schist containing coarse-grained amphibole knots and a few relict grains of pyroxene and oliving.

AUTOCHTHONOUS (?) ROCKS

pcl

Linville Metadiabase. Blue-green, green or gray, medium- to fine-grained massive to schistose greenstone, locally shows relict diabasic texture.

pfg, pfgv, pfga, pfgvm

Grandfather Mountain Formation

pfg, fine-grained, medium or dark gray or greenish-gray, thinly laminated siltstone, phyllite, and phyllitic schist, commonly calcareous, and containing massive beds of graywacke and graywacke conglomerate and rarely thin beds of impure marble.

pfga, fine- to coarse-grained, light-green, tan or gray sericitic arkose, locally containing lenses of pebble- and cobble-conglomerate, especially in upper part.

pfgv, fine- to medium-grained, light gray to dark blue-gray felsic flows, crystal tuffs, and tuffaceous sedimentary rocks, locally with thin flows of porphyritic andesite. Includes small intrusive body of felsite near Rose Mountain.

pfgvm, amygdaloidal andesite or basalt, associated with blue or silvery tuffaceous phyllite and dark quartzite.

Pzpcg

Gneiss. Fine-grained well layered leucocratic and mesocratic biotite-quartz-plagioclase gneiss similar to gneiss of the Inner Piedmont belt. Contains pods and layers of muscovite pegmatite.

gn

Gneiss and schist. **Pzpcg**, fine-grained, well layered, light- to medium- and dark-gray biotite-quartz-plagioclase gneiss, commonly containing some interlayered mica schist, amphibolite and amphibolite gneiss and pods of muscovite pegmatite. Locally contains thin layers of micaceous quartzite.

Pzpm, muscovite- and biotite muscovite schist, commonly with garnet, with interlayered fine-grained biotite gneiss, amphibolite, and amphibole and quartz schist. Locally contains thin layers of gray micaceous quartzite.

PLANAR FEATURES

Strike and dip of bedding

Inclined $\swarrow 45^\circ$ **Vertical** **Overturned** $\swarrow 45^\circ$ **Top uncertain** $\swarrow 45^\circ$

Strike and dip of compositional layering

Horizontal **Inclined** $\swarrow 45^\circ$ **Vertical** **Generalized** $\swarrow 45^\circ$

Strike and dip of crystallization foliation in medium-grade metamorphosed rocks, cataclastic foliation in low-grade metamorphosed rocks, and cleavage in bedded rocks

Horizontal **Inclined** $\swarrow 45^\circ$ **Vertical**

Strike and dip of foliation in phyllonite zones

Inclined $\swarrow 45^\circ$ **Vertical**

Strike and dip of axial plane of medium- or small-scale fold

Isoclinal $\swarrow 45^\circ$ **Non-isoclinal** $\swarrow 45^\circ$

LINEAR FEATURES

May be combined with any of the above symbols of planar features

Bearing and plunge of mineral alignment, stretching, streaking, or grooving

Horizontal **Inclined** $\swarrow 10^\circ$

Bearing and plunge of axis of minor fold or crenulation, or of intersection of S-planes

Horizontal **Inclined** $\swarrow 10^\circ$

Active **Inactive**

Small mine or prospect

f feldspar

m mica

Mn manganese

Pb lead

Ag silver

Zn zinc

U uranium

Active **Inactive**

Quarry

st building stone

rm road metal

Active **Inactive**

Gravel or clay pit

k kaolin

g gravel

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M(200)
R29a
no. 64-132
Sheet 304
c.1

ST Stauroilite
KY Kyanite
SI Sillimanite

Occurrences of selected metamorphic index minerals

3 1818 00258446 2

North Carolina (Grandfather Mountain window) Geol. 1:48,000 1964

sheet 304

copy 1

Legend to accompany sheet 1

pbgm

Brown Mountain Granite. Massive, white, medium- to coarse-grained leucocratic granite.

pwm

Wilson Creek Gneiss. Medium- to coarse-grained cataclastic granitic gneiss, strongly foliated and commonly phyllonitic. Ranges in composition from granite to quartz diorite, but is most commonly quartz monzonite. Blue overprint indicates areas of abundant phyllonite.

pbgm, poorly foliated coarse-grained leucocratic quartz monzonite, mapped locally near Rose Mountain.

pbr

Blowing Rock Gneiss. Coarse-grained quartz monzonitic augen gneiss containing microcline porphyroclasts 2-5 cm in diameter.

pfg

Granberry Gneiss. Layered cataclastic granodiorite and quartz monzonite gneiss, generally interlayered with dark biotite gneiss and fine-grained biotite schist, and containing occasional layers, lenses, and pods of amphibolite gneiss and amphibolite. Also includes some well-foliated nonlayered granite and quartz monzonite.

pfgn

Gneiss southeast of the Grandfather Mountain window. Fine- to medium-grained conspicuously layered non-granitic biotite gneiss interlayered with biotite-muscovite schist. Contains layers and pods of amphibolite and amphibole gneiss and bodies of muscovite pegmatite.

pfgs

Mica schist, mica gneiss and amphibolite.

pbgm, biotite-muscovite schist and gneiss, interlayered with subordinate amounts of amphibolite and amphibole gneiss.

pbgm, layered amphibolite and amphibole gneiss, interlayered with subordinate amounts of mica schist and mica gneiss.