

PENNSYLVANIAN
CARBONIFEROUS

Pf

Fountain formation

Pink to reddish-orange arkosic sandstone and conglomerate, and dark reddish-brown mudstone.

ANGULAR UNCONFORMITY

gd

Granodiorite

Mottled white and black medium-grained, rarely coarse-grained, rock composed essentially of quartz, oligoclase, microcline, and biotite. Porphyritic granodiorite in the northwestern part of the area has been cataclastically deformed.

q qp

Quartzite unit

White to light-gray extremely fine-grained quartzite with local conglomeratic layers. Includes layers of sericite-quartz phyllite and schist (qp). ^{1/}

s

Mica schist unit

Principally interlayered silver-gray to dark-gray fine- to medium-grained sericite-biotite-quartz schist ^{1/} and quartz-sericite-biotite schist, both of which commonly contain porphyroblasts of sillimanite, andalusite, or garnet; locally contains layers of conglomeratic schist and lenses of lime silicate rock. The contact of the mica schist unit with the amphibolite unit is commonly a transition zone composed of interlayered mica schist and garnetiferous biotite-quartz gneiss.

ds dsq

Deformed schist

Includes cataclastically deformed sericite-biotite-quartz schist ^{1/}, quartz-sericite-biotite schist, and biotite-plagioclase-quartz schist. A central layer of granulite (dsg), composed of microcline, quartz, and epidote, is bordered by biotite-plagioclase augen gneiss.

alq al
als

Layered lime-silicate gneiss

Varicolored well layered gneiss composed essentially of epidote, quartz, hornblende, and plagioclase, but with garnet, magnetite-ilmenite, microcline, diopside, cummingtonite, tremolite, and calcite commonly present. Includes layers of quartz gneiss (alq), containing abundant magnetite-ilmenite, and sericite-biotite schist (als) ^{1/}.

a

Amphibolite unit undifferentiated

ahbm ahb

Interlayered amphibolite and biotite-plagioclase-quartz gneiss

Dark-gray to black fine-grained equigranular rocks having closely spaced compositional and color layering; includes amphibolite, containing hornblende, plagioclase, and quartz, interlayered with biotite-plagioclase-quartz gneiss. A discontinuous layer of medium-grained amphibolite (ahbm) has a speckled texture caused by hornblende grains in a matrix of quartz and plagioclase.

gqm

Quartz monzonite gneiss

Light orange-pink to gray fine- to medium-grained foliated gneiss, composed essentially of microcline, plagioclase, quartz, and biotite. Locally contains layers of amphibolite, plagioclase-hornblende-biotite gneiss, and plagioclase-biotite gneiss.

dgqm

Deformed quartz monzonite gneiss

Cataclastically deformed gneiss similar in mineralogical composition to quartz monzonite gneiss; thin sections show mortar texture and granulated zones. Includes bodies of porphyritic granodiorite too small to be mapped.

g

Gneiss unit undifferentiated

ggb gghb gg

ggl

Gray gneiss

Dominantly gray fine-grained plagioclase-quartz-biotite gneiss, with numerous layers of darker gray to black plagioclase-hornblende gneiss and amphibolite; locally contains layers of lime silicate gneiss, quartz gneiss, and marble. A layer of garnet-biotite schist (ggb) separates gray gneiss from quartz monzonite gneiss. In west-central area the gray gneiss is subdivided into: interlayered plagioclase-quartz-biotite gneiss, amphibolite, and plagioclase-hornblende gneiss (gghb); lime silicate gneiss and amphibolite (ggl), with minor layers of quartz gneiss, marble, and plagioclase-quartz-biotite gneiss.

PRECAMBRIAN

Relative ages among these rock units are unknown

^{1/} The term sericite is used in the rock descriptions to refer to white mica with high birefringence, probably predominantly muscovite, but possibly including other micas such as paragonite and pyrophyllite which cannot be differentiated readily by optical methods.