

BEDROCK GEOLOGY OF PORTAGE COUNTY, WISCONSIN

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EXPLANATION

CORRELATION

DESCRIPTION

PALEOZOIC

Cambrian

ss

SANDSTONE UNDIFFERENTIATED (ELK MOUND GROUP)

Well- to poorly-sorted quartz arenites, commonly iron-oxide cemented, feldspathic, and conglomeratic near the Cambrian/Precambrian unconformity. Red and green shales occur locally.

Middle Proterozoic

ra

ANOROGENIC INTRUSIVE ROCKS OF THE WOLF RIVER BATHOLITH (About 1500 Ma)

Red River adamellite. Coarse- to medium-grained porphyritic adamellite (quartz monzonite), biotite as dominant mafic phase, common igneous flow-alignment of alkali feldspar phenocrysts.

wa

Waupeca adamellite. Coarse-grained massive porphyritic adamellite with characteristic rapakivi-mantled ovoidal alkali-feldspar.

wrg

Wolf River granite. Red, coarse-grained massive porphyritic granite and adamellite, hornblende and biotite as dominant mafic phases, typically with large ovoidal alkali-feldspars.

m

Mafic plutonic rocks, probably equivalent to anorthosite, gabbro, or monzonite exposed in northeastern Wisconsin but defined by aeromagnetic anomalies in Portage County.

oq

QUARTZITE AND ASSOCIATED METASEDIMENTARY ROCKS (Baraboo interval)

Orthoquartzite, pink to green, white, gray, or yellowish.

ang

Conglomerate, with quartz and rock clasts.

arg

Argillite, typically associated with chert and iron-rich rocks.

mqCr

Micaceous quartzite, some with chromian muscovite-Cr.

ch

Chert, pink to black carbonaceous.

if

Iron formation (hematite or magnetite banded-ore) and iron-rich quartzite/chert.

rg

ANOROGENIC GRANITE

Pink to red biotite granite, typically granophyric; also two-mica equigranular granite.

gr

SYN- TO LATE-KINEMATIC GRANITIC ROCKS

Red to pink biotite-granite and granodiorite, typically equigranular massive to porphyritic.

grf

Granitic rocks similar to gr but foliated.

grt

Amphibole-rich granodiorite and quartz diorite, gradational with gr.

mg

MAFIC INTRUSIVE ROCKS

Gabbro and pyroxenite, undeformed to well-foliated.

hd

Hornblende diorite and scattered occurrences of tonalite, foliated to less commonly massive.

gd

PRE- TO SYN-KINEMATIC INTERMEDIATE INTRUSIVE ROCKS

Granodiorite to tonalite, coarse-grained equigranular to porphyritic with abundant biotite and hornblende, typically well-foliated.

tn

PRE- TO SYN-KINEMATIC TONALITES ALONG THE WISCONSIN RIVER (1820 to 1840 Ma)

Gray to white, coarse- to fine-grained with well-developed foliation and lineation, intruded by granitic dikes.

gth

INTRUSIVE HYBRIDS — DISCRETE OR IN CONTAMINATED/DEFORMED ZONES BETWEEN PLUTONS AND COUNTRY ROCKS

Granite/felsic-intermediate volcanic hybrid, fine-grained gray to gneissic-banded gray to pink rock, also biotite schist.

gmh

Granite/mafic volcanic hybrid, pink/black "salt and pepper" - textured rock or mafic banded-gneiss, also hornblende schist.

fv

FELSIC TO INTERMEDIATE VOLCANIC ROCKS — ORIGINALLY PYROCLASTIC AND PORPHYRITIC ROCKS

Quartz-sericite schist/phyllite and biotite-chlorite schist.

fvp

Quartzofeldspathic gneiss, some with feldspar porphyroblasts.

fvp

Pink to gray granitic felsites and porphyries, mostly fine grained.

mv

MAFIC VOLCANIC ROCKS — ORIGINALLY FLOWS, VOLCANICLASTIC AND DIABASE ROCKS

Chlorite, actinolite, and hornblende schist with amphibolite at higher metamorphic grade, rare preservation of amygdaloidal and pillow structures.

um

ULTRAMAFIC ROCKS — ASSOCIATED WITH VOLCANIC UNITS

Talc-serpentine schist, metapyroxenite, metaperidotite.

gnw

gneiss along the Wisconsin River (About 2800 Ma)

Quartzofeldspathic gneiss and migmatite, well-layered/banded, granite to tonalite in composition, with amphibolite and biotite schist subordinate. Intruded by Proterozoic tonalite and several generations of granite pegmatites.

PRECAMBRIAN

Early Proterozoic

Archean and Early Proterozoic?

Archean

