

EXPLANATION

UNCONSOLIDATED QUATERNARY

INTRUSIVE ROCKS MESOZOIC

PRECAMBRIAN

WISSEMEYER GROUP

CAMBRO-ORDOVICIAN (?) GLENARM SUPERGROUP

Alluvium
Interbedded, poorly-sorted country rock and vein quartz gravels, quartzose sands, micaceous silts and kaolinitic clays. Typically confined to flood plains of perennial streams in valleys and gathering areas dissected by ephemeral streams in upland areas. Sediment size and mineralogy are directly related to the adjacent country rock and geomorphic setting. In rural, deeply dissected areas, alluvium may be mixed with fine to very coarse colluvium. In urban areas this unit cannot be adequately shown since it is commonly overlain by artificial fill and/or has been severely disturbed. Thickness ranges from 0.5 to 6 meters.

Diabase
Probable location of Mesozoic diabase dike based on the surface distribution of diabase clasts. Diabase is a hard, massive, fine-grained, black rock consisting of pyroxene and plagioclase, occurring typically in the field as rust-colored cobbles and boulders. Clusters of this symbol may represent either successive points along a continuous dike or a swarm of discrete dikes.

Top of crystalline stratigraphic section

Sykesville Formation
Piney Run Formation

Sykesville Formation
Piney Run Formation
Fine-grained plagioclase-chlorite-muscovite-quartz schist, locally with chloritized biotite, and commonly bearing garnet. Includes 10 to 30 percent fine-grained biotite quartzite, in beds generally thinner than 10 centimeters. Locally has a "seamed" appearance due to thin-bedded laminae of milky quartz. Thickness about 1,500 meters. Replaces the Sykesville Formation along strike.

Sykesville Formation
39a Gneiss member. Poorly foliated to massive, fine to medium-grained biotite-plagioclase-quartz gneiss, deceptively granite-like in appearance, containing sparse to numerous clasts ranging in size from granules to cobbles and larger slabs. Clasts are chiefly chloritized biotite schist chips, commonly with garnet plus magnetite or pyrite. Nearly abundant are quartz pebbles and granules, less common are cobbles of light gray, fine-grained quartz (feldspathic) rock. Feldspar granules very uncommon. Weathers to a bouldery soil. Thickness about 1,400 meters.
um Undifferentiated ultramafic and mafic rock. Chiefly amphibolite and actinolite (massive actinolite rock) plus subordinate chlorite schist and metasedimentary mica-quartz schist. Locally talcose.
39b Schist member. Facies equivalent of the gneiss member. Resembles the gneiss member but generally finer grained, commonly garnetiferous, very muscovitic, well foliated, and locally devoid of clasts. Includes a few occurrences of amphibolite which are too small to show on the map. Thickness about 1,400 meters.
ac Actinoschist. Several occurrences in the west part of the map of schistose rock consisting of randomly oriented actinolite.
ns Non-serpentinitic ultramafic rock. An occurrence in the northwest section of the map of actinolite-bearing talc-chlorite schist.

Oella Formation
Medium-grained biotite-plagioclase-muscovite-quartz schist, rarely garnetiferous, interlayered a centimeter to decimeter scale with fine-grained biotite-plagioclase-quartz gneiss. Schist and gneiss subequal in abundance. Thickness about 300 meters.
a Amphibolite. An occurrence of plagioclase-hornblende gneiss (amphibolite) in the southwest part of the map.
ns Non-serpentinitic ultramafic rock. Any one or more of the following: schistose to massive actinolite rock, chlorite schist, soapstone.
q Vein quartz. A short, narrow ridge of massive, milky, vein quartz near the southeast corner of the map.
s Serpentine. A small mass of serpentine rock underlying an 0.3 square kilometer area at the intersection of Deer Park and Lyons Mill Roads in the southwestern section of the map. Commonly waxy and silicified.
um Undifferentiated ultramafic and mafic rock. Amphibolite (locally with garnet or quartz) plus the rock types represented by "ns" and "q".

Loch Raven Schist Pleasant Grove Schist *
Pleasant Grove Schist *
Uniform, fine-grained plagioclase-chlorite-muscovite-quartz schist, locally with magnetite, rarely with garnet. Commonly accompanied by numerous thin veins and lenses of milky quartz and thin beds of quartzite, imparting a "seamed" appearance to the rock. Thickness about 1,200 meters. Equivalent to the Loch Raven Schist on the opposite flank of the Sykesville syncline.

Loch Raven Schist
1 Loch Raven Schist. Uniform, medium- to coarse-grained biotite-plagioclase-muscovite-quartz schist with lenses and pods of vein quartz. Locally biotite-rich and/or feldspar-rich. Includes rare quartzite. Thickness ranges from 0 to 1,000 meters.
lg Garnet facies. Garnet common; staurolite and kyanite rare or absent.
lg-s Garnet-staurolite facies. Garnet and staurolite common; kyanite rare or absent.
lg-k Garnet-kyanite facies. Garnet and kyanite common; staurolite rare or absent.
lg-s-k Garnet-staurolite-kyanite facies. Garnet, staurolite, and kyanite all common.
a Amphibolite. An occurrence of plagioclase-hornblende gneiss (amphibolite) in the east-central part of the map.
ea Epidote amphibolite. Fine- to medium-grained epidote-plagioclase-hornblende gneiss (epidote amphibolite) strikingly laminated on a scale of millimeters.
ed Epidote. An occurrence in the north-central part of the map of quartz-epidote rock (epidote) containing chloritized hornblende.
ns Non-serpentinitic ultramafic rock. Any one or more of the following: schistose to massive actinolite rock, chlorite schist, soapstone.
p Pegmatite. An occurrence in the southwest corner of the map of very coarse-grained granite (pegmatite) together with considerable fine-grained, cherty white feldspar-rich rock (aplite).
q Vein quartz. An occurrence in the west-central part of the map of massive, vein quartz.
s Serpentine. Pale green to grey weathering, dark green to bluish-black, schistose to massive serpentine rock, locally picroilite, commonly bearing relict olivine and pyroxene and, in places, chrome, hematite and irregularly fractured and silicified. Veined in places by white magnetite, chalcocite, calcite, desferite, chrysolite, and common opal. Soil cover very thin or absent.
um Undifferentiated ultramafic and mafic rock. Amphibolite plus chlorite schist and massive actinolite rock.
w A single occurrence of fine-grained biotite granite along Red Run in the south-central part of the map. Tentatively assigned to the Woodstock Granite (y).
r Rush Brook Member. Chiefly fine- to medium-grained biotite-plagioclase-muscovite-quartz schist with a tendency for biotite to occur in clots giving the rock a spotted appearance. Locally contains fine feldspar mugs (less than 5 mm), and, in places, tourmaline. Minor fine-grained, slabby gneiss and biotite quartzite. Thickness ranges from 0 to 800 meters.
m Marble. Inferred to underlie a short, narrow valley in the southeast corner of the quadrangle although no outcrops are known.

normal fault
U - upthrown side
D - downthrown side

thrust fault
teeth on upper plate

axial trace of anticline or dome

axial trace of syncline

synformal anticline **antiform anticline**

axial trace of Texas-Phoenix nappe

vertical **inclined** **horizontal**
foliation or schistosity
(everywhere virtually parallel to compositional layering)

symmetric **dextrally asymmetric** **sinistrally asymmetric**
axis and symmetry of minor fold

mineral lineation

QUADRANGLE LOCATION

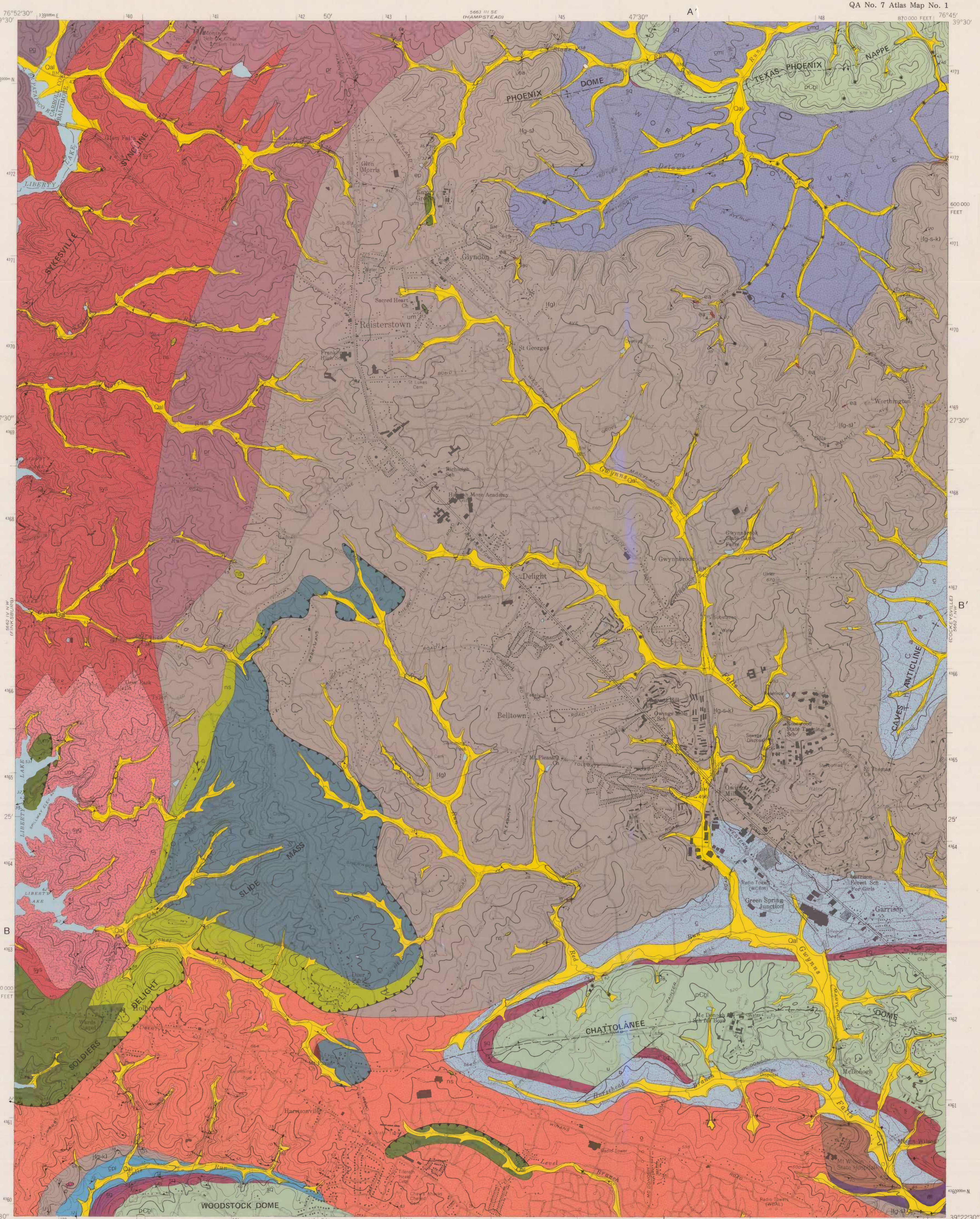
STATE OF MARYLAND
DEPARTMENT OF NATURAL RESOURCES
MARYLAND GEOLOGICAL SURVEY
Kenneth N. Weaver, Director
Copies of Atlas available from
Maryland Geological Survey
Johns Hopkins University
Baltimore, Maryland 21218

SCALE 1:24,000
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 0 1 2 3 4 5 6 7 8 9 10 KILOMETERS

CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

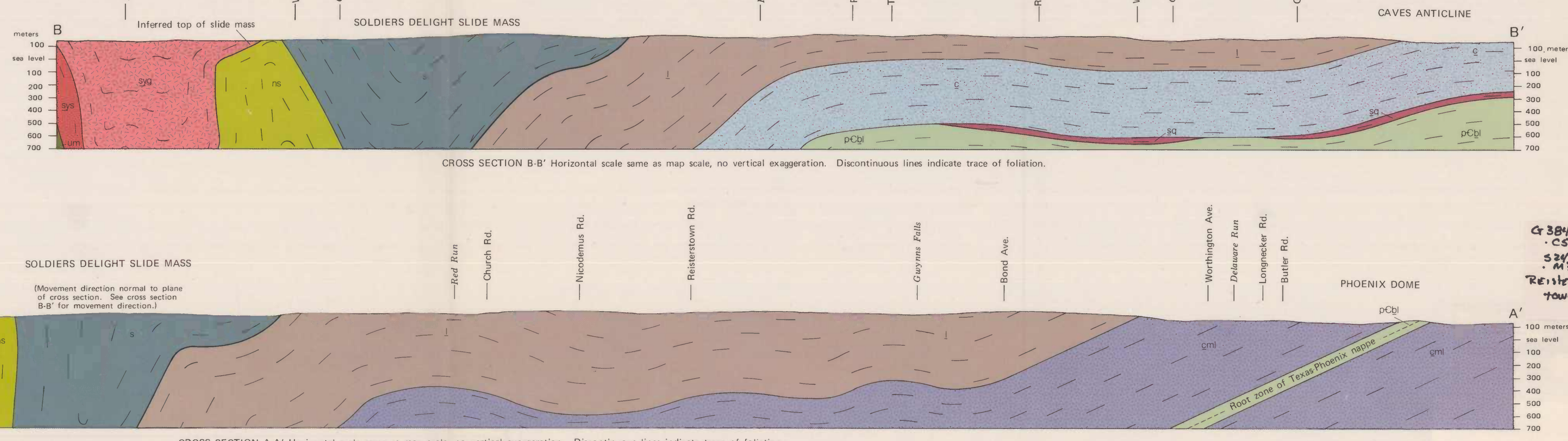
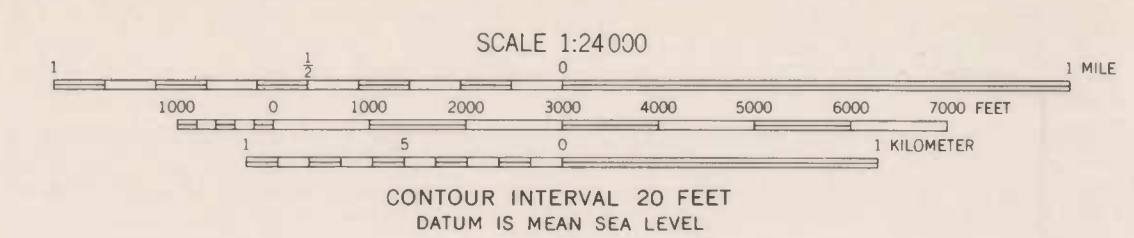
CROSS SECTION B-B' Horizontal scale same as map scale, no vertical exaggeration. Discontinuous lines indicate trace of foliation.

CROSS SECTION A-A' Horizontal scale same as map scale, no vertical exaggeration. Discontinuous lines indicate trace of foliation.



REISTERSTOWN QUADRANGLE: GEOLOGY, HYDROLOGY AND MINERAL RESOURCES
MAP 1. GEOLOGIC MAP OF THE REISTERSTOWN QUADRANGLE, MARYLAND

By
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1977



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CS
528
143
Reisterstown