

Winsted Quadrangle Bedrock Geology Map w/Explanation

Charles W. Martin

Explanation

Map

Cross-Sections

Geologic Map of the Winsted Quadrangle, Connecticut

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(SOUTH SANDSFIELD)

PLATE 1

(WEST GRANVILLE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF CONNECTICUT
HIGHWAY DEPARTMENT

WINSTED QUADRANGLE
CONNECTICUT
7.5 MINUTE SERIES (TOPOGRAPHIC)



(WEST TORRINGTON)

Mapped, edited, and published by the Geological Survey
Control by USGS, USC&GS, and Connecticut Geodetic Survey
Topography from aerial photographs by multiplex methods
Aerial photographs taken 1944 Field check 1948
Revised 1956

Polyconic projection. 1927 North American datum
10,000-foot grid based on Connecticut coordinate system
1000-meter Universal Transverse Mercator grid ticks,
zone 18, shown in blue

Fine red dashed lines indicate selected fence and field lines
visible on aerial photographs. This information is unchecked

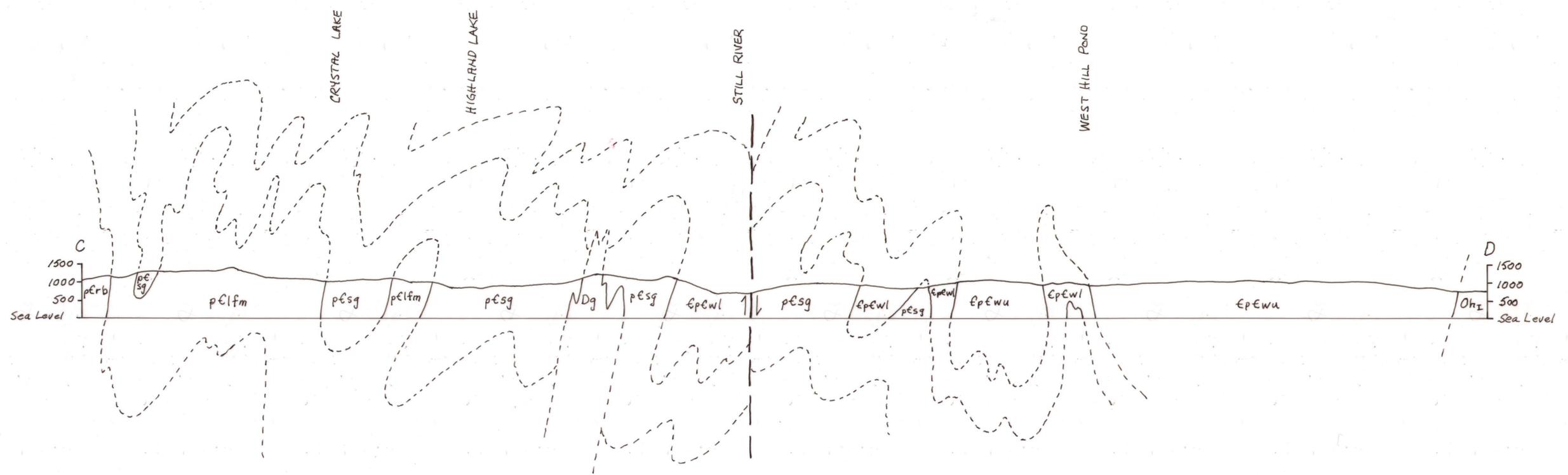
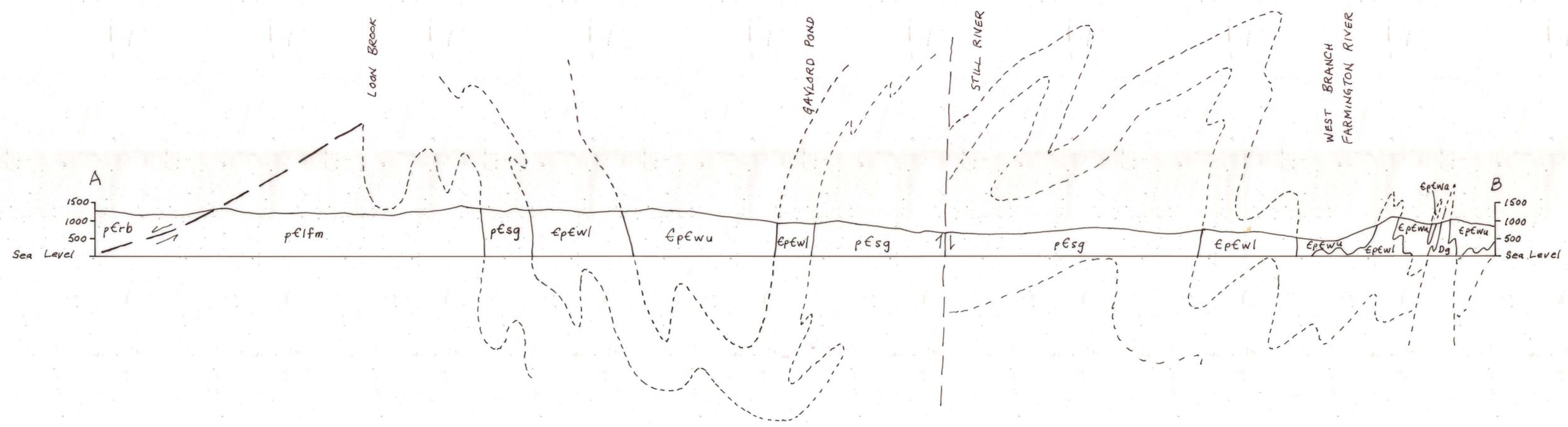


THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, WASHINGTON, D. C. 20242
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

Revisions shown in purple compiled in cooperation with
Connecticut Highway Department from aerial photographs taken 1969
This information not field checked
Areas covered by dashed light purple pattern
are subject to controlled inundation

GEOLOGIC MAP OF THE WINSTED QUADRANGLE, CONNECTICUT
BEDROCK GEOLOGY BY CHARLES W. MARTIN 1969-72

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WINSTED QUADRANGLE CROSS-SECTIONS
CHARLES W. MARTIN

INTERPRETATION ABOVE SURFACE AND BELOW SEA LEVEL IS SCHEMATIC

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m557.46
wins/m46
1972
Map 2

EXPLANATION

MIDDLE PALEOZOIC (?)



Intrusive Rocks

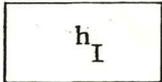
- g Undifferentiated granite. Fine-grained to pegmatitic, massive to foliated rock containing mica, microcline, plagioclase, and quartz. Color is white, light gray, or pink. Pegmatite patches and stringers are locally abundant.
- qd Quartz-diorite. Fine-grained, massive, gray, muscovite-biotite-quartz-plagioclase rock.



Amphibolite

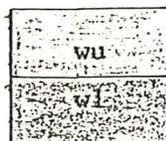
Fine- to medium-grained, dark gray to black amphibolite composed essentially of hornblende, plagioclase, biotite, and quartz, with accessory magnetite, sphene, apatite, epidote, and zircon. Amphibolites range from unfoliated to well-foliated and slabby.

LOWER PALEOZOIC (?)



Hartland Formation Unit I

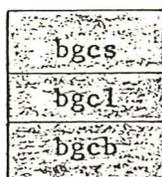
Fine-grained, light gray, muscovite-biotite-plagioclase-quartz granulitic gneiss. Contains subordinate layers of mica-plagioclase-quartz schist.



Waramaug Formation

- wu Fine-grained, gray to rusty-weathering, muscovite-biotite-plagioclase-quartz gneiss with subordinate interlayered sillimanite= kyanite-muscovite-plagioclase-quartz-biotite gneiss. Accessory minerals are garnet, zircon, apatite, and magnetite. Typically weathers smooth and commonly contains distinctive coarse, "fish-scale" muscovite flakes. Contains small granite and amphibolite bodies.
- wl Fine- to coarse-grained, nubby and rusty-weathering, sillimanite-kyanite-muscovite-plagioclase-quartz= biotite gneiss with subordinate layers of mica-plagioclase-quartz gneiss. Poorly-foliated but commonly segregated into quartz-plagioclase and biotite-sillimanite-kyanite lenses. Accessory minerals are chlorite, zircon, apatite, microcline, and magnetite.

LOWER PALEOZOIC (?)



The Gneiss Complex of the Berkshire Highlands

- bgcs Gray and pink, fine- to medium-grained biotite-streaked mica-microcline-plagioclase-quartz granitic gneiss with subordinate banded felsic gneiss, amphibolite, and calc-silicate rocks. Rocks are dominantly streaked rather than well-layered. Granite and pegmatite are abundant.
- bgcl Interlayered fine- to medium-grained, gray biotite= plagioclase-quartz banded felsic gneiss; gray, biotite-streaked, granitic gneiss; mafic gneiss; amphibolite; and calc-silicate rocks. Layering, rather than banding, is the dominant aspect. Mafic gneiss and amphibolite are relatively abundant and with felsic gneiss produce black-and-white layered rocks.
- bgcb Gray to rusty or orange-weathering, fine- to medium-grained, biotite-quartz-plagioclase gneiss with subordinate interlayered mafic gneiss and amphibolite, banded felsic gneiss, and quartzite. Locally, sillimanite produces nubby weathered surfaces. Accessory minerals are apatite and zircon.

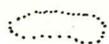
PRECAMBRIAN



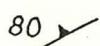
Contact, dashed where inferred or approximately located.



Fault, dashed where inferred or approximately located.



Outcrop areas.



Strike and dip of foliation.



Generalized strike and dip of crumpled or variable foliation. Dip in direction of numeral.



Strike of vertical foliation.



Generalized strike of crumpled or variable vertical foliation.



Horizontal foliation.



Direction and plunge of microscopic fold axes.



Horizontal fold axes.

EXPLANATION

Rock Units

IGNEOUS ROCKS

Dg	Dqd
----	-----

Intrusive Rocks

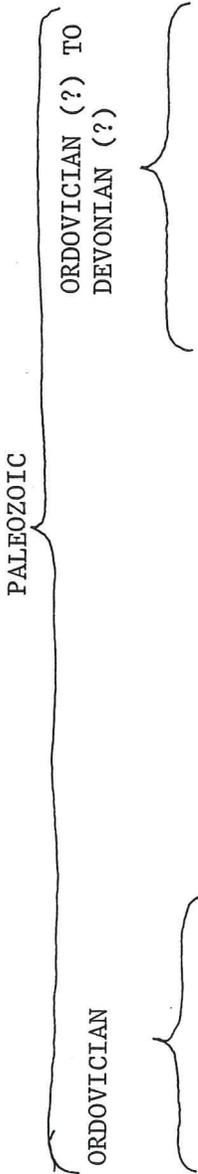
- Dg Undifferentiated granite. Fine-grained to pegmatitic, massive to foliated rock containing biotite, muscovite, microcline, plagioclase, and quartz. Color is white, light gray, or pink. Pegmatite patches and stringers are locally abundant.
- Dqd Quartz-diorite. Fine-grained, massive, gray, muscovite-biotite-quartz-plagioclase rock.

METAMORPHIC ROCKS

Oh _I

Hartland Formation Unit I

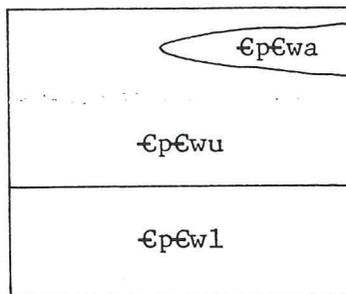
Fine-grained, light gray, muscovite-biotite-plagioclase-quartz granulitic gneiss. Contains subordinate layers of muscovite-biotite-plagioclase-quartz schist.



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PALEOZOIC

CAMBRIAN OR OLDER



Waramaug Formation

- EpEwa Fine-grained, dark gray to black amphibolite composed essentially of hornblende, plagioclase, biotite, and quartz, with accessory magnetite, sphene, apatite, epidote, and zircon. Amphibolites range from unfoliated to well-foliated and slabby.
- EpEwu Fine-grained, gray to rusty weathering, garnet= muscovite-biotite-plagioclase-quartz gneiss with subordinate interlayered garnet-sillimanite= kyanite-muscovite-plagioclase-quartz-biotite gneiss. Accessory minerals are zircon, apatite, and magnetite. Typically weathers smooth and commonly contains distinctive coarse, "fish-scale" muscovite flakes. Contains small granite and amphibolite bodies.
- EpEw1 Fine- to coarse-grained, nubby and rusty weathering, garnet-sillimanite-kyanite-muscovite-plagioclase-quartz-biotite gneiss with subordinate layers of muscovite-biotite-plagioclase-quartz gneiss. Poorly-foliated but commonly segregated into quartz-plagioclase and muscovite-biotite= sillimanite-kyanite lenses. Accessory minerals are chlorite, zircon, apatite, microcline, and magnetite. Contains abundant pegmatite stringers.

p6sg
p6l1fm
p6rg

Berkshire Highlands Massif

PRECAMBRIAN

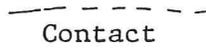
- p6sg Gray and pink, fine- to medium-grained biotite= streaked muscovite-biotite-microcline-plagioclase= quartz granitic gneiss with subordinate banded felsic gneiss, amphibolite, and calc-silicate rocks. Rocks are dominantly streaked rather than well-layered. Granite and pegmatite are abundant.
- p6l1fm Interlayered fine- to medium-grained, gray biotite= plagioclase-quartz banded felsic gneiss; gray, biotite-streaked, granitic gneiss; mafic gneiss; amphibolite; and calc-silicate rocks. Layering, rather than streaking is dominant. Mafic gneiss and amphibolite are relatively abundant and with felsic gneiss produce black-and-white layered rocks.
- p6rb Gray to rusty or orange-weathering, fine- to medium-grained, biotite-quartz-plagioclase gneiss with subordinate inter-layered mafic gneiss and amphibolite, banded felsic gneiss, and quartzite. Locally, sillimanite produces nubby weathered surfaces. Some layers contain ragged, coarse, muscovite flakes. Accessory minerals are garnet, apatite and zircon.
- c Calc-silicate lenses or layers.

Symbols



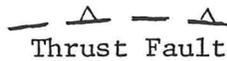
Outcrops

Area of closely spaced outcrop.



Contact

Dashed where approximately located or concealed.



Thrust Fault

Dashed where approximately located; sawteeth on upper plate.



High Angle Fault

Dashed where approximately located; U, upthrown side; D, downthrown side.



Inclined



Vertical



Horizontal

Strike and dip of foliation.



Inclined



Vertical

Generalized strike and dip of crumpled or variable foliation.



Inclined

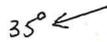


Vertical

Strike and dip of parallel foliation and bedding.



Strike and dip of axial plane of mesoscopic folds.



Inclined



Horizontal

Bearing and plunge of axes of mesoscopic folds.



Anticline



Syncline



Overturned anticline



Overturned syncline

Major fold showing approximate trace of axial surface and direction of plunge.



Mineral Isograd, approximately located. Mineral marking is shown in proper geographic position.