

Ashaway Rodgers Bedrock Compilation Sheet (paper)

Map

NOTICE !

Bedrock quadrangle 1:24,000 scale compilation sheets for the Bedrock Geological Map of Connecticut, John Rodgers, 1985, Connecticut Geological and Natural History Survey, Department of Environmental Protection, Hartford, Connecticut, in Cooperation with the U.S. Geological Survey, 1:125,000 scale, 2 sheets. [minimum 116 paper quad compilations with mylar overlays constituting the master file set for geologic lines and units compiled to the State map, some quads have multiple sheets depicting iterations of mapping]. Compilations drafted by Nancy Davis, Craig Dietsch, and Nat Gibbons under the direction of John Rodgers.

Geologic unit designation table translates earlier map unit nomenclature to the units ultimately used in the State publication.

This map set contains unpublished maps, cross-sections, and related information archived by the State Geological and Natural History Survey of Connecticut as part of the Survey Library Collection.

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J.H. International, Inc., July 1978

PREPARED IN COOPERATION WITH
THE STATE OF CONNECTICUT
GEOLOGICAL AND NATURAL HISTORY SURVEY
AND
THE STATE OF RHODE ISLAND
DEVELOPMENT COUNCIL

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

GEOLOGIC QUADRANGLE MAP
QQ-403



EXPLANATION

MAJOR MINERALS ARE LISTED IN ORDER OF DECREASING ABUNDANCE. ACCESSORY MINERALS ARE LISTED ALPHABETICALLY. PETROGRAPHIC MINERALS ARE GENERALLY ABSENT. GRAIN SIZES ARE: FINE, LESS THAN 1 MM; MEDIUM, 1 MM TO 1 CM; COARSE, GREATER THAN 1 CM

- Mafic dike**
A single 3 cm black, porphyritic dike in Narragansett Pier Granite northeast of Westerly. Outcrop now covered. Very fine-grained to aphanitic matrix of pigeonite (?) laths, magnetite, sparse red-brown amphibole, calcite, and unidentified interstitial material of low birefringence. Euhedral pale green olivine phenocrysts partly altered to serpentine and talc constitute 10 to 50 percent of the rock.
- Westerly Granite**
Fine-grained, light-gray, massive, equigranular quartz monzonite to granodiorite of magmatic origin composed of oligoclase, microcline, quartz, biotite, and minor muscovite and magnetite, and accessory sillimanite, apatite, monazite, sphene, and zircon. Locally contains abundant inclusions of amphibolite (Oa). Cut by Westerly Granite and mafic dike.
- Narragansett Pier Granite**
Pn, medium-grained, reddish-pink, massive to weakly foliated, equigranular quartz monzonite to granodiorite of magmatic origin. Consists of pink and white subhedral feldspar, anhedral anorthoclase, quartz, and vitreous black biotite flakes. Composed of oligoclase, microcline, quartz, biotite, minor muscovite and magnetite, and accessory sillimanite, apatite, epidote, monazite, sphene, and zircon. Locally contains abundant inclusions of amphibolite (Oa). Cut by Westerly Granite and mafic dike.
- Hope Valley Alaskite Gneiss**
Mh, medium- to coarse-grained, light-pink, equigranular to locally porphyritic alaskite gneiss of magmatic origin. Strong lineation of rods of muscovite grains 15 to 20 mm long. Biotite, where present, is aligned and produces a weak foliation. Many outcrops are platy owing to parallelism of (010) feldspar faces. Composed of microcline, quartz, albite or micro oligoclase, and minor biotite, muscovite, and magnetite. Extremely small quantities of the accessory minerals apatite, garnet, sillimanite, sphene, and zircon. May in part be gradational with unit Mp of Potter Hill Granite Gneiss. Still underlying Chapman and Pondtown Hills is heterogeneous, green siltstone from fine to medium, much of the rock is granite gneiss.
- Potter Hill Granite Gneiss**
Mp, fine- to medium-grained, orange to pink, equigranular to rarely porphyritic, very strongly foliated granite gneiss. Fresh rock, light gray, is very scarce. Most outcrops are weathered, deeply stained, and somewhat crumbly, and tend to be slabby. Composed of microcline, quartz, oligoclase or rarely albite, biotite, magnetite, and accessory sillimanite, apatite, epidote, monazite, sphene, and zircon. Generally stained and weathered. Much associated pegmatite having pink microcline and gray quartz.
- Metavolcanic rocks**
Omm, predominantly fine-grained mafic and intermediate metavolcanic rocks. Southeastern belt, fine- to medium-grained, slabby amphibolite, composed of hornblende, oligoclase or andesine, quartz, and biotite, with minor apatite, magnetite, and sphene. Northwestern belt, very fine-grained, locally flinty, black to deep green, massive to finely laminated, gray-weathering amphibolite of similar mineral composition to the above. Includes rhyolite layers with pods of coarse hornblende as large as 10 by 15 cm, layers 1 meter thick or less of finely laminated, vitreous and light-gray quartzite composed of quartz and minor muscovite, feldspar (albite), biotite, and magnetite; light-gray, fine-grained amphibolite; and gray biotite quartzite. All units of the northwestern belt locally in folds of 5 to 15 meters amplitude.
- Plainfield Formation**
Cp, predominantly fine- to rarely medium-grained, pale tan to gray, vitreous, massive to lenticularly bedded clean quartzite. Impure varieties are medium to dark gray and calcareous composed of quartz, feldspar, biotite, and accessories. Locally contains calcareous, commonly are medium to coarse grained, pale to dark green, and bear quartz, andesine, diopside, tremolite, microcline, and biotite, or quartz, scapolite, hornblende, microcline, and epidote.

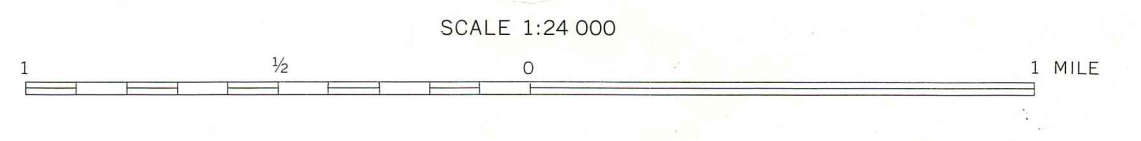
- Platonic group**
?pts - Starting platonic group
?pess - Sittick granite gneiss
?pesh - Hope Valley alaskite gneiss
?peshh - Potter Hill granite gneiss
- Muscovite gneiss**
?ptm - Muscovite gneiss
- Narragansett Pier granite**
?pnp - Narragansett Pier granite
- Quartzite in Plainfield fm.**
?pqr - Quartzite in Plainfield fm.

- Bedrock names**
Individual outcrops shown by solid black lines. Areas of abundant outcrops shown by stippling.
- Contact**
Short dashed where additional, dotted where concealed, and solid where contact is clear. Arrows indicate direction and amount of dip.
- Mineral localities**
1, thin plate in sheet
2, thin plate in sheet
3, thin plate in sheet

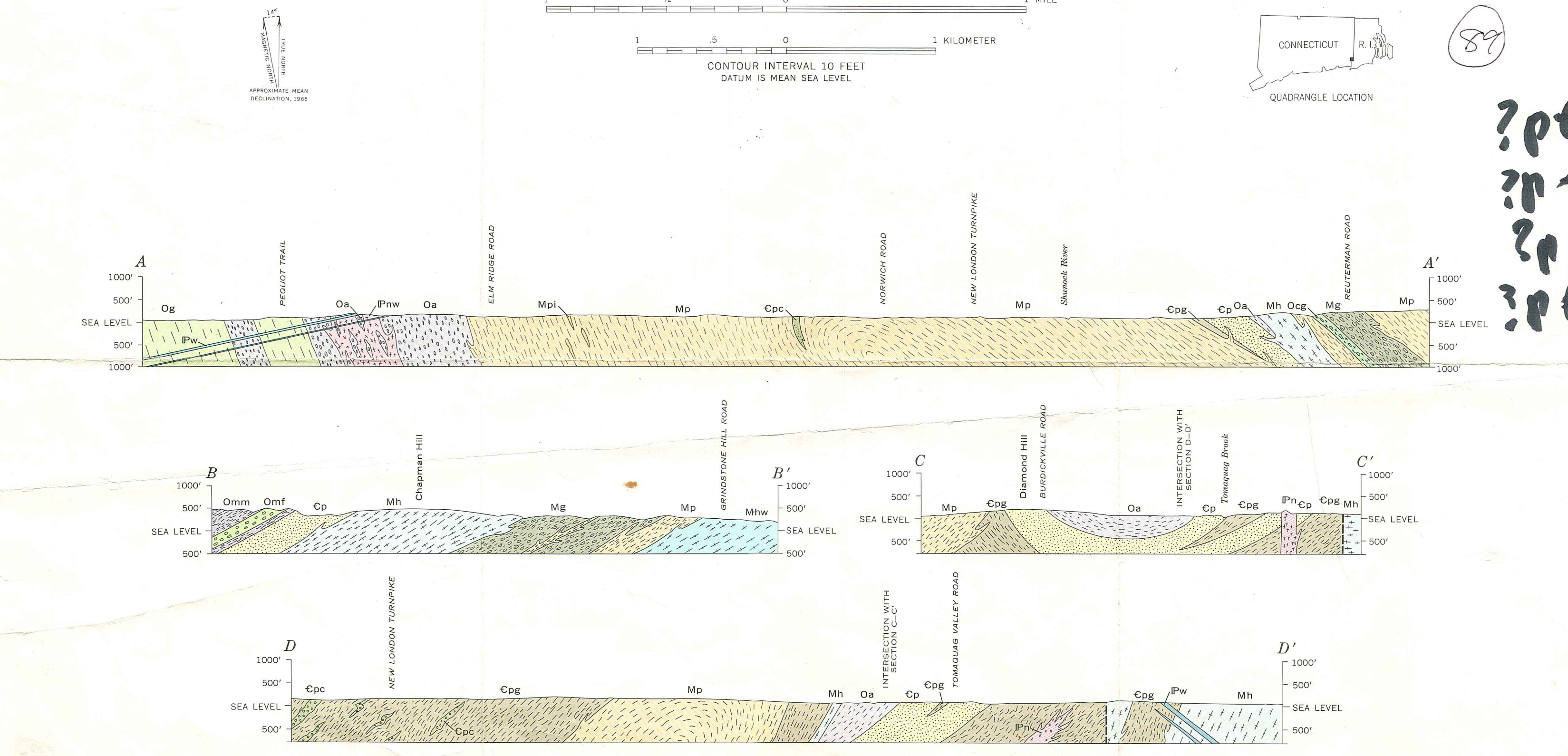
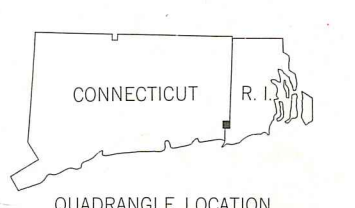
- Quartz-sillimanite-muscovite nodule layers in Potter Hill Granite Gneiss and Hope Valley Alaskite Gneiss**
Lines denote probable extent of layers
N, exposures of nodules
- Pegmatite**
- Quarry**
- Large quarry**
- Small quarry or stone prospect**
- Abandoned quarry**
Abandoned quarries, too numerous to show on the map, are present on the hills immediately north of the railroad from Noosneck Hill Road to Apuntauug Brook.

- REFERENCES CITED**
Lundgren, Lawrence, 1962, Deep River area, Connecticut: Stratigraphy and structure: Am. Jour. Sci., v. 260, p. 1-23.
Moore, U. E., Jr., 1969, Bedrock geology of the Carolina-Quonochontaug quadrangles, Rhode Island: U.S. Geol. Survey Geol. Quad. Map GQ-117.

Base by U.S. Geological Survey, 1953
Geology by Tomas Feininger, 1958-61, assisted by James T. McCoy, 1961



CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL



BEDROCK GEOLOGIC MAP OF THE ASHAWAY QUADRANGLE, CONNECTICUT-RHODE ISLAND

By
Tomas Feininger
1965

For sale by U.S. Geological Survey, price \$1.00