

Uncasville 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.

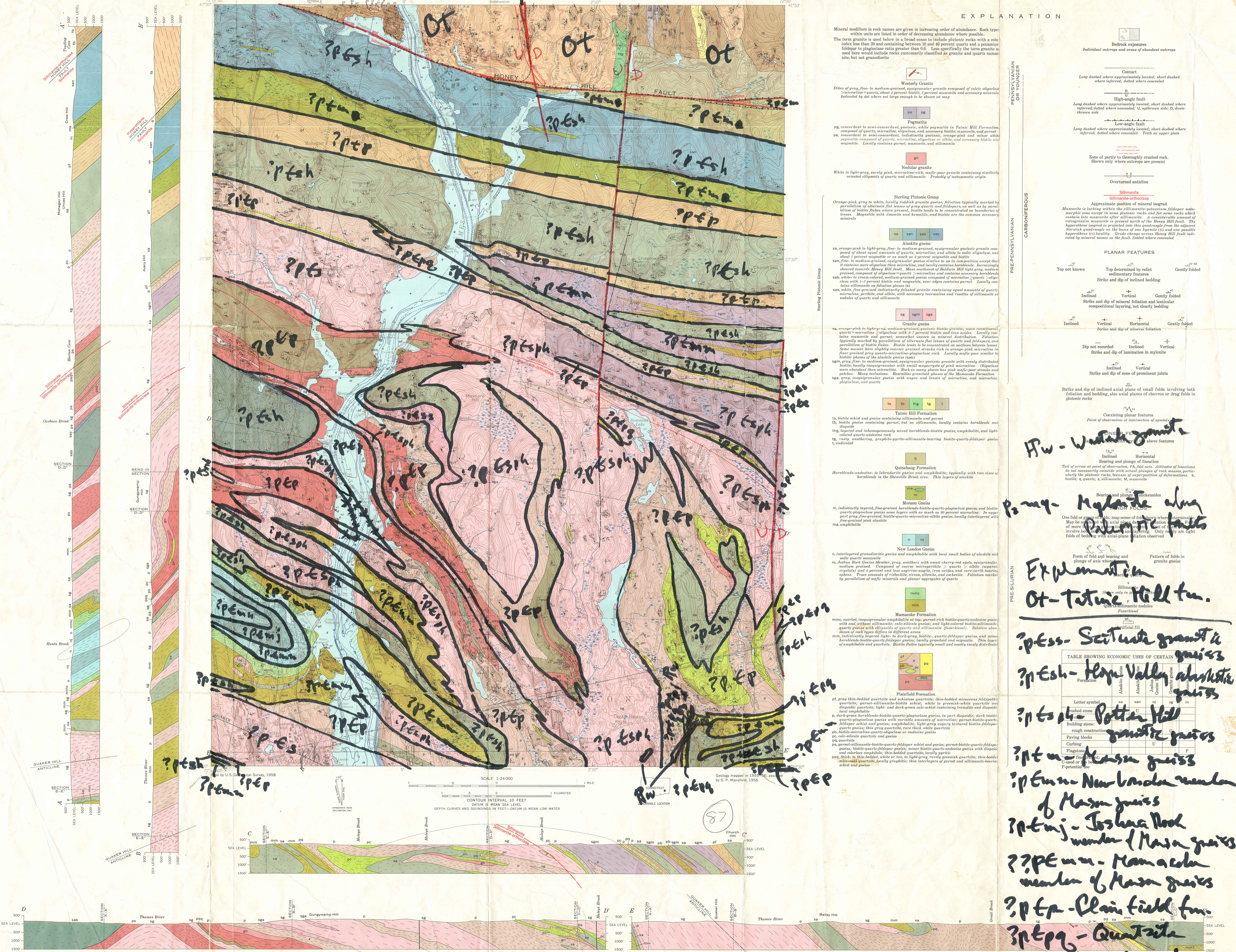
Geologic unit designation table translates earlier map unit nomenclature to the units ultimately used in the State publication.

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EXPLANATION

Mineral modifiers in rock names are given in increasing order of abundance. Rock type within units are listed in order of decreasing abundance where possible. The term granite is used below in a broad sense to include plutonic rocks with a color index less than 20 and containing between 10 and 40 percent quartz and potassium feldspar to plagioclase ratio greater than 0.6. Less specifically the term granite as used here would include rocks customarily classified as granite and quartz monzonite, but not granodiorite.

Westerly Granite
Dikes of gray, fine- to medium-grained, equigranular granite composed of calcic oligoclase > microcline > quartz, about 5 percent biotite, 1 percent muscovite and accessory minerals indicated by dot where not large enough to be shown on map.

Pegmatite
PE concordant to semi-concordant, granitic, white pegmatite in Tutnic Hill Formation composed of quartz, microcline, oligoclase, and accessory biotite, muscovite, and garnet. PE concordant to semi-concordant, indistinctly granitic, orange-pink and white with possible composition of quartz, microcline, oligoclase or albite and accessory biotite and magnetite. Locally contains garnet, muscovite, and sillimanite.

Nodular granite
White to light-gray, rarely pink, microcline-rich, mafic-poor granite containing similarly oriented ellipsoids of quartz and sillimanite. Probably of metamorphic origin.

Sterling Plutonic Group
Orange-pink, gray to white, locally reddish granite gneiss. Foliation typically marked by parallelism of alternate flat lenses of gray quartz and feldspars, as well as by parallelism of biotite flakes where present; biotite tends to be concentrated on boundaries of lenses. Magnetic with ilmenite and hematite, and biotite are the common accessory minerals.

Alaskite gneiss
sa, orange-pink to light-gray, fine- to medium-grained, equigranular gneiss composed of about equal amounts of quartz, microcline, and albite to sodic oligoclase, and about 1 percent muscovite or as much as 5 percent magnetite and biotite.
san, fine- to medium-grained, equigranular gneiss similar to sa in composition except that it contains more oligoclase than microcline, and locally contains hornblende. Increasingly altered towards Honey Hill fault. Also contains garnet and feldspars, and typically marked by parallelism of alternate flat lenses of quartz and feldspars, and parallelism of biotite flakes. Biotite tends to be concentrated on surfaces between lenses. Some masses have slightly coarse-grained streaks rich in orange-pink microcline in fine-grained gray quartz-microcline-plagioclase rock. Locally mafic-poor similar to biotite phase of the Alaskite gneiss (sa).
sah, white to cream-colored, medium-grained gneiss composed of microcline > oligoclase with 1-2 percent biotite and magnetite, near edges contains garnet. Locally contains sillimanite on foliation planes (s).
sas, white, fine-grained indistinctly foliated granite containing equal amounts of quartz, microcline, perthite, and albite, with accessory tourmaline and rosettes of sillimanite or nodules of quartz and sillimanite.

Granite gneiss
sg, orange-pink to light-gray, medium-grained, equigranular biotite gneiss; main constituent quartz > microcline > oligoclase with 2-7 percent biotite and iron oxides. Locally contains muscovite and garnet; somewhat uneven in mineral distribution. Foliation typically marked by parallelism of alternate flat lenses of quartz and feldspars, and parallelism of biotite flakes. Biotite tends to be concentrated on surfaces between lenses. Some masses have slightly coarse-grained streaks rich in orange-pink microcline in fine-grained gray quartz-microcline-plagioclase rock. Locally mafic-poor similar to biotite phase of the Alaskite gneiss (sa).
sgm, gray, fine- to medium-grained, equigranular gneiss with evenly distributed biotite, locally inequigranular with small megacrysts of pink microcline. Oligoclase more abundant than microcline. Rock in many places has pink mafic-poor streaks and patches. Many inclusions. Resembles granitic gneiss of the Mamacko Formation.
sga, gray, inequigranular gneiss with wavy and lenses of microcline, and microcline, plagioclase, and quartz.

Tutnic Hill Formation
tb, biotite schist and gneiss containing sillimanite and garnet
td, biotite gneiss containing garnet, but no sillimanite, locally contains hornblende and diopside
te, layered and subhorizontally bedded hornblende-biotite gneiss, amphibolite, and light-colored quartz-calcite rock
tg, rusty weathering, graphite-granite-sillimanite-bearing biotite-quartz-feldspar gneiss, undivided

Quinebaug Formation
Hornblende-andesite to labradorite gneiss and amphibolite; typically with two sizes of hornblende in the Sheepshead Brook area. Thin layers of andesite.

Monson Gneiss
m, indistinctly layered, fine-grained hornblende-biotite-quartz-plagioclase gneiss, and biotite quartz-plagioclase gneiss some layers with as much as 20 percent microcline. In upper part gray, fine-grained biotite-quartz-microcline-albite gneiss, locally interlayered with fine-grained pink alaskite.
ma, amphibolite

New London Gneiss
n, interlayered granularitic gneiss and amphibolite with local small bodies of alaskite and acid quartz monzonite
nj, Joshua Rock Gneiss Member, gray, weathers with small cherry-red spots, equigranular; medium-grained. Composed of coarse microperthite > quartz > albite (repart crystals) and 2 percent and less actinolite, iron oxides, and rare earth-bearing apatite. Trace amounts of celestine, strom, olivine, and calcite. Foliation marked by parallelism of mafic minerals and planar aggregates of quartz.

Mamacko Formation
mmc, wavy, inequigranular amphibolite at top, greenish-biotite-quartz-calcite gneiss with and without sillimanite; calc-alkaline gneiss; and light-colored biotite-sillimanite quartz gneiss with sillimanite of quartz and sillimanite (fluorite). Relative abundance of rock types differs in different areas.
mm, indistinctly layered light- to dark-gray, biotite, quartz-feldspar gneiss, and minor hornblende-biotite-quartz-feldspar gneiss; locally granitoid and migmatite. Thin layer of amphibolite and quartzite. Biotite flakes typically small and mostly evenly distributed.

Plainfield Formation
pf, gray thin-bedded quartzite and schistose quartzite; thin-bedded micaceous foliolitic quartzite; garnet-sillimanite-biotite schist; white to greenish-white quartzite and diopside quartzite; light- and dark-green calc-schist containing tremolite and diopside and amphibolite.
p, dark-green hornblende-biotite-quartz-plagioclase gneiss, in part diopside; dark biotite quartz-plagioclase gneiss with variable amounts of microcline; garnet-biotite-quartz-feldspar schist and gneiss; amphibolite; light-gray wavy textured biotite-feldspar quartz gneiss; thin gray quartzite, rare thick white quartzite
pb, biotite-microcline-quartz-oligoclase or andesite gneiss
pc, calc-alkaline quartzite and gneiss
pq, quartzite
ps, garnet-sillimanite-biotite-quartz-feldspar schist and gneiss; garnet-biotite-quartz-feldspar gneiss; biotite-quartz-feldspar gneiss; minor biotite gneiss with diopside and colorless amphibole; thin-bedded quartzite, locally pyritic
psa, thick to thin-bedded, white or tan, to light-gray, rarely greenish quartzite; thin-bedded micaceous quartzite, locally graphitic, thin interlayers of garnet and sillimanite-bearing schist and gneiss

Hw - Westerly granite

P2-ny - Mamacko gneiss along Sheepshead Brook

Explanations

Ot - Tutnic Hill fm.

?pess - Sectate granite gneiss

?pesh - Hope Valley alaskite gneiss

?pesh - Potter Hill gneiss

?ptm - Mason gneiss

?pemm - New London member of Mason gneiss

?ptmj - Joshua Rock member of Mason gneiss

??pemm - Mamacko member of Mason gneiss

?peta - Plainfield fm.

?petp - Quartzite in Plainfield fm.

TABLE SHOWING ECONOMIC USES OF CERTAIN FORMATIONS

Formation	Alaskite (sa)	Alaskite (san)	Mamacko (mmc)	Granite gneiss (sg)	Mason (m)
Building stone	U	U	U	U	U
Building blocks	U	U	U	U	U
Paving blocks	U	U	U	U	U
Carving	U	U	U	U	U
Flagstone	U	U	U	U	U
Gravel	U	U	U	U	U
P-potential					

BEDROCK GEOLOGIC MAP OF THE UNCASVILLE QUADRANGLE, NEW LONDON COUNTY, CONNECTICUT

By
Richard Goldsmith
1967