

Rockville Quadrangle Bedrock Geology Map 2

R.P. Wintsch
Map

Preliminary Bedrock Geologic Map of the Rockville Quadrangle , Connecticut - 1999

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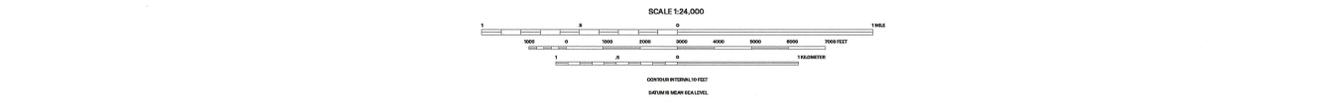
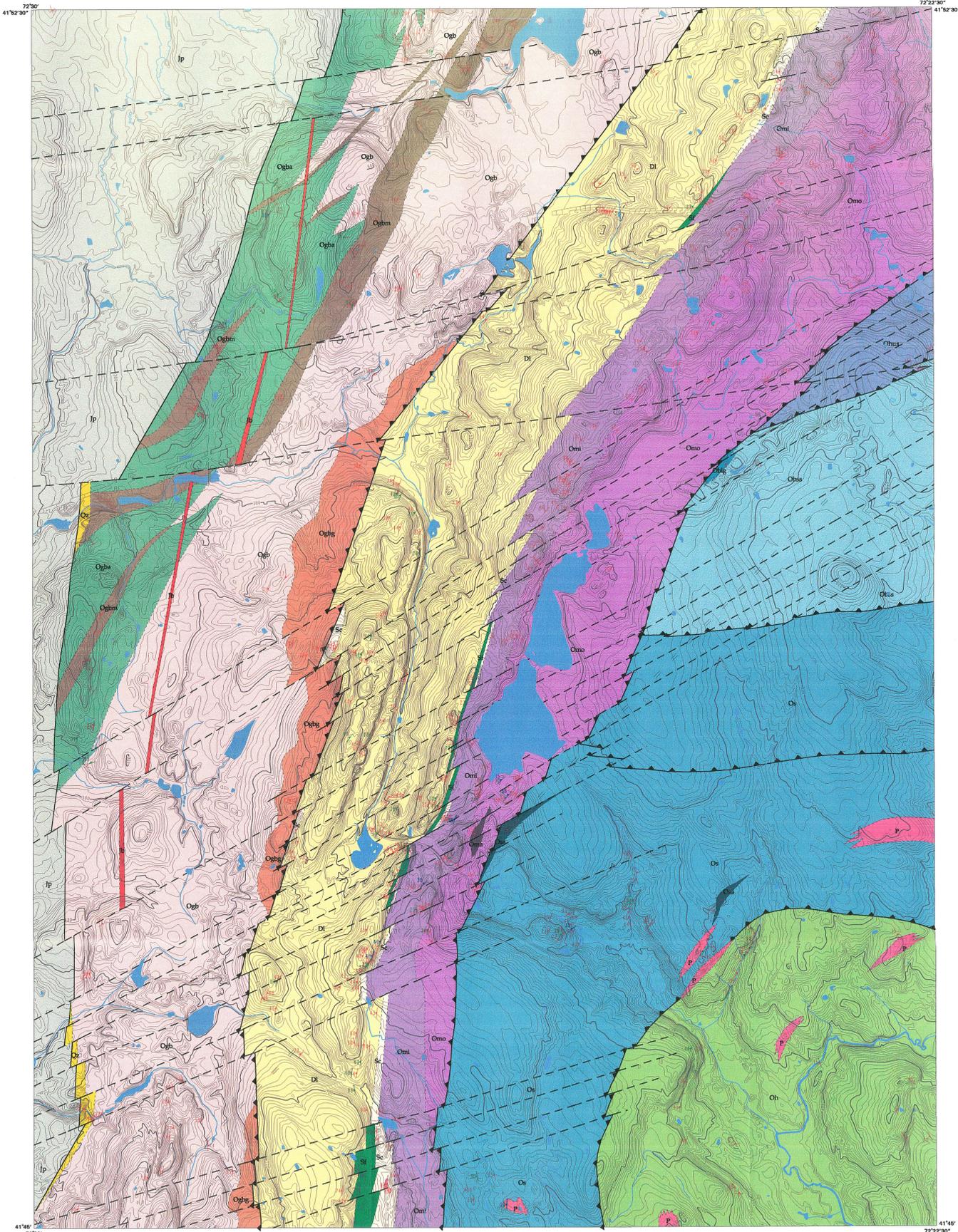
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Preliminary Bedrock Geologic Map of the
Rockville Quadrangle, Connecticut
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EXPLANATION

- Preliminary Explanation of Map Units
(some units shown only on outcrop map)
- Units described below are modified from those in the Rockville (Aitken, 1950), Ellington (Collins, 1954), South Coventry (Fahey and Pease, 1975), Marlboro (Snyder, 1970), and Glastonbury (Hertz, 1955) quadrangles.
- Dikes and Veins (most shown only on map of veins)
- Br Silicified breccia. Broken clasts of quartz vein and felsic gneiss, commonly silicified, but identifiable as relating to the host rock type, cemented by quartz. Locally vuggy along the Mesozoic border fault.
 - Jb Diabase Dike. Dark gray-brown massive plagioclase, clinopyroxene diabase. Weathers a distinctive rusty brown color. Location on map confirmed by ground magnetometer survey. Unit probably extends along strike to the north and south, but is not shown because of lack of magnetic data.
 - Qz Quartz vein. Massive, coarse grained, white quartz. Occurs as veins a few cm to tens of m thick. Mapped veins are undeformed, and may cut all rock units older than Mesozoic. Late Permian.
 - Pp Pegmatite. Massive, unfoliated, unzoned, medium to coarse grained quartz-plagioclase-muscovite pegmatite. Occurs as veins and dikes 10 cm to 2 m thick, primarily in rocks of the Bronson Hill terrane. Distinguished from P by predominance of K-feldspar and lack of deformation. Late Permian.
 - A Aplite. Massive, coarse grained, quartz-plagioclase + muscovite + K-feldspar granofels. Occurs as veins 10 cm to 1 m thick, cutting rocks of the Bronson Hill and Merrimack terrane. Pennsylvanian or older.
 - P Pegmatite. Variably foliated, coarse grained, unzoned plagioclase-quartz-biotite-K-feldspar pegmatite. Occurs as veins and boulders primarily in rocks east of the Bonnell Brook fault. Distinguished from Pp by the dominance of plagioclase and foliated and boudinaged structure. Pennsylvanian or older.
- Hartford Basin
Sedimentary Rocks
- Jp Portland Formation. Red to brown weathering, coarse grained arkose and lithic subarkose. Locally conglomeratic. Lower Jurassic.
- Bronson Hill Terrane
Metasedimentary Silurian-Devonian Rocks
- Di Littleton schist. Unit is dominated by silvery, massively weathering, medium to coarse grained, quartz-muscovite-biotite-garnet-tantalum-zircon (mylonite) schist. Locally dominant is a slabby weathering, medium to fine grained, quartz-biotite-muscovite schist and granofels, probably derived from quartz wackes (not mapped separately, but indicated on the outcrop map as Diq). Lower Devonian.
 - Dla Amphibolite. Dark gray to black, massive, hornblende-plagioclase + garnet amphibolite. Small bodies not mapped separately may be well layered and foliated.
 - Sf Fitch schist and granofels. Unit is dominated by dark brown, spongy-textured weathering, medium grained, quartz-biotite-plagioclase-calcite-K-feldspar-schist-like-sphene schist and granofels, but also common is slabby weathering, medium grained, quartz-biotite-plagioclase schist and granofels. Upper Silurian.
 - Sc Clough Quartzite. White to pale gray, massively weathering, medium to locally coarse grained quartzite, containing minor muscovite and magnetite. Locally conglomeratic. Upper Silurian.
- Ordovician Metasedimentary and Metavolcanic Rocks
- Omo Monson Gneiss. Light gray, medium grained, slabby weathering, quartz-plagioclase-K-feldspar-biotite-epidote schist and gneiss. K-feldspar occurs as megacrysts up to 1 cm in diameter. Biotite and quartz are commonly concentrated into 1 mm thick layers parallel to foliation. Biotite streaks commonly define a conspicuous mineral lineation. Late Ordovician.
 - Omi Middletown Gneiss, undifferentiated. Unit dominated by Omo, and Omi. Late Ordovician.
 - Omf Medium grained, well layered, gray to tan weathering, plagioclase-quartz-biotite granofels. Commonly strongly foliated and lineated with biotite streaks and quartz rods. May include Omo.
 - Oma Amphibolite. Dark gray to black, massive to slabby weathering, medium to coarse grained, hornblende-plagioclase + garnet amphibolite. Commonly strongly lineated with 5 mm long hornblende needles. May contain accessory garnet, especially near the western margin.
 - Oms Dark tan to brown weathering, medium to fine grained friable, biotite-muscovite schist. Most common near the western margin of the Middletown Gneiss. At extreme western margin of Middletown Gneiss, the unit may contain abundant garnet, locally mined in the northeast corner of the map.
 - Omi Tan to rusty weathering, massive to weakly foliated, medium to fine grained, muscovite-biotite quartzite. Unit may separate Oms from Oma. Distinguished from Sc by finer grain size, higher mica (especially biotite) content, and brown to tan color.
- Og Glastonbury Gneiss Complex
- Ogb Glastonbury Gneiss. Pale gray, massive, medium to coarse grained, granodioritic quartz-plagioclase-K-feldspar-biotite-epidote (granite, zircon) schist and gneiss. K-feldspar occurs as megacrysts with Carlsbad twinning up to 1 cm in diameter. Biotite and quartz are commonly concentrated into 1 mm thick layers parallel to foliation and define together with quartz rods a conspicuous, penetrative mineral lineation. Rock is unlayered, making foliation difficult to identify in outcrop. Late Ordovician.
 - Ogbg Granitic gneiss at Minnechaug Farms. Medium to coarse grained, tan weathering, K-feldspar-quartz-plagioclase-muscovite-biotite granitic gneiss. Occurs along the eastern margin of Ogb and may be continuous, but without better exposure, it is shown as discontinuous and cut out by the fault on the eastern margin of the Glastonbury complex. The unit has been identified in the adjacent Marlboro quadrangle (Snyder, 1970), and is mapped separately in the Glastonbury quadrangle (Hertz, 1955). Named for the excellent pavement outcrops at Minnechaug Farms on Rt. 94 in the Marlboro quadrangle, where intrusive contacts of Ogbg into Ogb are well exposed. Late Ordovician.
 - Ogba Plagioclase - hornblende schist and amphibolite. Dark gray to black, massive, well foliated, plagioclase - hornblende schist and amphibolite. Rock variably well segregated into nearly monomineralic plagioclase and hornblende layers. Thin, unfoliated felsite dikes along West Street in Vernon not mapped separately.
 - Oghm Mylonite and Phyllonite. Olive brown weathering, strongly foliated, muscovite phyllonite, interlayered with interlayer, boudins, and tectonic lenses of quartz-plagioclase and amphibole granofels. Derived from Ogb and Ogbg by syntectonic metasomatism in a ductile fault zone. Late Paleozoic.
- Central Maine Terrane
Metasedimentary Rocks
- The Hamilton Reservoir and Bigelow Brook formations are very poorly exposed in the Rockville quadrangle. They are extrapolated into the Rockville quadrangle from the South Coventry quadrangle to the east (Fahey and Pease, 1979).
- Ohus Hamilton Reservoir Formation. Tan to brown weathering, medium to coarse grained, quartz-plagioclase-biotite-garnet schist. Very limited exposure in the quadrangle, and is variably blastomylonitic in association with the hanging wall of the Kinney Pond fault zone.
 - Ohsa Bigelow Brook Gneiss. Sulfidic schist unit. Very poorly exposed, tan to rusty brown weathering, medium grained quartz-plagioclase-biotite + sillimanite + sulfidic schist. Unit contains abundant, resistant, foliated pegmatite.
 - Oblig Bigelow Brook Gneiss. Layered gneiss. Dark gray to black weathering, medium to coarse grained, layered plagioclase-hornblende-biotite gneiss and granofels.
 - Oss Southbridge Gneiss. Unit is primarily a dark brown to dark green weathering, medium grained, quartz-plagioclase-biotite-clinopyroxene-hornblende granofels. Unit is poorly exposed in this quadrangle, but in stream beds it forms slabby weathering, alternating layers of the above granofels, biotite schist, and amphibolite, each from 1 to 10 cm thick.
 - Osa Southbridge Gneiss. Amphibolite. Layered gneiss. Dark gray to black weathering, medium to coarse grained, layered plagioclase-hornblende-biotite gneiss and granofels.
- Lithodemic Rocks
- Bmy Blastomylonite. Dark gray to black, very well layered and foliated quartz-plagioclase-biotite + hornblende-blastomylonitic schist and augen gneiss. Characterized by very shallowly dipping, slabby weathering outcrops, especially in nearbeds. In most outcrops it is not possible to determine the protolith of the rock, although it is interpreted to be derived from the enclosing Southbridge and Bigelow Brook gneisses.
- Merrimack Terrane
Metasedimentary Rocks
- Oh Hebron Formation. Interlayered olive brown weathering, medium grained quartz-plagioclase-biotite schist and olive green medium grained quartz-plagioclase-hornblende-biotite + diopside + scapolite granofels. Schist layers vary from 0.5 to 20 cm thick, and granofels layers vary from 0.5 to 5 cm thick. Coarse grained, foliated, plagioclase-quartz pegmatites 2 to 30 cm thick are common.

- normal fault
- ▲ ductile fault
- - - brittle fault
- - - geologic contact
- regional fracture zone

- Strike and dip of foliation
- Horizontal foliation shown in various colors where necessary

Base derived from 1:24,000 scale U.S. Geological Survey Digital Line Graph source material with modification where necessary. Coordinate System: State Plane Coordinate System of 1927, Zone 3020 (Connecticut). Horizontal Datum: North American Datum of 1927 (NAD27). Standard Unit of Horizontal Measurement: U.S. Survey Foot. Map Projection: Lambert Conformal Conic. Reference Spheroid: Clarke 1866.