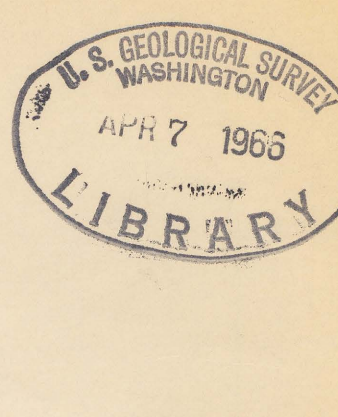


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EXPLANATION



A thin layer of windblown sand and silt, generally mixed with underlying glacial debris. is present but not shown over parts of the upland areas, and is thin and discontinuous over the glaciofluvial deposits.

Swamp deposits of Pleistocene to Recent age are shown only by the standard map symbol for swamps printed on the underlying bedrock color. These deposits consist of undecomposed to partly decomposed organic matter generally mixed with sand and silt; locally they contain peat

Recent

Qal

Alluvium

Silt, sand, and gravel, well to poorly sorted, in modern flood plains; occurs as low terraces subject to floods and reworking at least every several years

Qf

Alluvial fan deposits

Silt, sand, and gravel, generally moderately to poorly sorted

Qst

Stream terrace deposits

Silt, sand, and gravel, well to poorly sorted, in terraces formed from pre-existing valley train or outwash deposits by downcutting, reworking, and downstream migration of glaciofluvial material. Cut-and-fill processes are active near present stream gradient. Deposits grade downward into alluvium in lowest terraces or stream channels, and upward into waterlaid ice-contact deposits

Qcd

Waterlaid ice-contact deposits

Gravel, sand, silt, and minor amounts of clay, deposited by glacial melt water; locally includes thin layers of till. Forms kettled, collapsed, or eroded glaciofluvial and glaciolacustrine deposits. Deposits include kames, kame terraces, and deltas, with associated lake sediments and varved clay

Qic

Ice-channel deposits

Eskers or ice-channel fillings of sand and gravel deposited as glaciofluvial channel deposits in open channels or in tunnels in or under the ice

Note: Till covers most areas not underlain by swamps or other surficial deposits. The till consists of a nonsorted to poorly sorted mixture of boulders, gravel, sand, silt, and clay, deposited directly from an ice sheet that advanced generally from the northwest over the uplands. Two general kinds of till are present in the area:

1) an upper till; light gray (NY) when dry to light olive gray (5Y7/2) when moist; very stony and bouldery with a sandy to silty matrix, includes lenses of moderately well sorted sand and gravel; generally very little or no light yellowish brown oxidation from surface; up to 20 feet thick on hillsides; noncalcareous in all tested exposures; seen only on top of lower till when together

2) a lower till; light yellowish brown (10YR6/4), light olive brown (2.5Y5/4) where oxidized to dark gray (N4) or greenish gray (5GY5) where unoxidized; less stony, large boulders scarcer than in upper till; sand seems to 1/16 inch thick present; matrix silty very fine sand to very fine sandy silt or clay; slightly fissile; tough and compact; noncalcareous in all exposures tested

QUATERNARY

Upper Ordovician

Qu

Ultramafic rocks undivided

Typical bodies consist of a core of moderately to highly sheared grayish-green to dark-greenish-gray serpentinite, surrounded successively by shells of medium- to light-greenish-gray talc-carbonate rock and of medium- to light-greenish-gray steatite (talc rock); small bodies commonly consist chiefly or entirely of talc-carbonate rock and steatite. The country rock at the margins of all bodies is altered for a width of 2 to 6 inches to chlorite or chlorite and tremolite (the "blackwall" zone)

Oh

Hawley Schist

Interbedded amphibolite, greenstone, feldspathic granulite, feldspathic schist, and minor micaceous schist and phyllite. The amphibolites and greenstones are black to green medium-grained rocks in which the proportions of plagioclase, hornblende (or actinolite), epidote, and chlorite locally vary markedly within narrow stratigraphic intervals; garnet, biotite, and calcite or ankerite are generally minor constituents. The feldspathic schists and granulites are light-gray to buff, fine-grained rocks that vary through the full range of compositions between amphibolite or greenstone and rock composed essentially of feldspar with only minor amounts of quartz, garnet, amphibole, biotite, chlorite, and muscovite. In the intermediate range of compositions, beds of light-green or white feldspathic schist or granulite with sprays or fascicles (Emerson, 1898, p. 164) of hornblende, and scattered garnet are locally conspicuous. The schist and phyllite are gray to buff and composed essentially of white mica and quartz. Formation is continuous and correlative with the Bernard Gneiss of southeast Vermont

Oms

Moretown Formation

Oms, buff to silvery-gray, fine-grained quartz-muscovite-plagioclase-biotite-chlorite schist characterized by 2 to 5 mm round garnets that deflect the schistosity and give the rock distinctive bumpy schistosity surfaces. Interbedded is dark-green or black hornblende-plagioclase amphibolite, and minor thin beds of highly feldspathic schist.

Omsc, gray to black carbonaceous quartz-muscovite schist.

Om, light-gray-green to buff, fine- to medium-grained quartz-feldspar-muscovite-chlorite-biotite-(garnet) schist and granulite. Upper part of unit typified by "pinstripe" structure consisting of light-colored granular layers 1 to 5 mm thick of quartz and feldspar interlaminated with paper-thin schistose layers of mica and chlorite. Basal part of formation generally poorly layered, coarser grained, more micaceous, and with irregular clots of chlorite up to 12 mm across. Amphibolite and highly feldspathic granulite abundant in basal few hundred feet.

Omc, dark-green plagioclase-actinolite-chlorite-epidote-(calcite) amphibolite similar to amphibolites in the Rowe Schist

Ocr

Rowe Schist

Light-green to light-gray phyllite, light-green fine-to medium-grained schist, and minor greenstone and amphibolite. Phyllite and schist composed predominantly of quartz, muscovite, and chlorite, locally with megacrysts of garnet, albite, or magnetite, and characterized by wavy schistosity and lack of distinctive layering. Lenses of granular quartz about 1 cm wide and 10 cm long locally abundant near top of formation; megacrysts of albite 1 to 2 mm in diameter and of garnet as much as 1 cm in diameter abundant near base; rusty schist, lithologically transitional with underlying Hoosac Schists, present locally near base. Lenses of amphibolite and greenstone, too small to show on map, especially common in very southwest corner of quadrangle and immediately southeast of Drury. Distinguished from overlying Moretown rocks by better developed schistosity and discontinuity of quartz lenses.

Ocrs, green to dark-green plagioclase-actinolite-chlorite-epidote-(calcite) amphibolite and plagioclase-chlorite-epidote-actinolite-(calcite) greenstone. Locally, felsic and mafic minerals are segregated in layers 2 to 10 cm thick. Only the thicker and more continuous units are mapped separately. Includes rocks mapped by Emerson (1898, 1917) as Chester Amphibolite.

Ocrs, predominantly dark-gray to black fine-grained schist and phyllite, with minor fine- to medium-grained quartzite irregularly distributed in dark-gray to white, massive beds 3 to 50 cm thick. The schist and phyllite contain chiefly quartz, muscovite, chlorite, and carbonaceous matter, and locally minor biotite and rare garnet. Besides quartz, the quartzites contain only minor proportions of carbonaceous matter and muscovite. Minor thin beds and lenses of green quartz-mica schist are identical to schist in Ocr. This unit is generally near middle of formation, and intertongues complexly with Ocr

Ec

Hoosac Schist

Gray to brown, medium-grained, quartz-albite-biotite-(muscovite)-(chlorite)-(garnet) gneiss and granular schist, commonly well bedded with distinctive pockets of layers 5 to 30 cm thick. Most of formation characterized by conspicuous 2 to 5 mm albite megacrysts that generally appear chalky on weathered surfaces; in graphitic beds the albite is black where fresh. Near top of formation are scattered thin beds of amphibolite and coarse feldspathic schist with fascicles of hornblende as much as 15 cm long. Formation distinguished from overlying Rowe Schist by a combination of coarser, more granular texture, predominance of gray or brown color, and abundance of albite.

Ehr, rusty-weathered gray to brownish-gray quartz-albite-muscovite-biotite-(chlorite)-(garnet) granular schist and gneiss, locally conglomeratic; pebbles of quartz, and rarely quartzite and gneiss, as large as 10 cm

ORDOVICIAN

Lower Cambrian

Upper Cambrian and Lower (?) Ordovician

Middle and Upper Cambrian

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(Cavendish Formation of Bell and others (1961))

?Ecc, medium- to dark-gray carbonaceous quartz-muscovite schist interbedded with rusty weathered, commonly garnetiferous, quartz-muscovite-(biotite) schist.

?Ecs, medium- to light-green garnetiferous quartz-muscovite-chlorite schist; reddish-brown garnets commonly abundant and locally as large as 3 cm; 1 mm garnets locally constitute as much as 70 percent of thin quartzose beds.

?Ecq, brown, gray, and dark-gray quartz-feldspar-biotite-muscovite gneiss, distinctly interlayered in beds 5 to 25 cm thick, principally due to variations in content of biotite.

?Ecm, cream to buff dolomitic marble; abundant rhombs of dolomite 1 to 2 mm across and sparse smaller flakes of graphite are commonly dispersed in a groundmass of anhedral calcite grains. Indistinct beds a few millimeters to a few centimeters thick form distinct packets of beds as much as 1 meter thick

CAMBRIAN (?)

Lower Cambrian (?)

af

Artificial fill

Shown only at south end of Sherman Reservoir

Long dashed where approximately located; short dashed where indefinite; dotted where concealed

Contact

Strike and dip of bedding

Inclined

Vertical

35

90

Strike and dip of schistosity parallel to bedding within limits of observation

Inclined

Vertical

42

90

Trend of folded or refolded bedding or schistosity

Commonly combined with other symbols to indicate plan of folded or refolded bedding or schistosity

Inclined

Vertical

75

90

Strike and dip of schistosity

Inclined

Vertical

65

90

Relation to bedding not apparent in outcrop

Inclined

Vertical

65

90

Strike and dip of slip cleavage (spaced surfaces of parting or incipient parting approximately parallel to the axial planes of small folds in a pre-existing foliation) or fracture cleavage (spaced partings analogous to slip cleavage, but in granular rocks without platy minerals)

Inclined

Vertical

55

90

Strike and dip of contact of crosscutting amphibolite dike

Inclined

Vertical

55

90

Strike and dip of axial plane of fold

Inclined

Vertical

55

90

Strike of vertical axial plane and plunge of axis

Inclined

Vertical

65

90

Bearing and plunge of fold or crinkle axis

Inclined

Vertical

60

90

May be combined with any of the above symbols

Inclined

Vertical

60

90

Bearing and plunge of quartz rods

Inclined

Vertical

60

90

May be combined with any of the above symbols

Inclined

Vertical

60

90

Coexisting planar features

Inclined

Vertical

60

90

Intersection at point of observation

Inclined

Vertical

60

90

Terrace scarp

Inclined

Vertical

60

90

Ticks point downslope. Long dashed where approximately located

Inclined

Vertical

60

90

Glacial melt-water channel or spillway

Inclined

Vertical

60

90

Arrow indicates direction of drainage

Inclined

Vertical

60

90

Glacial grooves and striations

Inclined

Vertical

60

90

Point of observation at tip of arrow

Inclined

Vertical

60

90

Sand, gravel, or till pit

Inclined

Vertical

60

90

Texture of deposits

Inclined

Vertical

60

90

Letter symbols indicate texture of unconsolidated deposits

Inclined

Vertical

60

90

cl clay

Inclined

Vertical

60

90

vc varved clay

Inclined

Vertical

60

90

st silt

Inclined

Vertical

60

90

s sand

Inclined

Vertical

60

90

p pebbles

Inclined

Vertical

60

90

Abandoned mine or quarry

Inclined

Vertical

60

90

C, copper

Inclined

Vertical

60

90

M, marble

Inclined

Vertical

60

90

P, pyrite

Inclined

Vertical

60

90

T, talc

Inclined

Vertical

60

90

Abandoned prospect

Inclined

Vertical

60

90

C, copper

Inclined

Vertical

60

90

P, pyrite

Inclined

Vertical

60

90

T, talc

Inclined

Vertical

60

90

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M(200)
R290
no. 66-141
Sheet 3 of 3
c.1

CAMBRIAN (?)

Lower Cambrian (?)

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