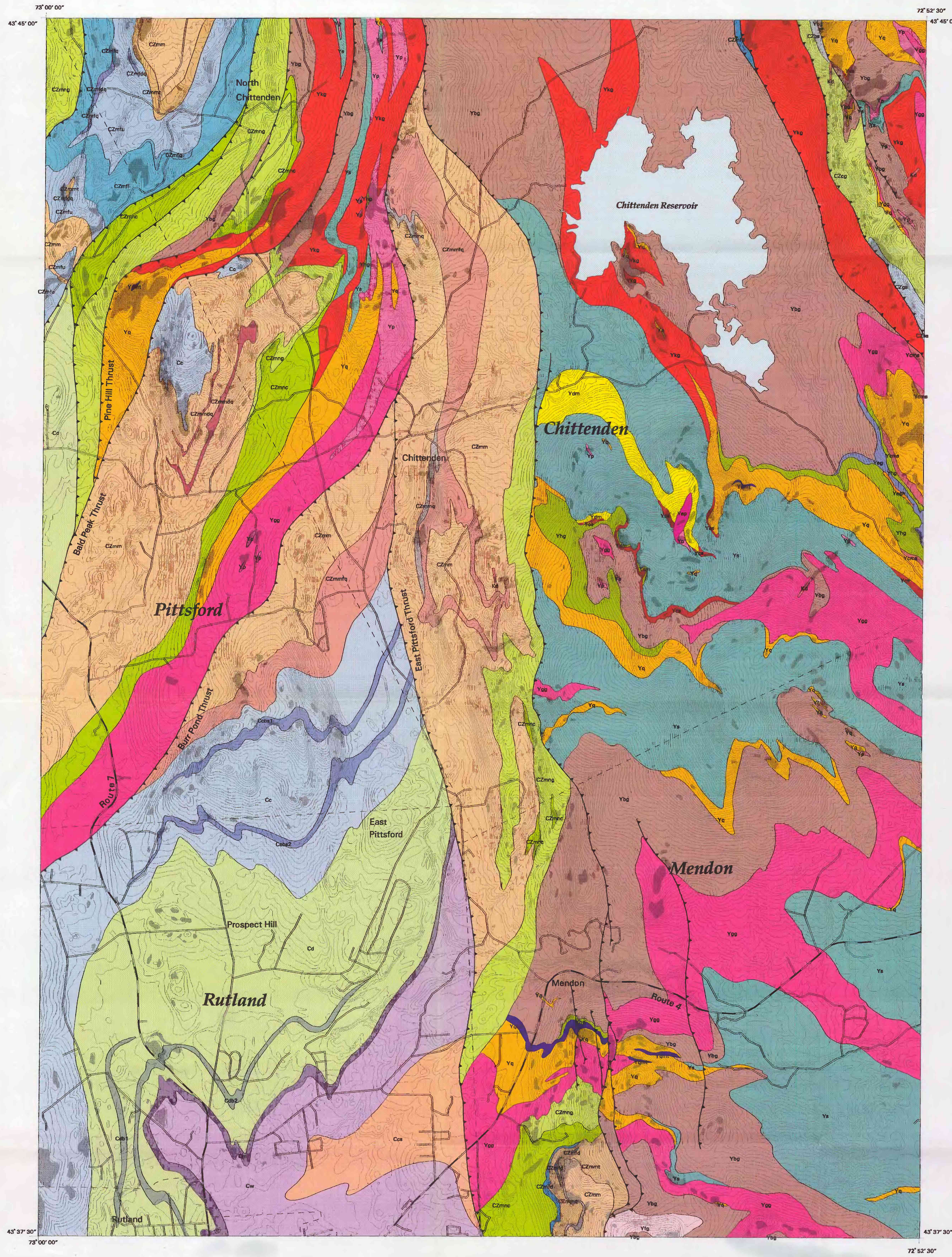


GEOLOGIC UNITS AND OUTCROP MAP



Topography from the Chittenden quadrangle (1961 edition)
Contour Interval 20 feet
Digital map units in State Plane Coordinate System
National Geodetic Horizontal Datum of 1927
Roads and town boundaries from the Vermont Center for Geographic Information, Inc.

Geology mapped by Ratcliffe in 1995-1996.
Digitized by Laura Cadmus¹, and Vicki Keegan¹.

SCALE 1:24000

MIN N

Approximate Mean Declination
15°30' West, 1984

STRUCTURE MAP



This plate is a paper representation of the digital bedrock geologic information of the Chittenden quadrangle located in Rutland County, Vermont. All of the bedrock geology data were obtained from Ratcliffe (1997) and were digitally compiled on a personal computer system using PC ARC/INFO version 3.5.1 by Environmental Systems Research Institute, Inc. The data shown on the geologic units and outcrop map were exported to ARC/INFO version 7.0 where solid color fill patterns were generated, and faults were drawn using symbols from a lineart (alcwrg.lin) from ALACARTE software (Fitzgibbon and Wentworth, 1991). The compilation procedures discussed in Walsh and others (1994) were used in the preparation of this report, with the exception of the topography. The topography was obtained from a photographic negative separate of contour lines from the Chittenden (1961) edition U.S.G.S. 7.5' topographic quadrangle. The negative was scanned on an Anatech Eagle 4080 ET raster-format scanner. The raster image was vectorized using GTX OSR Contour version 2.00 by GTX Corporation, Inc., and converted into an unattributed line coverage in ARC/INFO version 7.0.

This plate is a derivative product and should not serve as the primary source for the complete geologic information for this area; the correct reference should be number 2 below:

1. Fitzgibbon, T.T., and Wentworth, C.M., 1991, ALACARTE user interface: AML code and demonstration maps, Version 1.0: U.S. Geological Survey Open-File Report 91-587.

2. Ratcliffe, N.M., 1997, Preliminary bedrock geologic map of the Chittenden Quadrangle, Rutland County, Vermont: U.S. Geological Survey Open-File Report 97-703, scale 1:24000.

3. Walsh, G.J., Ratcliffe, N.M., Dudley, J.B., and Merrifield, T., 1994, Digital bedrock geologic map of the Mount Holly and Ludlow quadrangles, Vermont, and explanation of the bedrock geology database in the Vermont Geographic Information System: U.S. Geological Survey Open-File Report 94-229, scale 1:24000.

Description of Map Units

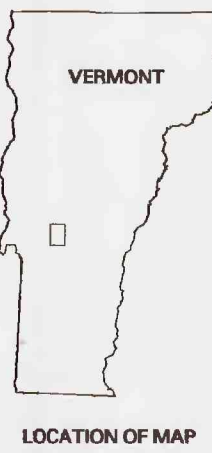
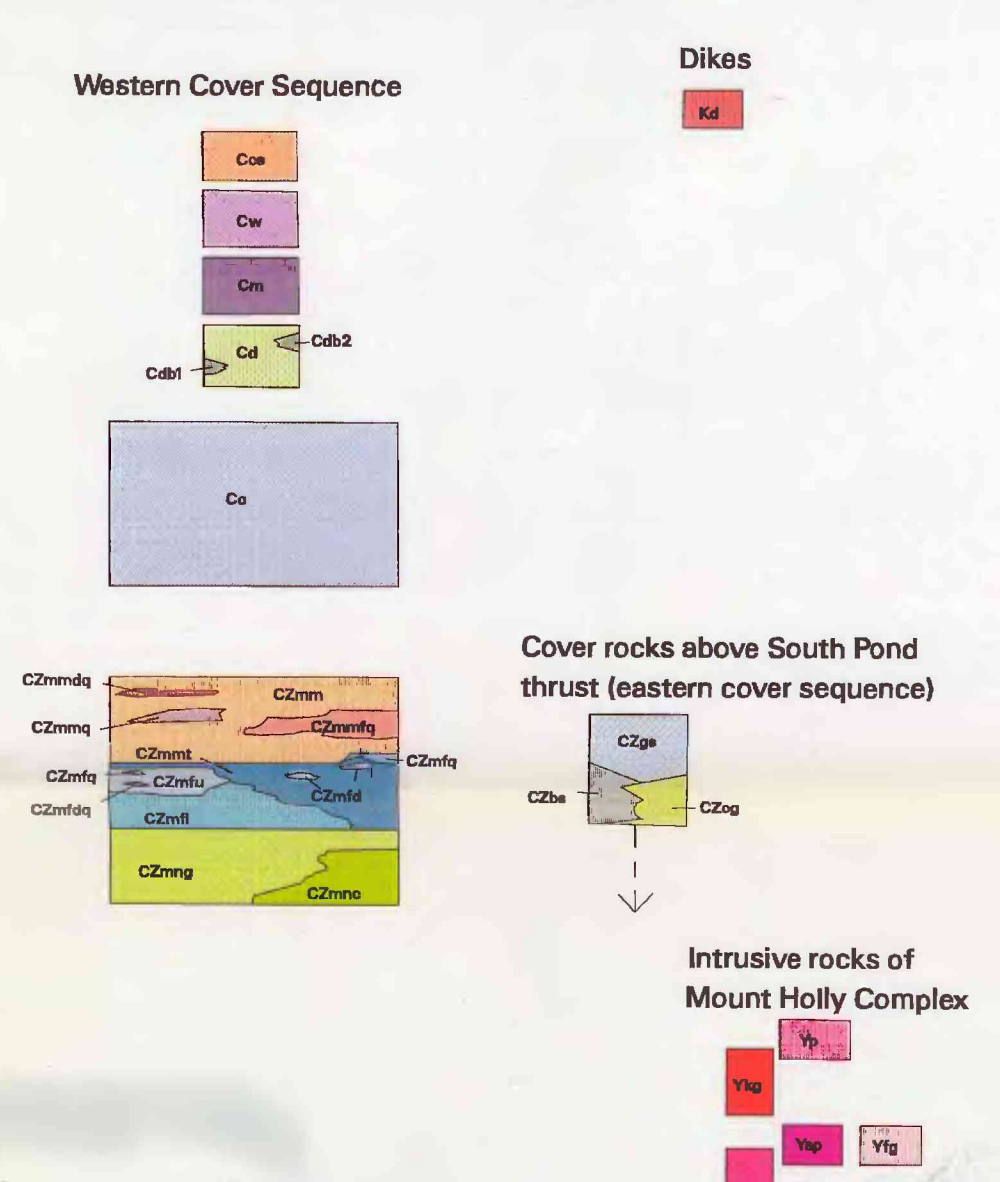
(Not necessarily in stratigraphic order; minerals listed in order of increasing abundance)

- | | |
|------|--|
| Kd | Orthoquartzite |
| Ccs | Mafic dike |
| Cw | Clarendon Springs Dolomite (Upper Cambrian) |
| Cm | Dolomite |
| Cd | Winocski Dolomite (Lower Cambrian) |
| Cd2 | Dolomite |
| Cd1 | Monkton Quartzite (Lower Cambrian) |
| Cc | Quartzite |
| Ccs1 | Durham Dolomite (Lower Cambrian) |
| Ccs2 | Light gray to cream weathering, massive dolomite, sedimentary breccia |
| | Dark gray weathering dolomite |
| | Dark gray weathering dolomite |
| | Cheshire Quartzite (Lower Cambrian) |
| | Vitreous quartzite |
| | Siliceous muscovite-quartz schist |
| | Siliceous muscovite-quartz schist |
| | Mendon Formation-Moosalamoo Member (Late Precambrian and Lower Cambrian) |
| | Siliceous phyllitic metasilstone |
| | Well-bedded to laminated feldspathic quartzite |
| | Flaggy feldspathic quartzite |
| | Dolomitic quartzite |
| | Gray-brown to greenish-gray weathering magnetite metasilstone |
| | Mendon Formation-Forestdale Member (Late Precambrian and Lower Cambrian) |
| | Orange-brown weathering, impure dolomite |
| | White weathering quartz-feldspar gneiss |
| | Cross-bedded quartzose dolomite |
| | Cream- to beige weathering dolomite |
| | Beige weathering dolomite as lenses in green albic gneiss |
| | Mendon Formation-Nickawack Member (Late Precambrian and Lower Cambrian) |
| | Quartz-feldspar gneiss and conglomerate |
| | Chlorite muscovite-albite gneiss commonly rich in magnetite |
| | Undifferentiated Eastern Cover Sequence (Cambrian and Late Proterozoic) |
| | Green laustrous schist |
| | Black phyllite |
| | Green chloritoid schist and gneiss |
| | Mount Holly Complex (Middle Proterozoic) |
| | Pegmatite |
| | Microcline megacrystic gneiss and gneissic granite |
| | Aplite |
| | Granitic gneiss |
| | Schist and gneiss |
| | Dolomite marble |
| | Calc-silicate rocks |
| | Quartzite |
| | Magnetite schist and gneiss |
| | Magnetite-quartzite breccia and magnetite-rich quartzite |
| | Hornblende garnet amphibolite |
| | Epidote gneiss |
| | Fine-grained hornblende-dioctahedral amphibolite |
| | Biotite-quartz-plagioclase gneiss |
| | Felsic gneiss |

Explanation of Map Symbols

- Contacts
- Outcrops (areas of exposed bedrock examined in this study)
- Thrust fault, teeth on upper plate
- Inclined joint (Dip values not plotted, but in database)
- Vertical joint
- Inclined brittle fault (Dip values not plotted, but in database)
- Foliation form-line (number and triangle show point of observation)
- Strike and dip of inclined foliation
- Strike and dip of vertical foliation
- Cleavage
- Strike and dip of inclined cleavage
- Strike and dip of vertical cleavage

Correlation of Map Units



This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and with the North American Stratigraphic Code. Any use of trade names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

This plate is part A and the database is part B of this Open-File Report. Both parts are available from the Vermont Geological Survey, telephone (802) 241-3808.