

All data compiled from:

Ratcliffe, N.M., 1993, Bedrock geologic map of the Mount Snow and Readsboro quadrangles, Bennington and Windham counties, Vermont: U.S. Geological Survey Miscellaneous Investigations Series Map I-2307.

GEOLOGIC UNITS AND FAULT MAP  
 PLATE 1 of 2



Plates 1 and 2 are a paper representation of the digital bedrock geologic information for the Mount Snow and Readsboro 7.5-minute quadrangles located in Bennington and Windham counties, Vermont. All of the bedrock geology data were obtained from Ratcliffe (1993), and were digitally compiled on a personal computer system using PC ARCFIN/NO version 3.4.0 Plus by Environmental Systems Research Institute, Inc. The data shown on Plate 1 were exported to ARCFIN/NO version 6.1 where solid color fill patterns were generated, and faults were drawn using symbols from a linset (alchewb1.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 topographic base. The topography was obtained from photographic negatives of contour lines from the Mount Snow (1988 edition) and Readsboro (1987 edition) of the U.S.G.S. 7.5-minute topographic quadrangles. The negatives were scanned on an IDEAL FSS 8000 raster-format scanner where the 30 meter index contours were selected and the intermediate contours removed. The raster images were vectorized using GTX OSR Contour version 2.00 by GTX Corporation, Inc. and converted into coverages in ARCFIN/NO version 6.1. These plates are derivative products and should not serve as the primary source for the complete geologic information for this area; the correct reference should be number 1 below:

1. Ratcliffe, N.M., 1993, Bedrock geologic map of the Mount Snow and Readsboro quadrangles, Bennington and Windham counties, Vermont: U.S. Geological Survey Miscellaneous Investigation Series Map I-2307, scale 1:24,000.
2. Walsh, G.J., Ratcliffe, N.M., Duxley, J.B., and Merrifield, T., 1994, Digital bedrock geologic map of the Mount Holly and Ludlow quadrangles, Vermont: U.S. Geological Survey Open-File Report 94-229, scale 1:24,000.
3. 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.

Description of Map Units

- LOWER CAMBRIAN AND LATE PROTEROZOIC COVER ROCKS**
- Hoosac Formation**
- C2hgt Lustrous, green chlorite-chloritoid-garnet-muscovite +/- paragonite schist
  - C2hgb Pale-green, white-albite spotted magnetite-chlorite-quartz-albite schist
  - C2hcb Black phyllite containing white quartzite and quartz-muscovite schist
  - C2hcc Quartz phyllite and quartzite
  - C2hcd Chlorite-garnet schist
  - C2hce Quartz pebble conglomerate, quartz-garnet schist, rusty quartz pebble schist
  - C2hcf Rusty albite schist
  - C2hcm Dolomite marble
  - C2hcn Quartzite
  - C2hne Epidote-rich, highly layered Turkey Mountain metabasalt
  - C2hnm Turkey Mountain metabasalt
  - C2hnb Gray albite-biotite-quartz granofels
  - C2hbc Gray albite-biotite-quartz granofels containing clasts of granitic gneiss and pegmatite
  - C2hbt Dark-gray biotite-albite-garnet schist
  - C2hbs Lustrous, tourmaline-biotite-muscovite-biotite-quartz schist end quartzite
  - C2hct Dark-gray to rusty garnet-biotite-muscovite-plagioclase-quartz schist
  - C2hcq Muscovite-biotite quartzite, pebble conglomerate, pebbly quartzite
- Dalton Formation**
- C2dfq Feldspathic muscovite quartzite, laminated feldspathic schist, and quartzite
  - C2dbs Lustrous, gray tourmaline-muscovite-biotite-quartz schist
- MIDDLE PROTEROZOIC BASEMENT ROCKS**
- Yp Biotite-microcline pegmatite or biotite-hornblende pegmatite
- Cardinal Brook Intrusive Suite**
- Ysr Somerset Reservoir Granite
  - Yhr Hannan Reservoir Granite
- Mount Holly Complex**
- Yap Aplite-textured microcline-plagioclase-quartz gneiss and migmatite
  - Ybgr Biotite-microcline-plagioclase-quartz gneiss or migmatitic felsic gneiss
  - Ygg Biotite-microcline-plagioclase granite gneiss
  - Ybg Layered biotite-quartz-plagioclase +/- hornblende gneiss
  - Ya Hornblende amphibolite and hornblende-plagioclase gneiss
  - Ycs Hornblende-dioapside calc-silicate gneiss, scapolite-dioapside gneiss, or dioapside-dioapsase gneiss
  - Ym Dioapside-calcite marble
  - Ybgt Garnet-biotite-plagioclase gneiss or garnet-bearing biotite quartzite
  - Yq Vitreous, garnet-bearing biotite quartzite
  - Ybrg Rusty muscovite-biotite-quartz-plagioclase gneiss and rusty, sulfidic quartz gneiss
  - Yhg Hornblende-plagioclase gneiss or hornblende-dioapside-plagioclase gneiss
  - Yrcs Rusty, sulfidic actinolite-tremolite calc-silicate gneiss and schist or dioapside-graphite calc-silicate rock
  - Yrr Rusty, sulfidic quartz-ribbed graphite-scapolite-plagioclase-quartz gneiss, graphite-garnet quartzite, and scapolite-plagioclase-quartz granofels
  - Yu Undifferentiated gneiss

Topography from Readsboro, VT (1987 edition) and Mount Snow, VT (1986 edition) USGS 7.5 minute maps. Contour interval is 30 meters. Map projection is polyconic. Digital map units in State Plane Coordinate System National Geodetic Horizontal Datum of 1927.

SCALE 1:24000

Geology of Mount Snow mapped in 1986-1987, assisted by William Burton and Carl Friedrichs, 1986, and James Ratcliffe 1986-1987. Geology of Readsboro mapped in 1986, 1987, and 1989, assisted by James Ratcliffe, 1986-87. Digitized by Gregory Walsh and Thomas Merrifield.

Approximate Mean Declination 15' West, 1993

Digital Bedrock Geologic Map of the Mount Snow and Readsboro Quadrangles, Vermont

By N.M. Ratcliffe

1994

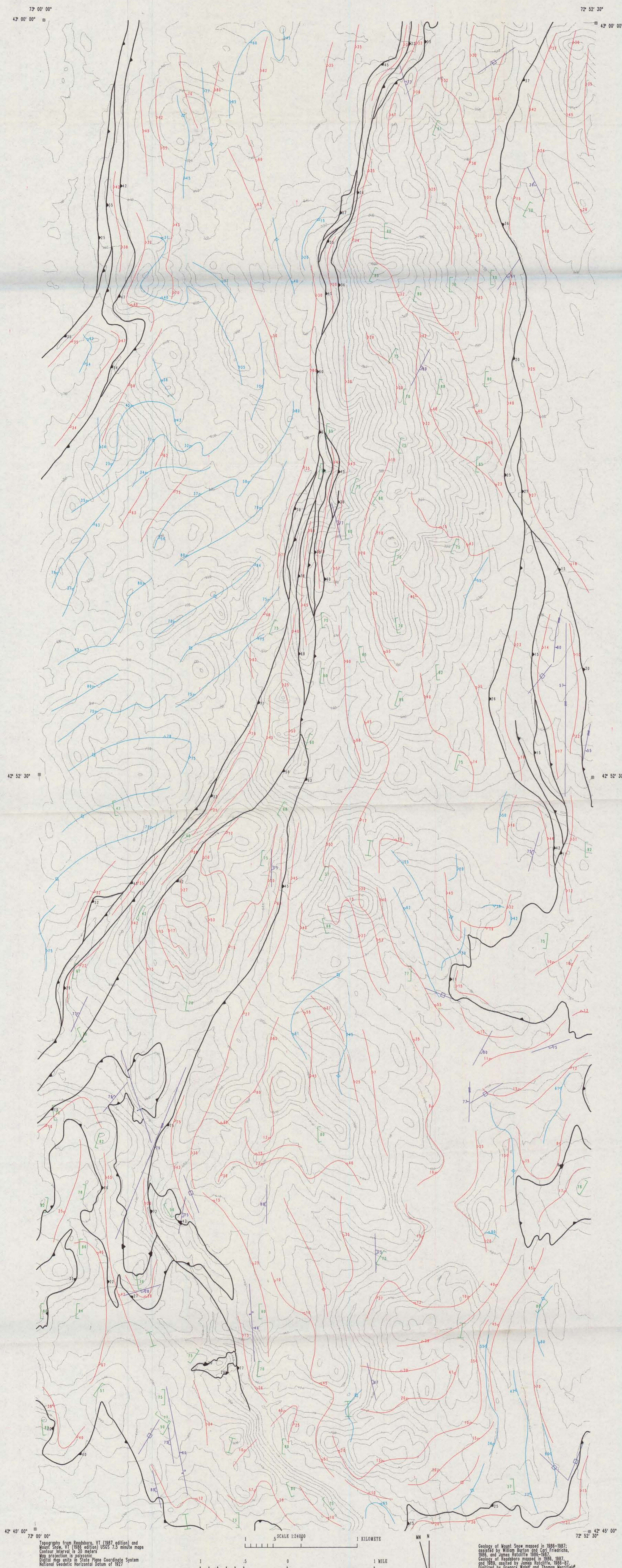
- Explanation of Map Symbols**
- Contacts
  - - - Brittle fault
  - Thrust fault, teeth on upper plate; dotted where concealed by water

**AFFILIATIONS:**  
 U.S. Geological Survey  
 Reston, Virginia 22092  
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 Vermont Geological Survey,  
 Office of Information Management Services,  
 Waterbury, Vermont 05671

The database is available from the Vermont Geological Survey, Office of Information Management Services, Waterbury, VT 05671, telephone (802) 241-3488.

All data compiled from:

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### Explanation of Map Symbols

- Schistosity  
Strike and dip of inclined schistosity on interpretive form-lines
- Strike and dip of vertical schistosity on interpretive form-lines
- Gneissosity  
Strike and dip of inclined gneissosity on interpretive form-lines
- Strike and dip of vertical gneissosity on interpretive form-lines
- Veins and brittle faults  
Relative lateral displacement of brittle fault
- Relative vertical displacement of brittle fault
- Strike and dip of inclined brittle fault
- Strike and dip of vertical brittle fault
- Strike and dip of inclined quartz vein
- Strike and dip of vertical quartz vein
- Cleavage  
Strike and dip of inclined cleavage
- Strike and dip of vertical cleavage
- Thrust Faults  
Strike and dip of thrust fault
- Strike and dip of overturned thrust fault -- teeth show dip, bar on upper plate

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2. Walsh, C.J., Ratcliffe, N.M., Dudley, R.B., and Merrifield, T., 1994, Digital bedrock geologic map of the Mount Snow and Readsboro quadrangles, Vermont: U.S. Geological Survey Open-File Report 94-228, scale 1:24000.
3. Fitzgibbon, T.T., and Westworth, C.M., 1991, ALACARTE user interface: AMI code and demonstration maps, Version 1.0: U.S. Geological Survey Open-File Report 91-367.

Topography from Readsboro, VT (1987 edition) and Mount Snow, VT (1988 edition) USGS 7.5-minute maps  
Contour interval is 30 meters  
Map projection is pseudocylindrical  
Digital map units in State Plane Coordinate System  
National Geodetic Horizontal Datum of 1927

SCALE 1:24000  
1 KILOMETER  
1 MILE

Geology of Mount Snow mapped in 1988-1987; compiled by William Burton and Carl Friedrichs, 1988, and James Ratcliffe 1988-1993.  
Geology of Readsboro mapped in 1986, 1987, and 1989, created by James Ratcliffe, 1988-87.  
Digitized by Gregory Walsh and Thomas Merrifield.

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