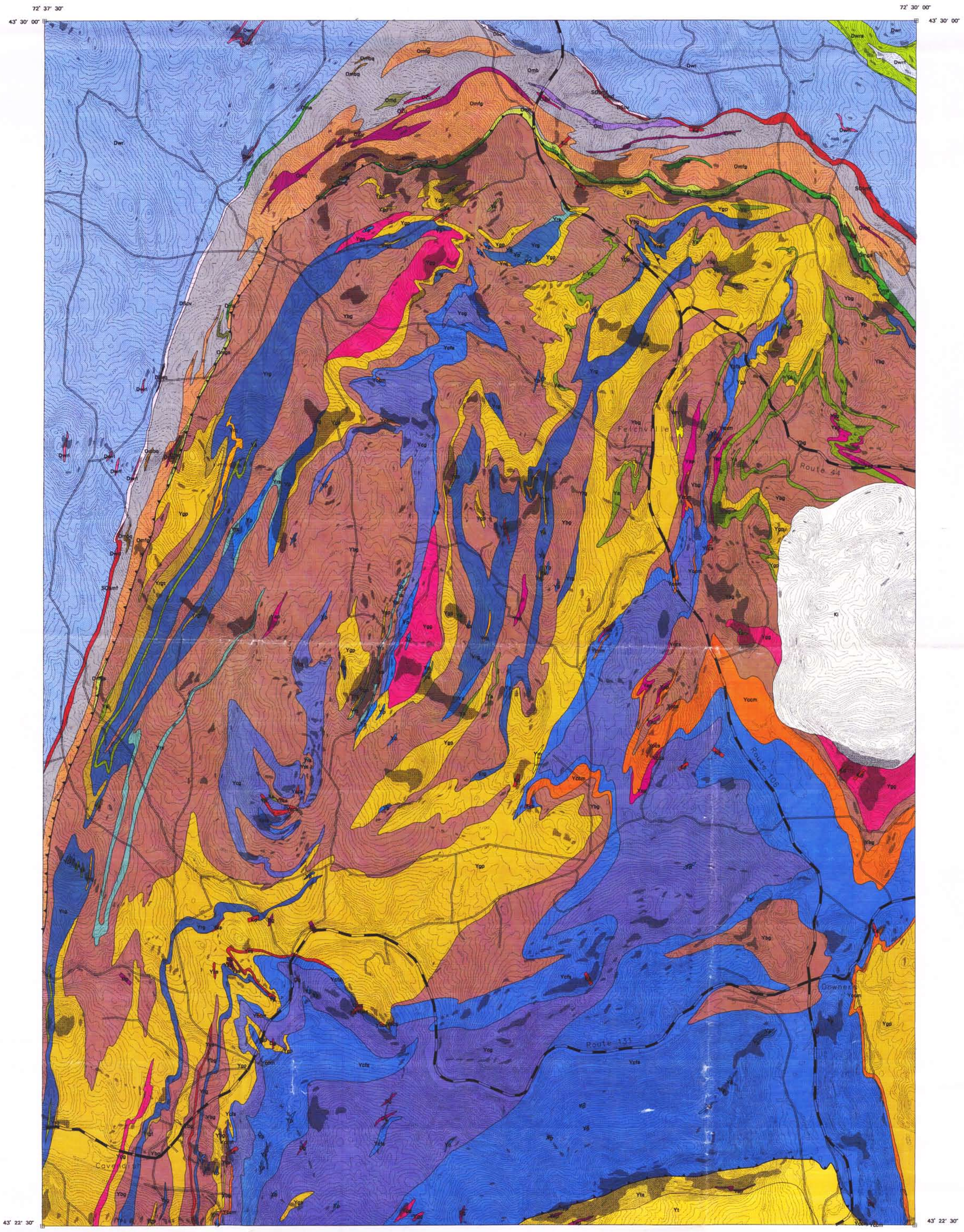
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

Prepared in cooperation with the
STATE OF VERMONT, GEOLOGICAL SURVEY

OPEN-FILE REPORT 95-203-A
GEOLOGIC UNITS AND OUTCROP MAP
PLATE 1 of 2



Description of Map Units
(not necessarily in stratigraphic order)

CRETACEOUS INTRUSIVE ROCKS

- Ki — Undifferentiated gabbro-diorite and syenite
- Kd — Camptonite and diabase dikes

DEVONIAN INTRUSIVE ROCKS

- Dg — Biotite-muscovite pegmatite or granite

LOWER DEVONIAN WAITS RIVER FORMATION

- Dwr — Dark-gray biotite phyllite
- Dwrl — Rusty brown, deeply weathered beds of impure limestone
- Dwra — Amphibolite
- Dwrf — Felsic gneiss and granofels

UNDIFFERENTIATED UPPER SILURIAN TO LOWER DEVONIAN ROCKS

- DScv — Interbedded amphibolite, quartzite and impure actinolitic limestone
- DSaq — Amphibolite and quartzite

ORDOVICIAN TO SILURIAN BARNARD GNEISS

- SObmf — Interlayered feldspar-biotite-quartz felsic gneiss to schist and hornblende-biotite mafic gneiss to schist and amphibolite

ORDOVICIAN MORETOWN FORMATION

- Omb — Rusty-brown to dark-gray phyllite or schist
- Ombq — Dark-gray, glassy to medium-gray quartzite
- Oml — Laminated gray-green quartz-plagioclase granofels
- Omfg — Light-rusty-tan weathering feldspathic schist and granofels
- Omq — Light-tan weathering feldspathic quartzite
- Omgs — Green muscovite-biotite-chlorite-quartz-plagioclase phyllonitic schist with hornblende and garnet
- Omg — Large-garnet biotite-plagioclase granofels
- Oma — Dark gray-green amphibolite
- Omd — Dioritic amphibolite

UNDIFFERENTIATED LATE PROTEROZOIC TO ORDOVICIAN ULTRAMAFIC ROCKS

- OZu — Talc schist and actinolitic greenstone

MIDDLE PROTEROZOIC INTRUSIVE ROCKS OF THE MOUNT HOLLY COMPLEX

- Yp — Biotite-chlorite-muscovite-epidote pegmatite
- Ygp — Plagioclase-rich granodiorite gneiss
- Yap — Aplitic gneiss
- Ygg — Granitic biotite-microcline-plagioclase-quartz gneiss
- Yt — Biotite tonalite and trondhjemite gneiss
- Yta — Plagioclase-augen gneiss and mylonite schist

OTHER MIDDLE PROTEROZOIC ROCKS OF THE MOUNT HOLLY COMPLEX CAVENDISH FORMATION

- Ycg — Light-silvery-green biotite-muscovite-chlorite-garnet-quartz schist and plagioclase schist
- Ycfs — Dark-gray muscovite-biotite-plagioclase-quartz schist and granofels
- Yccm — Light-gray to white dolomite-calcite-quartz marble with actinolite, phlogopite, sulphides, and chlorite
- Yccs — Dark-green diopside-microcline-hornblende-calcite marble, and dull-gray phlogopite-scapolite(?)-calcite marble

OTHER ROCKS OF THE MOUNT HOLLY COMPLEX

- Ybg — Biotite-quartz-plagioclase gneiss with pods of pegmatite, quartzite and amphibolite
- Ya — Amphibolite
- Yrq — Quartzite
- Yrg — Rusty weathering muscovite-biotite-plagioclase-quartz schist locally contains garnet and chlorite or rusty garnet-muscovite-biotite-quartz-plagioclase gneiss and quartz-ribbed gneiss
- Yrgt — Dark-gray, garnet-biotite-quartz-plagioclase schist to gneiss locally altered to chlorite-muscovite-quartz schist
- Ycs — Calc-silicate hornblende-diopside gneiss, amphibolite, and diopside-actinolite-quartz gneiss
- Ym — Calcite marble

Plates 1 and 2 are a paper representation of the digital bedrock geologic information for the Cavendish 7.5-minute quadrangle located in Windsor county, Vermont. All of the bedrock geology data were obtained from Ratcliffe (unpub. data), and were digitally compiled on a personal computer system using PC ARC/INFO version 3.4D Plus by Environmental Systems Research Institute, Inc.. The data shown on Plate 1 were exported to ARC/INFO version 6.1 where solid color fill patterns were generated, and faults were drawn using symbols from a lineset (alcnew61.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 a photographic negative separate of contour lines from the Cavendish, Vermont (1972 edition) U.S.G.S. 7.5-minute topographic quadrangle. The negative was scanned on an IDEAL FSS 8000 raster-format scanner. The raster image was vectorized using GTX OSR Contour version 2.00 by GTX Corporation, Inc. and converted into a coverage in ARC/INFO 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 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., unpublished data, Bedrock geologic map of the Cavendish quadrangle, Windsor County, Vermont, 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: U.S. Geological Survey Open-File Report 94-229, scale 1:24000.

Topography from Cavendish, VT quadrangle (1972 edition)
Contour Interval 20 feet
Map projection is polyconic
Digital map units in State Plane Coordinate System
National Geodetic Horizontal Datum of 1927
Roads from Vermont Center for Geographic Information, Inc.

SCALE 1:24000

1 0 1 MILE
1 0 1 KILOMETER
0 1 2 3 THOUSAND FEET

MN N

Approximate Mean Declination
15° West, 1972

Geology mapped by Ratcliffe in 1993.
Digitized by Gregory Walsh[1], Thomas Merrifield[2], and David Dreher[3].

LOCATION OF MAP

Digital Bedrock Geologic Map of the Cavendish Quadrangle, Vermont

By

N.M. Ratcliffe[1]

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Explanation of Map Symbols

- Contacts
- Outcrops (areas of exposed bedrock examined in this study)
- Thrust fault, teeth on upper plate