

Moretown Formation (Ordovician?)

**Omd** Metadiorite. Steel-gray to dark-gray/green, coarse-grained quartz-chlorite-plagioclase-hornblende-garnet-epidote ± biotite metadiorite. Intergrowths of coarse hornblende and interstitial plagioclase give rock a subophitic texture, which may be preserved igneous texture. Fine-grained, sharp contacts with host rocks appear to be preserved chilled margins. Contacts tend to parallel Taconian S2 and compositional layering in host metasediments. Appear to be a series of 1 to 5m thick sills. Occurs in all Om units except Omf and Omgs

**Omf** Feldspathic gneiss member. White-weathered, light-gray, massive to well layered, biotite-garnet-hornblende-chlorite-muscovite-quartz-plagioclase gneiss. Compositional layering typically defines graded beds of 0.5m thick beds rich in coarse-grained hornblende. Rare 1 to 5mm garnets are a distinctive deep red color. Unit contains abundant 0.5 to 5m thick layers of Omd. Contact with lower Omf unit defined by a 10 to 30m thick interbedded zone with 0.5 to 2m thick individual beds. Unit terminates along a Taconian mylonitic fault zone near the Massachusetts border and therefore does not correlate with any of the Om units in Massachusetts

**Omfs** Feldspathic schist member. Rusty-weathered to lustrous, silver-gray, granulose, pyrite-biotite-garnet-chlorite-quartz-muscovite-plagioclase schist and granofels with thin, discontinuous horizons of hornblende-bearing quartz-plagioclase schist. Garnets range in size from 2mm to over 2cm. Also contains numerous bodies of Omd. Contact with lower Omf unit is a 20 to 100m zone of 1 to 2m thick intercalated beds of both units

**Omb** Brookside member. Coaly-black to silvery-gray, carbonaceous occasionally white-weathered, fine-grained, garnet-biotite-chlorite-quartz-plagioclase-muscovite schist and phyllite with minor amounts of both disseminated and porphyroblastic sulfides. Coaly-black phyllitic rocks are commonly interlayered with white-weathered silvery-gray schistose rocks. Typically contains meter-thick beds of granulose schist (Omfs-like) and dark-gray quartzite. Small 1 to 6mm garnets form distinctive bumps on foliation surfaces. This unit pinches out within the NE part of the Jacksonville quad; termination appears to be controlled by along-strike facies transition with Omfs. Contact with lower Omf defined by 5 to 15m thick interbedded zone with 1 to 2m thick beds of each unit. May correlate with Whetstone Hill Member of the Moretown Formation, of central Vermont (Doll and others, 1961)

**Ompf** Pinstriped granofels member. Tan to buff weathered, light- to dark-gray, well bedded and laminated, biotite-garnet-chlorite-muscovite-quartz-plagioclase granofels. Distinctive laminations ("pinstripes") result from mm-scale segregation of quartz-plagioclase and muscovite folia, defining either Taconian S2 or Acadian S5 foliations. Scattered, 1 to 6mm red garnets are found throughout unit and define tops of rare graded beds. Locally contains 0.5 to 10m thick horizons of light-gray- to cream-colored, laminated quartzite, which are most common at top of unit. Upper section also contains numerous bodies of Omd. Ompf (and the entire Moretown Formation) is separated from the lower Rowe Formation by a Taconian mylonitic fault zone; the East Dover fault. Several Ompf-like granofels horizons, however, have been mapped internal to the Rowe Formation (feldspathic biotite-gneiss member of the Rowe Formation; Cnb)

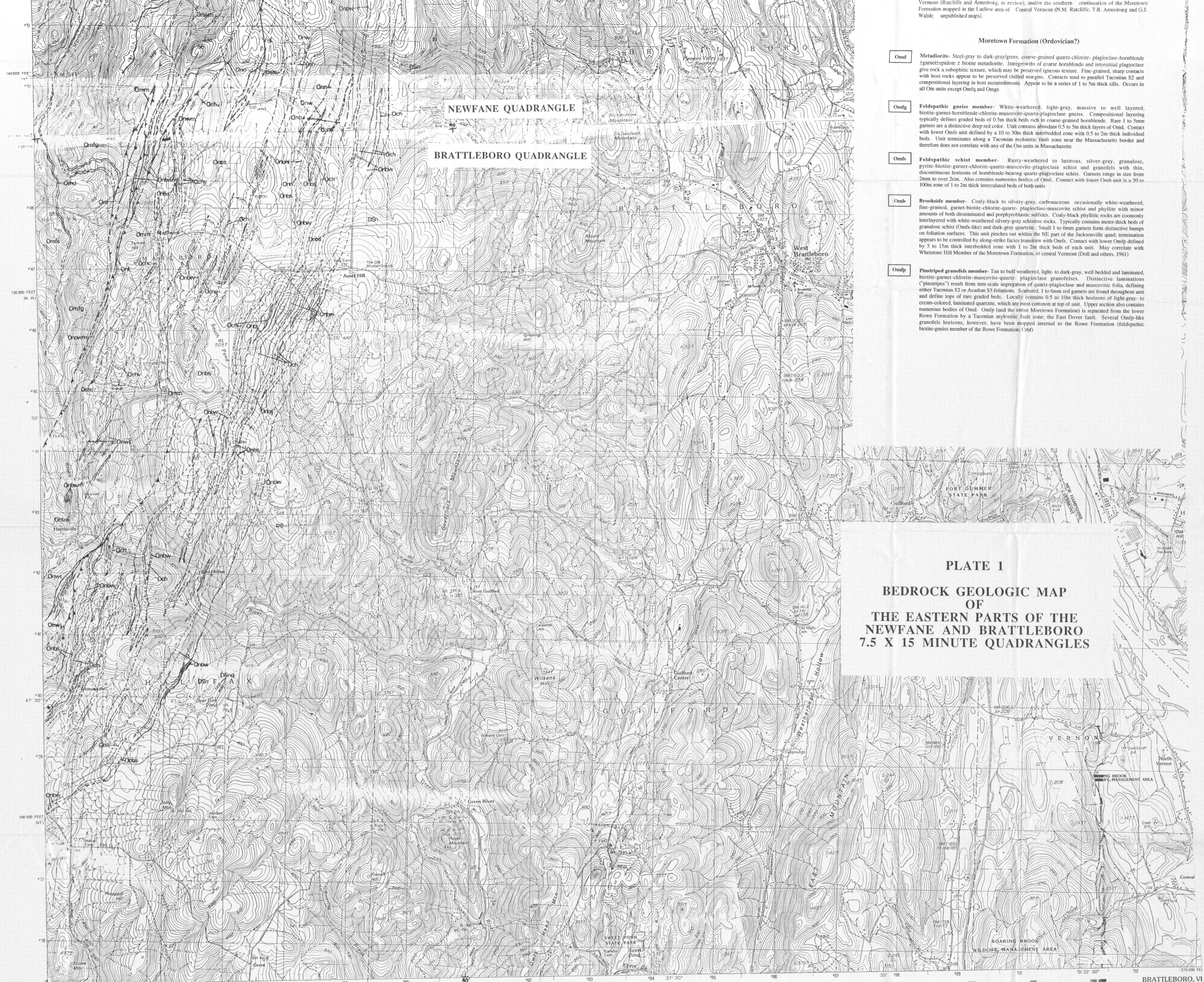


PLATE 1  
BEDROCK GEOLOGIC MAP  
OF  
THE EASTERN PARTS OF THE  
NEWFANE AND BRATTLEBORO  
7.5 X 15 MINUTE QUADRANGLES

