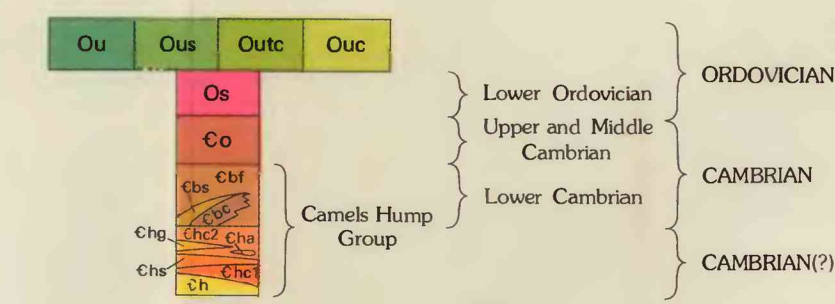


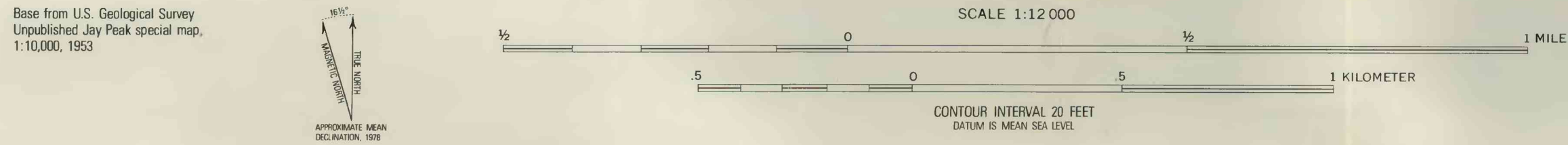
CORRELATION OF MAP UNITS



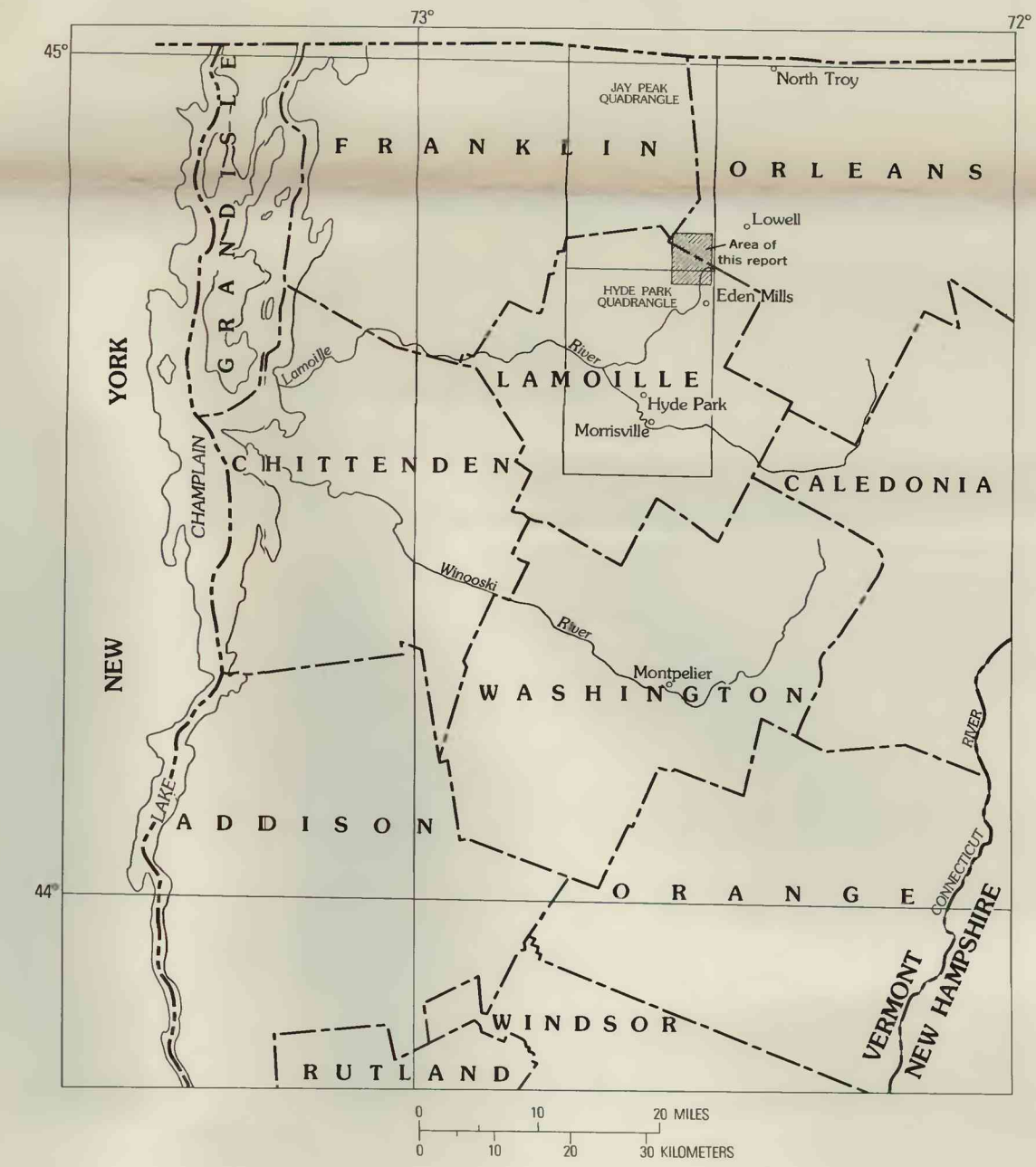
DESCRIPTION OF MAP UNITS

- Ou** ULTRAMAFIC IGNEOUS ROCKS AND DERIVATIVES (ORDOVICIAN)¹
ULTRAMAFIC ROCKS, UNDIFFERENTIATED—Chiefly dunite, composed essentially of olivine but generally considerably serpentinized; massive serpentinite, which intergrades with dunite, composed chiefly of bladed serpentinite (antigorite and (or) lizardite) and small varied proportions of chrysotile and schistose serpentinite (Ous). In extensive covered areas, unit probably includes some bodies of talc-carbonate rock and steatite (Outc) and carbonate-quartz rock (Ouc)
- Ous** SCHISTOSE SERPENTINITE—Matrix composed chiefly or entirely of bladed serpentinite (antigorite and (or) lizardite); chrysotile confined almost entirely to shear surfaces; little or no relic olivine
- Outc** TALC-CARBONATE ROCK AND STEATITE—Talc-carbonate rock is composed typically of about 40 percent magnesite and 60 percent talc; steatite is composed essentially of talc. Talc-carbonate rock is intergradational with steatite and also with carbonate-quartz rock (Ouc). Steatite commonly has a thin selvage of tremolite, where appreciably less than 0.3 m thick, a steatite body commonly consists chiefly or entirely of tremolite and minor chlorite
- Ouc** CARBONATE-QUARTZ ROCK—Composed essentially of 70 percent magnesite and 30 percent quartz, intergradational with talc-carbonate rock (Outc)
- Os** STOWE FORMATION (LOWER ORDOVICIAN)—Grayish-green quartz-sericite-chlorite schist characterized by numerous lentils of granular white quartz parallel to schistosity
- Co** OTTAQUECHEE FORMATION (UPPER AND MIDDLE CAMBRIAN)—Graphitic sericite-quartz phyllite and associated thin beds of dark-gray quartzite, light-green quartz-sericite-chlorite phyllite, light-buff sericite phyllite, quartz-pebble and feldspar-granule conglomerate, and sericitic quartzite
- Chc1** BELVIDERE MOUNTAIN FORMATION (LOWER CAMBRIAN)
FINE AMPHIBOLITE—Greenish-gray to medium-bluish-gray, distinctly bedded fine amphibolite (inside the hornblende isograd) and actinolitic and calcareous greenstone (outside the hornblende isograd). Individual crystals are rarely discernible to the naked eye
- Cbs** MUSCOVITE-QUARTZ-CHLORITE SCHIST—Silvery-green, contains abundant coarse spangles of white mica and scattered large nodules of magnetite commonly 10 mm and locally 20 mm across
- Cbc** COARSE AMPHIBOLITE—Dark-greenish-gray or greenish-black, distinctly bedded; contains minor amounts of fine amphibolite. Hornblende crystals are predominantly 5-10 mm long and range to as much as 25 mm
- Chc2** HAZENS NOTCH FORMATION (CAMBRIAN (?))—Within the formation in the northern part of the area, early minor folds diverge markedly in trend from late folds, and patterns of refolded folds are clearly exposed in several outcrops. Major folds are inferred to display the same patterns. Outcrops are too sparse to document the relation, but the pattern is illustrated by diagrammatic crinkles and warps in favorably situated contacts of map units
- Chc1** GRAPHITIC QUARTZ-MUSCOVITE-CHLORITE-ALBITE SCHIST—Chc1 is oldest. Contains interbeds of fine amphibolite and actinolitic greenstone (Chs)
- Chg** QUARTZ-ALBITE-MUSCOVITE-CHLORITE GNEISS—Greenish-gray
- Chs** QUARTZ-MUSCOVITE-CHLORITE SCHIST—Greenish-gray to grayish-olive-green
- Ch** UNDIFFERENTIATED SCHIST AND GNEISS

- Contact—Solid where accurately located, dashed where approximate. Arrow shows direction and amount of dip
- Contact—Location based upon magnetometer survey
- Fault or shear zone—Solid where accurately located, dashed where approximate. Arrow shows direction and amount of dip
- Anticline—Showing approximate trace of axial plane and direction of plunge of axis. Inferred from stratigraphic pattern
- Syncline—Showing approximate trace of axial plane and direction of plunge of axis. Inferred from stratigraphic pattern
- PLANAR FEATURES**
- Strike and dip of inclined axial plane of minor fold
- Strike and dip of bedding
- Inclined
- Vertical
- Horizontal
- Strike and dip of schistosity parallel to bedding
- Inclined
- Vertical
- Strike and dip of schistosity divergent from bedding, in nonbedded rocks, or where relations are indeterminate
- Inclined
- Vertical
- Strike and dip of slip cleavage
- Inclined
- Vertical
- LINEAR FEATURES**
- Generally combined with one of the above planar symbols for features in bedded rocks
- Bearing and plunge of minor fold axis or lineation
- Fold axis or crinkle related to the longitudinal folds of the Green Mountain anticlinorium
- Folds transverse to and warped by the longitudinal folds
- Pattern, in plan, of folded or crinkled bedding
- Strike and dip of layering in ultramafic rocks
- Inclined
- Vertical
- Horizontal
- Hornblende isograd—Boundary between greenschist and epidote-amphibolite facies. Hatchures are on side of epidote-amphibolite facies (higher metamorphic grade)
- Diamond-drill hole—Cross locates collar, tick locates bottom of hole; value in degrees gives inclination from the horizontal
- Inclined
- Vertical
- Triangulation point in mine survey
- Geologic section lines in fence diagram, plate 2. Location of section lines was influenced largely by the position of critical drill holes
- Mine drilling-grid lines, marked by stakes on the ground



Geology by A. H. Chidester, C. A. Rette, and J. C. Rette, 1952-53. Geology of the Lowell quarry area is based on plate 3. This map incorporates results of investigation by the mine exploration staff of the Industrial Products Division, GAF Corporation (formerly Vermont Asbestos Mines Division of the Rubenoid Company), as well as study by Chidester of areas stripped after 1953 and until June 1950.



GEOLOGIC MAP OF THE BELVIDERE MOUNTAIN AREA, EDEN AND LOWELL, LAMOILLE AND ORLEANS COUNTIES, VERMONT