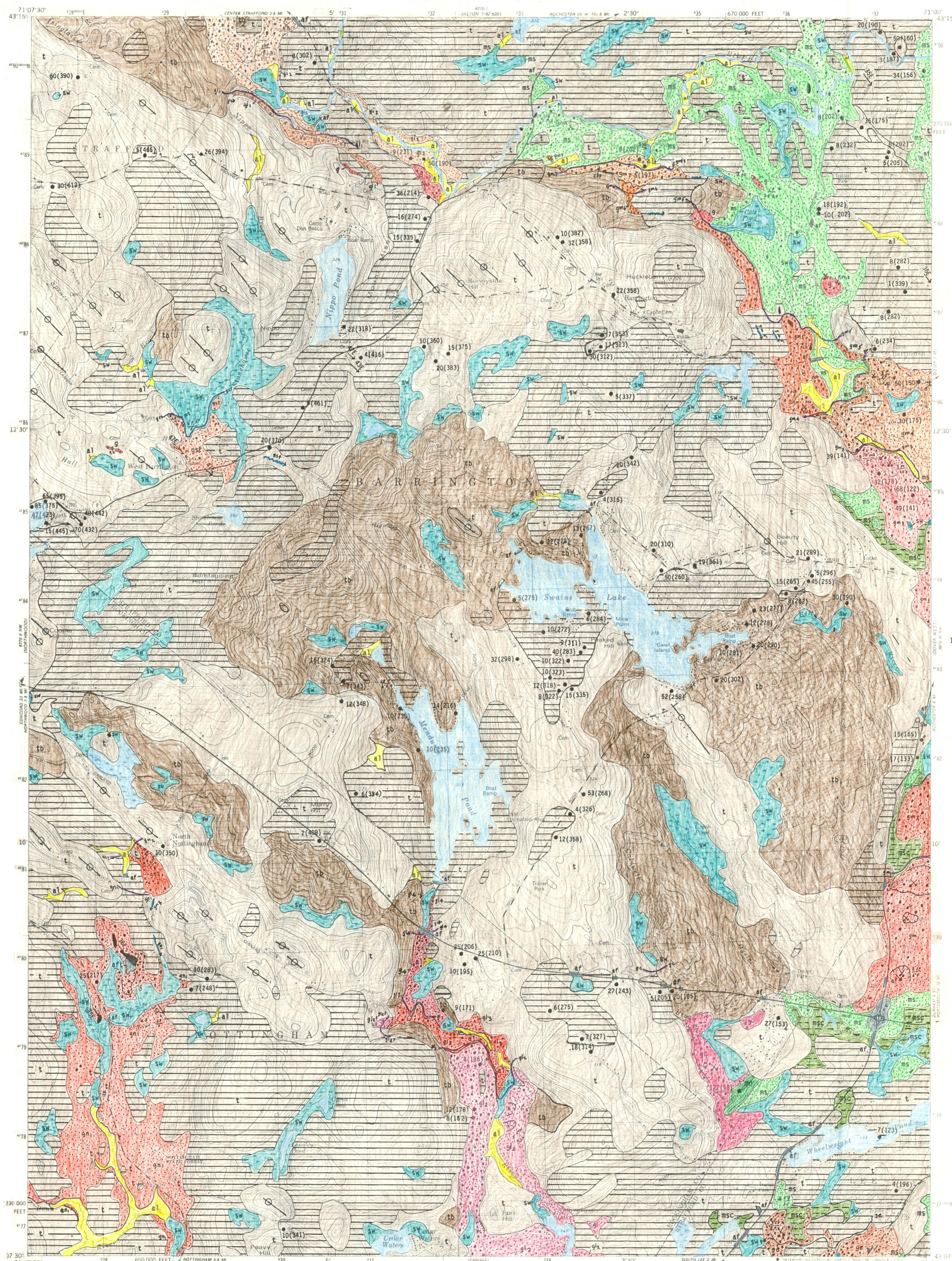


DESCRIPTION OF MAP UNITS

A layer of windblown sand and silt, generally mixed with underlying glacial deposits, is present over most of the map area but is not shown.

- sw** FRESHWATER SWAMP AND MARSH DEPOSITS—Muck, peat, silt, and sand underlying poorly drained lowland areas. Thicknesses range from a few feet to perhaps tens of feet. Swamp deposits along streams generally contain less peat and more silt and sand than do deposits away from streams
- al** ALLUVIUM—Sand, silt, and a little gravel in flood plains along present day streams. Deposits probably 10 ft thick or less and underlain by adjacent deposits. Included with swamp and marsh deposits where water table is at the surface
- mn** MARINE NEARSHORE GRAVEL AND SAND—Pebble, cobble, and boulder gravel and sand. Reworked from glacial deposits by marine wave and current action. Produced at the time of marine submergence during and after ice retreat. Some deposits are beaches formed at a former shore line; others were formed at depths of a few feet to a few tens of feet below water level
- ms** MARINE SAND—Fine- to coarse sand, a few feet to as much as 10 feet thick, deposited on the sea bottom; may contain thin beds of silt and clayey silt. Generally intertongues downward and seaward with marine silt and clay (msc). Laps onto older surficial deposits such as stratified glacial sand and gravel (gs) and till (t). Shoreward may coarsen upward into gravelly near-shore deposits (mn). In Mallego Brook-Isinglass River area, unit contains glacial and late-glacial fluvial beds
- msc** MARINE SILT AND CLAY—Clayey silt, silty clay, and fine sand deposited on the sea bottom. In some places grades upward and is interbedded with marine sand (ms). Highly variable in thickness. Unconformably overlies older glacial deposits and bedrock
- STRATIFIED GLACIAL SAND AND GRAVEL**—Sand, and pebble to boulder gravel, well-sorted to poorly sorted and stratified, as much as 50 feet thick. Deposited by glacial meltwater streams from the retreating ice sheet. Some deposits are deltas built into the high sea, which at the time of ice retreat ranged from about 190 feet above present sea level in the southeast corner to about 225 feet at the northwest corner. Other deposits are deltas or fans built into temporarily ponded areas. The deposits in the quadrangle represent successive northward-retreating positions of the ice margin. The successive deposits in each drainage basin are numbered consecutively in order of deposition where the order can be determined. The original form of some of the deposits in the quadrangle is not well known because of reworking by wave and current action and partial covering by the resulting deposits. The material reworked is not shown on the map
- g1-2** Deposits in upper Isinglass River area. g1, heads, in part, in the adjacent quadrangle to the north. Deposition down-valley controlled by bedrock threshold near U.S. Route 202.
- gm1-7** Deposits in the Mallego Brook drainage. Deposits gm1-4 were deposited in a marine environment, deposits gm5-7 are glaciolacustrine. gm1-3 are extensive in the adjacent Dover West quadrangle.
- gs** Sand and gravel in the Stonehouse Brook area.
- g1-2** Deposits in the North River drainage. Extensive sand and gritty sand of unit g1 deposited in a shallow till- and bedrock basin whose outlet is in the Epping quadrangle to the south. A small esker is present at the head of gm2.
- g1-2-4** Deposits in the Little River drainage. g1, may represent more than one sequence; coarse gravels in this deposit are on the west side of the valley, the deposits on the east side are mostly sand, horizontally bedded and rippled.
- gc** Deposit in the Caldwell Brook drainage. This deposit, which is largely mined out, contains many blocks of granite in its northern part.
- ge** Deposit near Lee. This is the ice-contact head of unit ge in the Epping quadrangle to the south.
- t** Uncorrelated stratified glacial deposits.
- t cb** **TILL**—Poorly to non-sorted mixture that ranges from clay-size particles to large boulders but is dominantly silt to pebble sizes. Locally includes small irregular masses of sorted and stratified sand and gravel. Matrix ranges from very loose and sandy to compact and silty. Consists of material deposited directly by the ice sheet, with little or no modification by meltwater. In some places mantles bedrock thinly (to about 10 feet) and discontinuously. Includes drumlins, which are streamlined hills of thick till as much as 80 feet thick built and shaped by moving glacial ice. In some areas till has a hummocky, irregular surface and is commonly very bouldery; bedrock exposures are generally lacking, but bedrock may be shallow depth in places. This till is mapped as **tb**.
- af** **ARTIFICIAL FILL**—Earth-fill materials in road embankments, dams, and made land. Many small bodies are not shown on the map. **afg**—graded areas, partly cut and partly filled. **aft**—sanitary land fill
- BEDROCK EXPOSURES**—Ruled pattern indicates areas of numerous outcrops and discontinuous, thin (less than 10 feet) surficial cover, and areas where bedrock is not exposed but is known or inferred to be at depths of less than 10 feet
- Contact**
- gc** Approximate retreatal position of stagnant ice margin during deposition of designated unit
- 30E** Glacial grooves and striations—Observation at tip of arrow. Number is in degrees east or west of south
- o** Long axis of drumlin—Generally parallel to inferred direction of ice movement. Not shown on drumlins that are irregular or nearly circular in shape, or whose alignment has been altered by wave erosion
- Direction of dip of delta foreset beds
- gn** Meltwater channel that fed the unit designated.
- gna** Meltwater spillway. Outlet for glacial stream that controlled the deposit
- h** Pit in surficial materials—Extent of large pit shown by hachures
- 12(120)** Well or test-boring reported as ending in bedrock. Number is depth to bedrock. Altitude of bedrock surface in feet above mean sea level is shown in parentheses. Information from Water Well Board, New Hampshire Department of Environmental Services, Water Resource Division



MATERIALS OBSERVATIONS

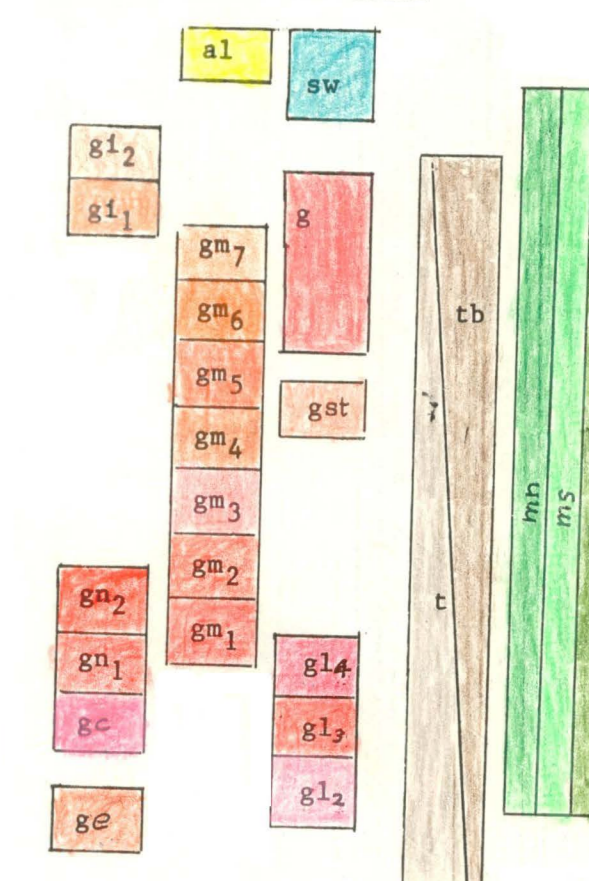
Surficial materials in exposures. Letters indicate texture in decreasing order of abundance. Numbers indicate thickness in feet

- x/c 3-10 spc
20 s
- b boulder
- c cobble
- p pebble
- s sand (as separate beds; not including sand in matrix of gravel)
- sc clay silt and silty clay

TEXTURE OF STRATIFIED DEPOSITS—Indicated to depth at least of 5 feet

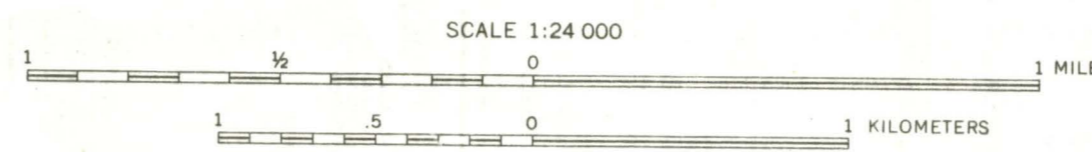
- Gravel
- Mixed sand and gravel
- Sand, minor silt
- Silt and clay

CORRELATION OF MAP UNITS



Map from U.S. Geological Survey, 1981

000 foot grid ticks based on
New Hampshire coordinate system



CONTOUR INTERVAL FEET
DATUM IS MEAN SEA LEVEL



Geology mapped in 1989

This report is preliminary and
has not been reviewed for conformity
with editorial or stratigraphic standards

**SURFICIAL GEOLOGIC MAP OF THE BARRINGTON QUADRANGLE,
ROCKINGHAM AND STRAFFORD COUNTIES, NEW HAMPSHIRE**

BY
RICHARD GOLDSMITH
1990

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