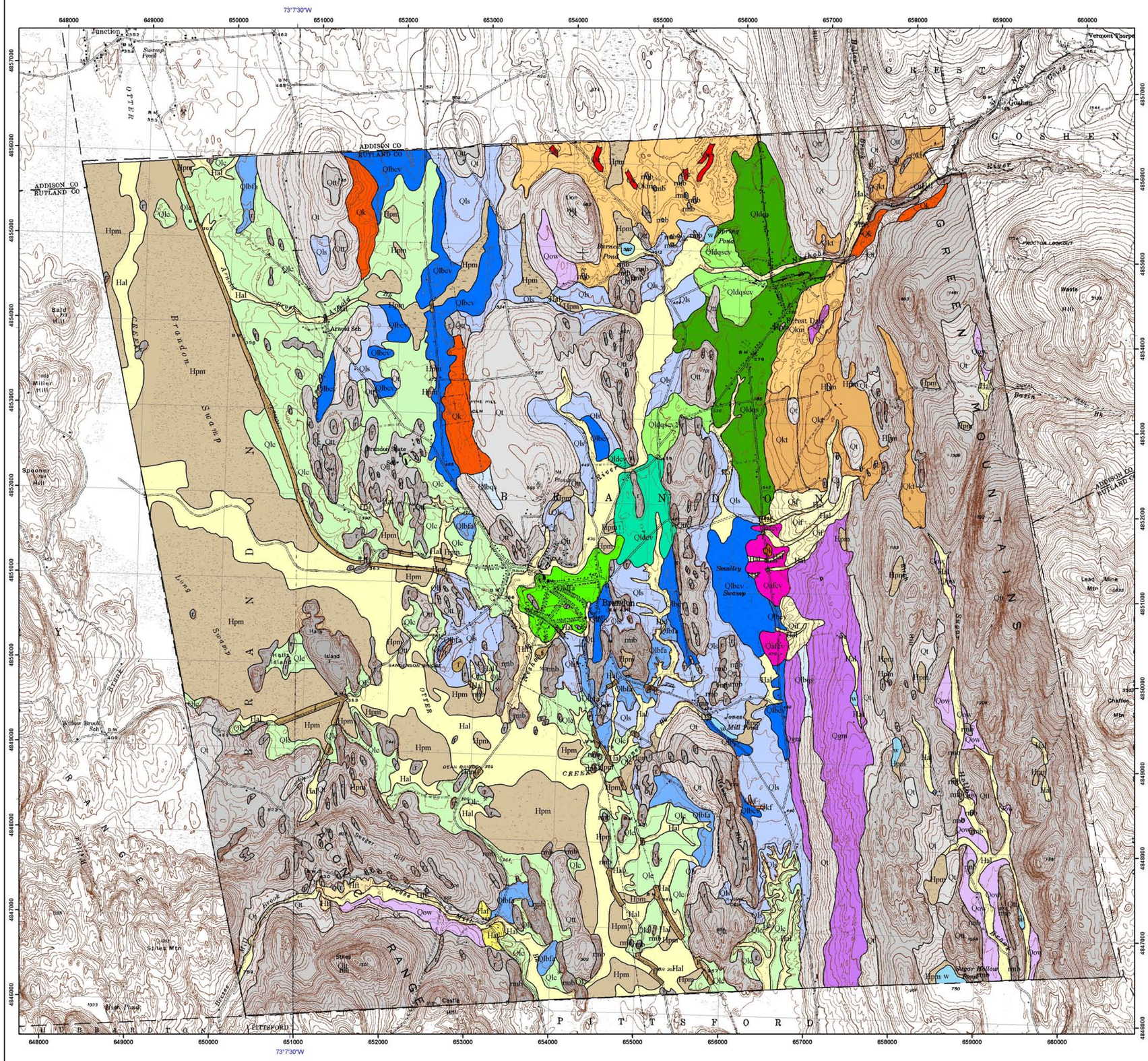

Base map from U.S. Geological Survey.
Quadrangle names printed in blue.
Coordinate System: Vermont State Plane, meters, NAD 83.
Geographic coordinates shown at topo corners are in NAD 83.
Grid overlay on map is Universal Transverse Mercator,
Zone 18N, NAD 27.

Digital Cartography by Marci Young and Marjorie Gale
Date: September 2008

1:24,000

0 0.5 1 2 Miles

0 0.5 1 2 3 Kilometers

Contour Interval 20 Feet

MN N

Magnetic declination
15.5 degrees west, 1968

SURFICIAL GEOLOGIC MAP OF THE TOWN OF BRANDON, VERMONT

by
David DeSimone
2008

Research supported by the Vermont Geological Survey, Dept. of Environmental Conservation, VT ANR.
This geologic map was funded in part by the USGS National Cooperative Mapping Program.
The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the U.S. Government.

LEGEND

RECENT

f — Fill; variable materials used as artificial fill along rail beds, road beds, embankments and low lying areas.

Hpm — Peat & Muck.; organic sediment, mostly silt and clay in wetlands and swamps; low lying flat lands prone to flooding.

Hal — Alluvium; stream flood plains; fine sand, silt and gravel of river channnel, bar and bank areas; river bottom lands; variable permeability but usually intermediate to low; often wet sites and prone to flooding; can be good acquifer if sufficiently thick.

Haf — Alluvial Fan; tributary stream deposits; gravel, silt and sand, often poorly sorted; gently to moderately sloping lands located at the base of steep slopes and at stream junctions; variable permeability but usually intermediate to low; fair aquifer if sufficiently thick and permeable.

Hft — Fluvial Terrace

PLEISTOCENE

Qafcv — Lake Coveville Alluvial Fan

Qlbfa — Lake Fort Ann fan delta @420ft. Lake Beach. strandline or shoreline current and wave deposits of sand or gravel; well to poorly sorted sand or well to poorly sorted gravel; sands deposited in lower energy embayments, tombolos and as sand spits; gravels deposited in higher energy open beaches and offshore bars; permeable and well drained; poor aquifer only because of limited aerial extent and thickness.

Qlbcv — Lake Coveville beach features @470ft +/- 10ft. Lake Beach. strandline or shoreline current and wave deposits of sand or gravel; well to poorly sorted sand or well to poorly sorted gravel; sands deposited in lower energy embayments, tombolos and as sand spits; gravels deposited in higher energy open beaches and offshore bars; permeable and well drained; poor aquifer only because of limited aerial extent and thickness.

Qlbqs — Lake Quaker Springs beach features @580ft +/- 10ft. Lake Beach. strandline or shoreline current and wave deposits of sand or gravel; well to poorly sorted sand or well to poorly sorted gravel; sands deposited in lower energy embayments, tombolos and as sand spits; gravels deposited in higher energy open beaches and offshore bars; permeable and well drained; poor aquifer only because of limited aerial extent and thickness.

Qldfa — Lake Fort Ann fan delta @ 430 ft. Lake Delta; stream deposits of gravel and sand accumulated in a lake and topset and foreset beds marking lake level; all are fan deltas in the mapped region; well sorted stratified sand and gravel or sand; usually well drained and thick deposits which make good aquifers.

Qldcv — Lake Coveville fan delta @470ft. Lake Delta; stream deposits of gravel and sand accumulated in a lake and topset and foreset beds marking lake level; all are fan deltas in the mapped region; well sorted stratified sand and gravel or sand; usually well drained and thick deposits which make good aquifers.

Qldqscv — Transitional Quaker Springs to Coveville fan. Lake Delta; stream deposits of gravel and sand accumulated in a lake and topset and foreset beds marking lake level; all are fan deltas in the mapped region; well sorted stratified sand and gravel or sand; usually well drained and thick deposits which make good aquifers.

Qldqs — Lake Quaker Springs fan delta @580ft. Lake Delta; stream deposits of gravel and sand accumulated in a lake and topset and foreset beds marking lake level; all are fan deltas in the mapped region; well sorted stratified sand and gravel or sand; usually well drained and thick deposits which make good aquifers.

Qls — Lake Sand; well sorted laminated fine to medium sand underlying plains; prone to gullying and headward erosion; moderately good aquifer if thick, poor if then.

Qlc — Lake Clay and Silt; fine grained varved or thinly laminated deposits of silt and clay accumulated in the deeper portions of lake basins; gravel sand lenses may be present within the sequence but especially toward the bottom; prone to landsliding and gullying; poorly drained and a poor aquifer.

Qow — Outwash; glacial melt water deposits of well sorted gravel and sand typically greater than 5 meters thick; gently sloping to flat lands; intermediate to high permeability; high gravel-sand resource potential.

Qk — Kame, undifferentiated; glacial deposits from streams, slumps and deposition by ice; stratified and unstratified sand, gravel and boulders with variable silt; rolling, hilly lands; intermediate to high permeability; high gravel-sand resource potential.

Qkf — Kame Fan; sand and gravel deposits from melt water deposited into the bottom of a lake along or near an ice margin; subaqueous fan sediments are well sorted and well stratified; typically found in direct contact with bedrock; may be overlain by lacustrine silt, clay and sand; good aquifer if thick and aerially extensive.

Qe — Esker; subglacial/englacial melt water stream deposits of moderately well sorted gravel and sand with boulders; prominet elongated and curving narrow ridges with steep sides and heights reaching 60+ feet; intermediate to high permeability; high gravel-sand resource potential; steep slopes pose a major slope stability problem.

Qkm — Kame Moriane; ice contact melt water and sediment flow deposits of stratified and unstratified gravel and sand with silt and boulders; rolling hilly ridged lands with potential; local steep slopes pose slope stability problems.

Qm — Moraine; ice contact ice deposited, sediment flow and melt water materials of unstratified and stratified silt, sand, gravel and boulders; broad ridges and swales with rolling low hills; variable permeability; local slopes may pose a stability problem.

Qif — Inwash Fan; stratified fluvial sand, sand and gravel, or gravel deposited where uplands transition to lowlands and associated with other ice contact sediment or accumulated against an ice margin and having one ice contact side, typically the distal side of the fan; well drained and, if thick a good aquifer.

Qkt — Kame Terrace; ice contact melt water and sediment flow deposits of stratified and unstratified gravel, sand, boulders and some silt; flat to nearly flat lands; intermediate to high permeability; high gravel-sand resource potential; slopes at edges of these areas may pose a stability problem.

Qgm — Ground Moraine; ice contact sediment flow, melt water and ice deposited sediments of variable texture ranging from stratified and well sorted gravel and sand to unstratified and poorly sorted silt, sand gravel and boulders; thickness is variable and rock outcrops may protrude; low to high permeability; limited local slope stability problems; gently rolling hills and elongated smoothed hills are possible.

Qt — Till; ice derived deposits of hardpan silt, boulders, gravel and sand which are unsorted and unstratified and deposited beneath the glacier; thickness greater than 3 meters but rock outcrops may be common; surface boulders or erractics are common; smoothed and streamlined hills in the valley and gently undulating slopes on the lower mountain flanks; low permeability; unstable slopes may result in excavations.

Qtt — Till, thin; ice derived deposits of hardpan silt, boulders, gravel and sand which are unsorted and unstratified and deposited beneath the glacier; thickness less than 3 meters with rock outcrops or ledge frequent; surface boulders or erractics are common; moderate to steep mountain slopes and summit areas; low permeability; steep slopes are unstable and slides are common.

PRECAMBRIAN AND PALEOZOIC

r — Rock Outcrop. These include areas of predominately outcrop with patches of till or slump or slide debris. Outcrop areas serve to recharge the bedrock units with ground water. Poor sites for septic systems. Slopes are generally stable.

rmb — Rock Outcrop. Marble. These include areas of predominately outcrop with patches of till or slump or slide debris. Outcrop areas serve to recharge the bedrock units with ground water. Poor sites for septic systems. Slopes are generally stable.

w — Water.

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