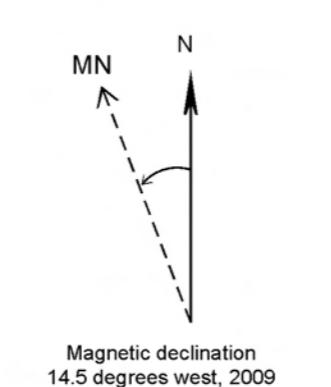
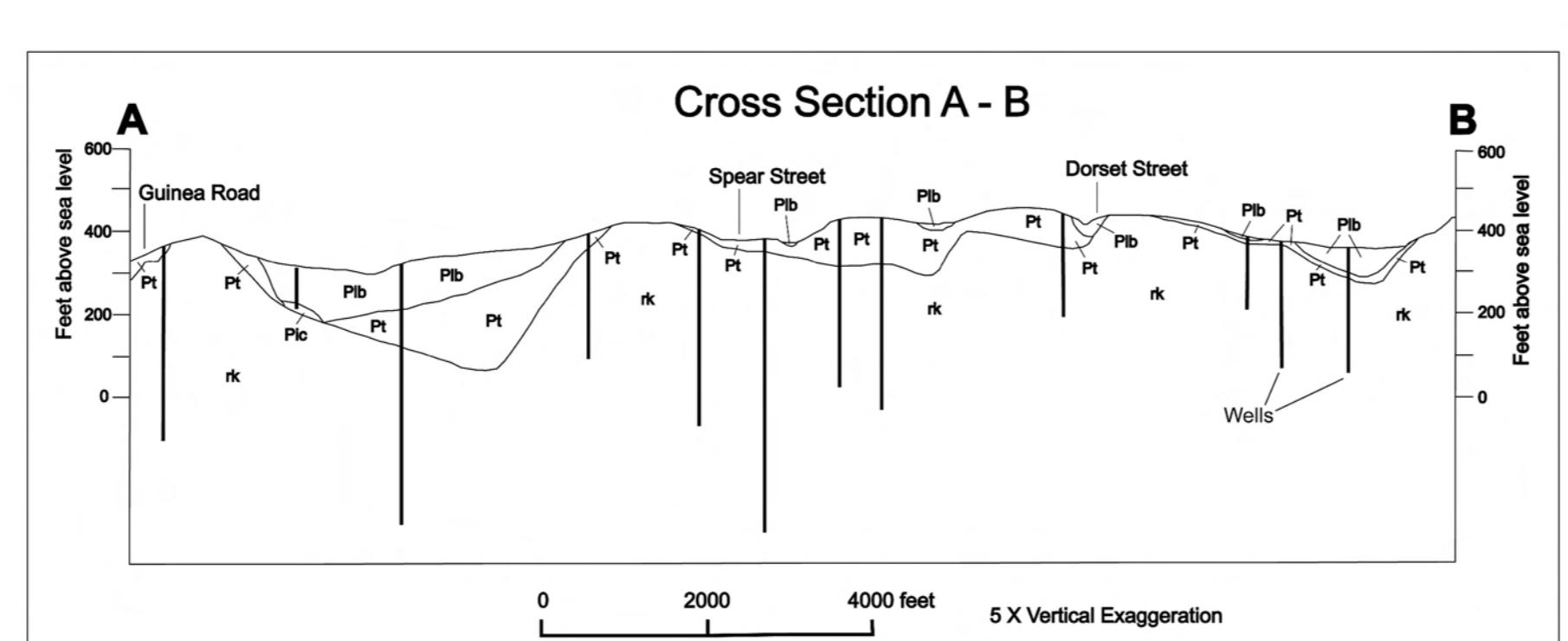
**DESCRIPTION OF MAP UNITS**

Holocene Deposits
Hf
Artificial Fill. Artificially emplaced earth along rail beds, road beds, embankments and low lying areas.
Holocene Alluvium
Hal
Silt, sand, pebble gravel, cobble gravel, and boulder gravel deposited by modern streams. Deposits include stream channel and bar deposits and finer-grained floodplain deposits. Minor wetland deposits are common. In parts of the clay lowlands, pebbles, cobbles, and boulders are exposed along reaches where streams have eroded down to the underlying till. Thickness is typically less than 3 meters.
Holocene Wetland Deposits
Hw
Deposits of sand and silt and accumulations of organic matter in lowlands. Generally less than 1 meter thick. Only mapped in the vicinity of Thorp Brook.
Holocene Wetland Deposits, Peat
Hwp
Thick accumulation of organic matter with minor sediment. Greater than 1 meter thick. One area mapped southeast of East Charlotte.
Holocene Alluvial Fan Deposits
Haf
Pebble gravel, cobble gravel, and pebbly sand deposited at the mouths of tributaries. Commonly less than 3 meters in thickness.
Holocene Talus Deposits
Hta
Accumulations of angular to subangular boulders at the bases of prominent cliffs.
Holocene Stream Terrace Deposits
Hst
Silt, sand, pebble gravel, cobble gravel, and boulder gravel deposited on terraces above the modern floodplains of streams. Deposits of mappable size are limited to the Lewis Creek valley. These represent former floodplains that have been dissected by younger streams. Generally less than 5 meters thick.
Pleistocene Deposits
Plb
Pleistocene Lake and Marine Bottom Deposits. Predominantly clay, silty clay, and silt with lesser amounts of fine to very fine sand. Lacustrine sediments of glacial Lake Vermont occur throughout the study area and consist of bedded silt/clay couplets (varves) but can include fine and very fine sand layers where deposited in ice-proximal environments. Marine sediments of the Champlain Sea occur in the western third of the study area below about 295 feet (90 meters). These consist of laminated very fine sand, silt, and clay and overlie the lacustrine sediments. Thickness of these bottom deposits ranges widely, from less than 1 meter to greater than 30 meters.
Plc
Pleistocene Lake Deposits. Coarse-grained. Moderately- to well-sorted medium to fine sand, pebbly medium to fine sand, and pebble/cobble gravel deposited in shallow waters or on shorelines of glacial Lake Vermont. Generally less than 10 meters in thickness.
Pic
Pleistocene Ice-contact Deposits. Poorly sorted pebbly sand and pebble/cobble gravel deposited in contact with glacial ice. Thickness is probably less than 10 meters. Exposed on the south flank of Mount Philo.
Pt
Pleistocene Till. Two types of till were discerned in the area but are not mapped separately. Deformation or readvance till: Many road areas are underlain by till consisting of variable mixtures of clay, silt, and fine sand with occasional pebbles, cobbles, or boulders. These materials are interpreted to be deformation till produced when the Laurentide ice sheet overrode recently-deposited lacustrine sediment. Rare exposures reveal intensely deformed lacustrine sediment with erratic pebbles, cobbles, or boulders mixed in. Lodgement till: Dense, unstratified diamict with grain sizes ranging from clay to boulders. Pebble, cobble, and boulder density is high compared to the deformation till. A weak subhorizontal foliation or fabric is visible in fresh exposures. Thickness of these tills is highly variable, from less than 1 meter to greater than 30 meters.
rK
Rock outcrop; includes areas of outcrop with patches of thin surficial material.
Striations
• Bedrock Outcrops
▫ Field Stations
▫ Wells and Borings
Shorelines
CrossSection
100 foot Contours
20 foot contours
Town Boundary
USGS 24K Quadrangle Boundary

**OPEN FILE REPORT VG09-6- SURFICIAL GEOLOGIC MAP OF CHARLOTTE, VERMONT**

by
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