New York State Museum New York State Geological Survey Mark Schaming, Director Geologic mapping by B.Bird, J. Waint, A. Kozlowski, and K. Backhaus, 2011 and 2018 Hygrology, and planimetry layers from the Digital data and cartography by K. Backhaus and B. Bird, KILOMETERS New York State DOT Raster Quadrangle separates for Cayuga 2011, 2018 and 2021 (https://gis.ny.gov/gisdata/inventories/member.cfm?OrganizationID=108).Geographic data layers from 2017 TIGER/Line shapes for transportation and hydrograpghy (https://www.census.gov/cgi-bin/geo/shapefiles/index.php Shaded relief from Cayuga County 2 m Lidar (http://www.cayugacounty.us/portals/0/planning/ nteractivegis.htm), 2014 Great Lakes 2m DEM, 2012 Seneca Watershed 2m DEM, and 10 m DEMof NYS from NYS GIS Clearinghouse (http://gis.ny.gov/elevation/index.cfm) for Wayne County CONTOUR INTERVAL: 10 FEET Magnetic declination from the NOAA online Declination Calculator: http://www.ngdc.noaa.gov/geomag-web/#declination UTM GRID AND 2019 MAGNETIC NORTH

## SURFICIAL GEOLOGY OF THE VICTORY 7.5-MINUTE QUADRANGLE, CAYUGA AND WAYNE COUNTIES, NEW YORK

Brian C. Bird, Andrew L. Kozlowski and Karl J. Backhaus

# SURFICIAL GEOLOGY OF THE VICTORY 7.5-MINUTE QUADRANGLE, CAYUGA AND WAYNE COUNTIES, NEW YORK prepared by Andrew L. Kozlowski, Brian C. Bird and Karl J. Backhaus

Supported in part by the U.S Geological Survey Cooperative Agreement Number GA11AC20362 National Cooperative Geologic Mapping Program (STATEMAP)

#### **DESCRIPTION OF MAP UNITS**

#### Holocene

Stratified silt, sand and gravel (Ha)

Sorted and stratified silt, sand, and gravel, deposited by rivers and streams. May include cobbles and boulders. Inferred as post-glaical alluvium and includes modern channel, over-bank and fan deposits

Wetland Deposit (Hw)

Peat, muck, marl, silt, clay or sand deposited in association with wetland environments. Various sediments can be present at transitional boundaries from one facies to another

#### Pleistocene

Stratified Sand (Ps)

Well sorted and stratified sand, deposited by fluvial, lacustrine or eolian processes. Inferred as deposits associated with distal glacial environments

Silt and Clay (Psc)

Stratified, fine-grained sediment consisting of fine sand, silt and clay size particles. Inferred to be deposited in mid shore to deepwater settings of glacial lakes. May include marl, rythmites, and varves.

Cobbles to Sand (Pics)

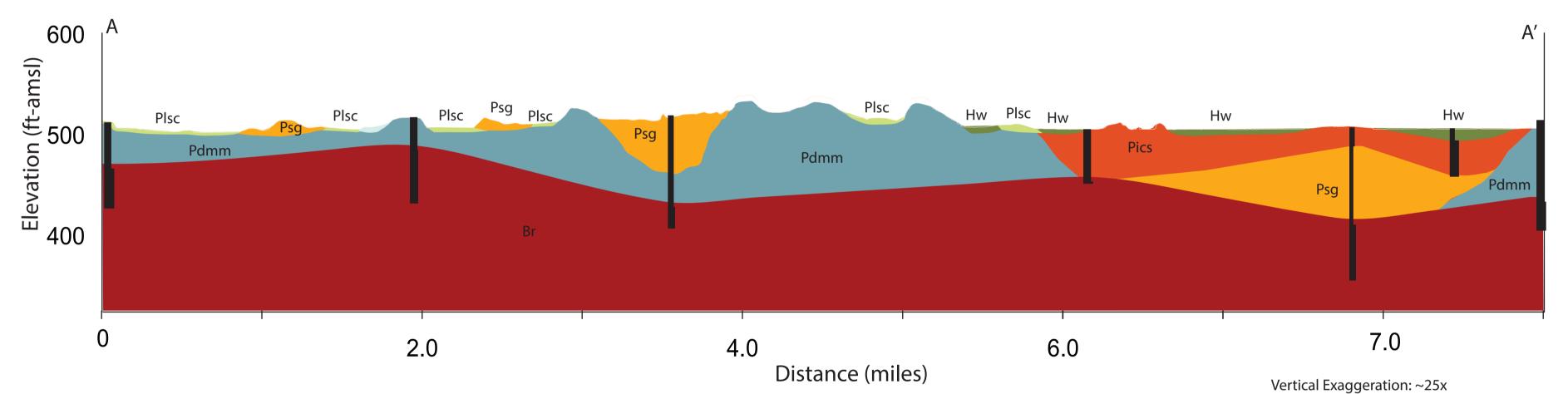
Stratified ice contacted deposits, variable coarse-grained sediment consisting of boulders to sand size particles. Inferred to be deposited along an ice-margin. May include, interbedded coarse lenses of gravel and clast supported diamictons (flow tills).

Stratified sand and gravel (Psg)

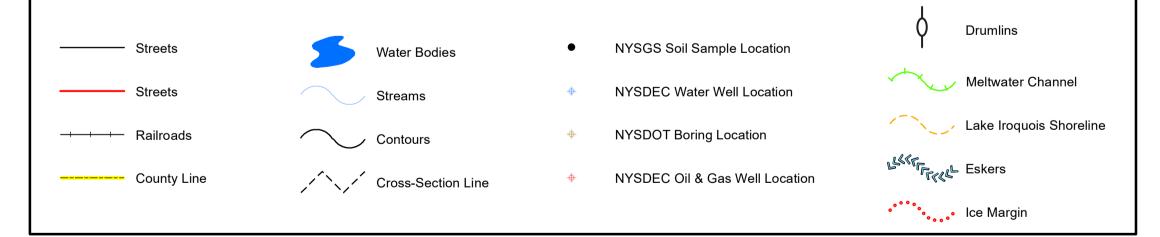
Well-sorted and stratified sand and gravel. May include cobbles and boulders. Inferred to be delta, fan or lag deposits in glacial channels or near ice margins.

An admixture of unsorted sediment ranging from clay to boulders. Generally matrix supported, massive and clast-rich.

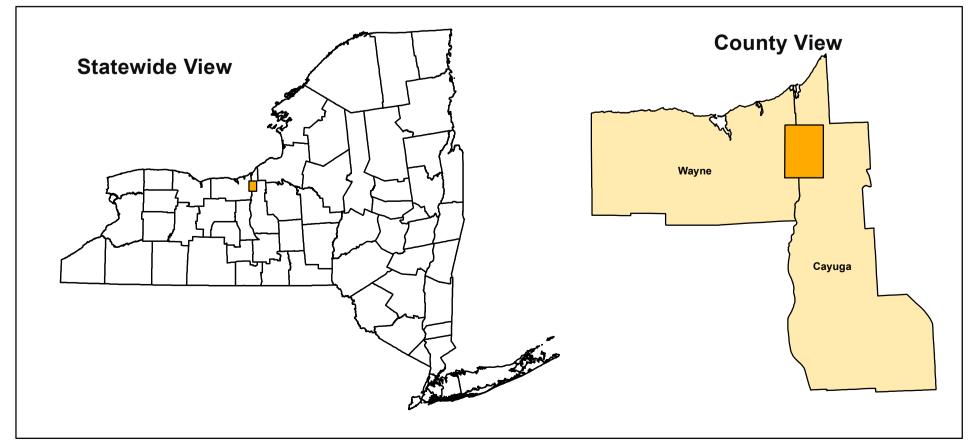
#### **CROSS-SECTION A-A'**

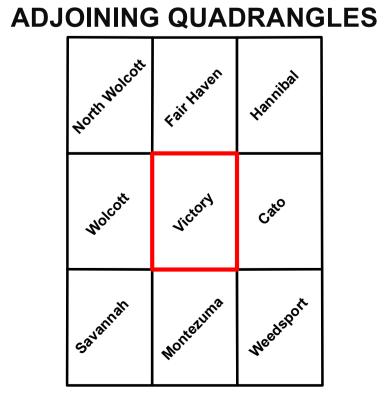


### **SYMBOLS**



#### **QUADRANGLE LOCATION**





1:75,000 scale; 2x vertical exaggeration Shaded relief generated from 2018 Cayuga County 1m, and the 2012 Seneca Watershed 2m 2014 Great Lakes 1m and the NYS 10m DEM

This geologic map was funded in part by the USGS National Cooperative Geologic Mapping Program Great Lakes Mapping Coalition award number GA11AC20362 in the year 2011 The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily presenting the official policies, either expressed or implied, of the U.S. Government. While every effort has been made to ensure the integrity of this digital map and the factual data upon which it is based, the New York State Education Department ("NYSED") makes no representation or warranty, expressed or implied, with respect to its accuracy, completeness, or usefulness for any particular purpose or scale. NYSED assumes no liability for damages resulting from the use of any information, apparatus, method, or process disclosed in this map and text, and urges independent site-specific verification of the information contained herein. Any use of trade, product, or firm names is for descriptive purposes only and does not imply endorsement by

**QUADRANGLE ELEVATION**