

**EXPLANATION**

**Quaternary**

- Qal: Alluvium  
Stream and lake deposits of clay, silt, sand, and gravel
- Dwf: West Falls Formation  
Hatch Shale Member in upper part; medium- to dark-gray silty shale and mudrock with many thin beds of light-gray siltstone, several beds of dark-gray to brownish-black shale, and some calcareous nodules. Rhinestreet Shale Member at the base; very dark gray to black petrolierous shale with some medium-gray shale beds, several septaria, and some calcareous nodules

**Upper Devonian**

- Dscr: Sonyea Formation  
Dscr, Cashaqua Shale Member and Rock Stream Siltstone Member; Cashaqua Shale Member is medium- to greenish-gray silty mudrock and shale with argillaceous to silty limestone nodules and nodular limestone layers. Rock Stream Siltstone Member is predominantly medium-gray quartz siltstone with many very silty gray shale and mudrock beds.
- Dsp: Pulteney Shale Member; dark-gray shale with many thin beds of black shale and medium-gray siltstone.
- Dsm: Middlesex Shale Member; black and brownish-black petrolierous shale

**Middle Devonian**

- Dgw: Genesee Formation  
Dgw, West River Shale Member; medium dark-gray to dark-gray shale and mudrock with several thin black-shale beds, a few very thin gray siltstone beds, and several layers of discoidal limestone nodules.
- Dgb: Bluff Point Siltstone Bed in West River Shale Member; a thin, characteristically contorted bedded gray siltstone bed.
- Dgi: Ithaca Member; medium-gray quartz siltstone and very fine grained sandstone with gray, very silty shale and mudrock beds.
- Dgp: Penn Yan Shale Member; dark-gray shale and mudrock with many layers of calcareous nodules of various sizes, several beds of black shale, and a few thin beds of gray siltstone.
- Dgg: Genesee Shale Member; black and brownish-black petrolierous shale with a few layers of argillaceous limestone concretions

**Devonian**

- Dtw: Tully Limestone and Windom Member of Moscow Shale  
Tully Limestone at top; medium-dark-gray dense hard crystalline limestone. Windom Member; medium-light-gray to medium-dark-gray shale and mudrock with black-shale bed at top and many limestone nodules and concretions

**Structures**

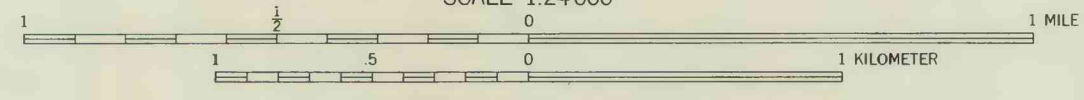
- Contact: Dashed where approximately located; short dashed where inferred
- Inferred fault: U, upthrown side; D, downthrown side
- Structure contours: Drawn on the base of the Middlesex Shale Member of the Sonyea Formation; contour interval is 20 feet; datum is mean sea level. Contours are dashed where inferred or where altitude was determined by projections from other contacts
- Dry hole: Figure is well number shown in table 1

Base by Army Map Service. Edited and published by U.S. Geological Survey, 1942

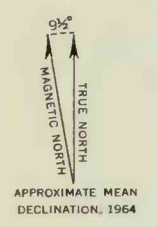
Geology by M. J. Bergin, 1958-59

**GEOLOGIC AND STRUCTURE CONTOUR MAP OF THE PENN YAN QUADRANGLE, NEW YORK**

SCALE 1:24,000



CONTOUR INTERVAL 20 FEET



(PULTENEY)

(GENESEE)

(RESERVILLE)

(GENEVA SOUTH)

(POTTER)

(GORESDEN)

(JERUSALEM)

(MILTON)

(PULTENEY)

(GENESEE)

(RESERVILLE)

(GENEVA SOUTH)

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