COMMONWEALTH OF VIRGINIA
DEPARTMENT OF MINES, MINERALS AND ENERGY
DIVISION OF MINERAL RESOURCES

PUBLICATION 169
GEOLOGIC MAP OF THE VIRGINIA PORTION OF
THE LEWISBURG 30 X 60 MINUTE QUADRANGLE

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Compilation and geology by Gerald P. Wilkes

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EXPLANATION

QUATERNARY (?)

L — **Landslide**

Intact rock-block slide or debris deposit. Probable Quaternary age. (See Frampton, 1995 and Jones, 2002.)

MISSISSIPPIAN

Mmc — **Maccrady Shale**

Shale and siltstone, light-red, light-greenish-gray, very thin- to medium-bedded, with minor limestone, light yellowish-brown, dolomitic, and sandstone, fine- to coarse-grained, some cross-bedding. An incomplete section of less than 500 feet is exposed near the town of Alleghany.

Mpo — **Pocono Formation**

Sandstone, medium- to coarse-grained, locally conglomeratic, thick-bedded, cross-bedded, with minor quartzite, siltstone and shale. Approximately 800 feet thick.

Mpr — **Price Formation**

Sandstone, medium- to coarse-grained, thick-bedded, with minor conglomerate, siltstone, shale, limestone, and coal. Preserved thickness approximately 500 feet.

DEVONIAN

Dhs — **Hampshire Formation**

Sandstone, siltstone, shale, and mudstone, shades of red, green, and gray; sandstone, fine-grained, thick-bedded, large-scale crossbeds. Approximately 900 to 1500 feet thick.

Dfk — **Foreknobs Formation** (Chemung Formation of previous reports)

Sandstone and shale, green and greenish-gray, fossiliferous in places (most notably large crinoid stems), and minor quartz-pebble conglomerate. 1500 to 2000 feet thick.

Db — **Brallier Formation**

Siltstone, shale, and thin sandstone, olive-gray, micaceous, sparsely fossiliferous. 1500 to 2200 feet thick.

Dmn — **Millboro Shale, Tioga Interval, and Needmore Formation, undivided**

Millboro Shale: shale, black, fissle, near the base is an interval of thin limestone beds, dark-gray, aphanic **(Purcell Member?)**; **Tioga Interval:** interbedded gray silty shale, bentonite beds, and black shale near base; **Needmore Formation:** shale, olive-gray, calcareous mudstone, fossiliferous, readily weathered. Composite thickness 800 to 1200 feet.

DS — **Devonian and Silurian rocks, undivided**

Ridgeley Sandstone: sandstone, medium-gray, calcareously cemented, fine- to coarse-grained, fossiliferous, most notably *Spirifer*. **Helderburg Group**, including: **Licking Creek Limestone:** limestone, medium-gray, arenaceous, with white chert; **Healing Springs Sandstone:** sandstone, medium-grained, calcareously cemented, cross-bedded; **New Creek Limestone:** limestone, gray to pink, coarse-grained, crinoidal. **Keyser Formation:** limestone, coarse-grained, nodular, arenaceous; **Clifton Forge Sandstone Member** of the Keyser Formation: quartzarenite, ledge-former, typically clean, found approximately midsection of the Keyser. **Tonoloway Limestone:** consists of an upper and lower unit: limestone, dark-gray, fine-grained, thin-bedded; and a middle unit: limestone, thick-bedded, coarse-grained turbidites. **Cayugan Group**, including: **Wills Creek Formation:** shale, silty, yellow-weathering; **Williamsport Sandstone:** sandstone, indurated, greenish-gray, with minor siltstone beds; **McKenzie Formation:** sandstone, calcareous, cross-bedded, interbedded with limestone, massive, knobby-weathering, dark-gray. Composite thickness of this map unit is 200 to 820 feet.

SILURIAN

Skrt — **Keefer Sandstone, Rose Hill Formation, and Tuscarora Formation, undivided**

Keefer Sandstone: sandstone, quartzite in places, white to light-gray, very-thick-bedded, medium- to coarse-grained, massive ledge-former, 50 to 400 feet thick. **Rose Hill Formation:** sandstone, maroon, medium-grained, hematitic, well-indurated, and red, green, and gray shale and siltstone, 200 to 250 feet thick. **Tuscarora Formation:** sandstone, white to light-gray, ledge-forming, quartzitic, medium- to coarse-grained, with quartz-pebble conglomerate ("jelly beans") in lower half of unit, 50 to 260 feet thick.

ORDOVICIAN

Oj — **Juniata Formation**

Sandstone, shale, and mudstone, red to olive-gray. Approximately 300 feet thick.

Ordr — **Reedsville Shale, Dolly Ridge Formation, and Eggleston Formation, undivided**

Reedsville Shale: shale and siltstone, calcareous, yellow-gray, green-gray, and medium gray, *Orthorhynchula* zone near top of unit. **Dolly Ridge Formation:** limestone, medium-gray, thin-bedded, fine-grained, argillaceous, interbedded with claystone, limestone, shale, and K-bentonite beds. **Eggleston Formation:** mudstone and siltstone, greenish to yellowish-gray; limestone, olive-gray and light-brown, aphanic to medium-grained, thin-bedded; K-bentonite beds in upper part of unit. Composite thickness of these units is approximately 1200 feet.

Ou — **Middle Ordovician rocks, undivided**

Limestone, dark-gray with black chert; limestone, coarse-grained, thick-bedded, knobby-weathering; limestone, dark-gray to reddish, very fine-grained; limestone, black, cherty, argillaceous, with calcareous shale. Approximately 500 feet thick.

Ob — **Beekmantown Formation**

Dolostone, light- to medium-gray, thick-bedded, fine-grained, distinctive "butcher-block" jointing on some weathered surfaces, black bedded chert, beds of white massive chert near top of unit, with some interbeds of limestone, light-to medium-gray. Uppermost 500 feet exposed in map area.

KEY

CONTACTS

Solid where exposed or approximate, dotted where covered or inferred

FAULTS

Solid where exposed or approximate; **thrust faults: T** on the upper plate, tick marks indicate dip direction; **strike-slip faults:** arrows indicate direction of movement

FOLDS

Major antiform axis based on orientation of strike and dip

Tightly folded beds

ATTITUDE OF ROCKS

Strike and dip of inclined bedding

Strike and dip of overturned bedding

Horizontal bedding

Strike of vertical bedding

REFERENCES USED IN COMPILATION

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This map was compiled digitally. Digital conversion and editing by Kevin B. Jones. The geospatially referenced files are available from the Division of Mineral Resources, P. O. Box 3667, Charlottesville, VA 22903.

SCALE 1 : 100,000

0 1 2 3 4 5 6 7 8 9 miles

0 2 4 6 8 10 12 14 kilometers

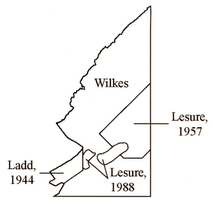
CONTOUR INTERVAL 50 METERS

Projection: Modified Plate Carree
lon 0 = -80.50000000
lat 0 = 37.50000000
k1 = 0.0174533
k2 = 0.0138466

DECLINATION DIAGRAM

Base map is a modified U. S. Geological Survey DRG, 1984 Lewisburg Quadrangle, West Virginia - Virginia, 30 x 60 minute series

Map prepared in cooperation with the U. S. Geological Survey - STATEMAP Assistance Award Number 98HQAG2011



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