

does, however, display conspicuous widely spaced "wispy" red shale laminae. The unit is between 15 feet and 25 feet thick in the Davis and Table Rock area.

Succeeding the Deer Valley is about 175 to 200 feet of interbedded, pale-red, laminated, calcareous sandstone and brighter red, hackly, micaceous siltstone and shale, the Savage Dam Member. The uppermost member of the Greenbrier, the Wymps Gap Limestone, is a pale greenish-gray, very fine grained, argillaceous limestone, grading up to hackly calcareous mudrock with reddish overtones. Its thickness totals about 35 to 50 feet.

The Greenbrier Formation forms the valley in which the Younghigheny River flows.

The Greenbrier crops out very poorly, if at all, in the Lonaconing quadrangle because the beds are readily soluble and generally covered by rubble from uplope. Its presence is largely inferred in this area. The top of the Greenbrier is generally marked by the first sustained redbeds lacking limestone (Mauch Chunk Formation). Fauna in the Greenbrier consists mostly of brachiopods and abundant crinoid debris, but a few trilobites, bivalves, gastropods, and orthocone cephalopods also are present.

The sparse, shallow marine fauna of the Forkknobs indicates a Late Devonian age.

Scherr Formation Shale, siltstone, and subordinate sandstone. Shale light-olive to greenish-gray; siltstone and sandstone medium-gray, brownish-gray to reddish-gray.

The Scherr Formation is mostly shale, thickly laminated to fissile, similar to that of the Brallier, interbedded with planar siltstones. The basal 10 to 15 feet of the unit is dominated by fine-grained sandstone and contains some brownish-gray to reddish beds. This influx of coarser sediment defines the lower contact of the unit.

As much as 2,000 feet of strata can be assigned to the Scherr Formation along the Allegheny Front in Maryland, but the thickness is variable. At LaVale in the Cumberland quadrangle, only about 1,000 feet of beds are present.

The lower sandy beds of the Scherr hold up a series of low knobs along the lower slopes of Dans Mountain. Outcrops are limited to the beds and banks of some tributaries draining the slopes of the ridge.

Supplemental Information

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Base map from U.S. Geological Survey 7.5-minute Series (Topographic) Table Rock, 1948 (photorevised 1981) 2001 magnetic north declination (center of quadrangle): 9 degrees west (To determine current magnetic declination see: <http://www.ngdc.noaa.gov/cgi-bin/seg/gmag/flshtml.pl>) Davis, 1967 (photorevised 1981) 1996 magnetic north declination (center of quadrangle): 8.5 degrees west
Note: Hydrography, topography and boundary layers shown are from USGS digital line graphs (DLGs) for these quadrangles. Cultural/transportation layer is from USGS stable base separates.

Current map projection: Maryland State Plane Coordinate System 1987 (Projection: Lambert Conformal Conic, 1980 geodetic reference system) (Horizontal Datum: North American Datum 1983)
State Plane (NAD83) 2000-meter ties, grid ties and coordinates shown in black Geographic coordinates (latitude-longitude) (NAD83) shown at 2.5' intervals in black Note: Black grid lines on the Table Rock quadrangle are remnant 1000-meter UTM NAD27 lines from the base mylar. This layer has been rasterized and projected to State Plane NAD83 meters.

Explanation of Map Symbols

- Geologic Symbols**
- Geologic contact; dotted where concealed
 - Coal bed (with unit label); dotted where concealed
Note: coal seams at geologic contacts are labeled in red only (seams are not symbolized separately)
 - Inclined bedding, strike and dip; degrees of dip shown
 - Mine adit or prospect
- Topographic and Hydrologic Symbols**
- Topographic Contour - Index (100-ft interval)
 - Topographic Contour - Intermediate (20-ft interval)
 - Stream
 - Water body (including lakes, ponds, rivers)
 - Marsh, wetland, swamp, or bog

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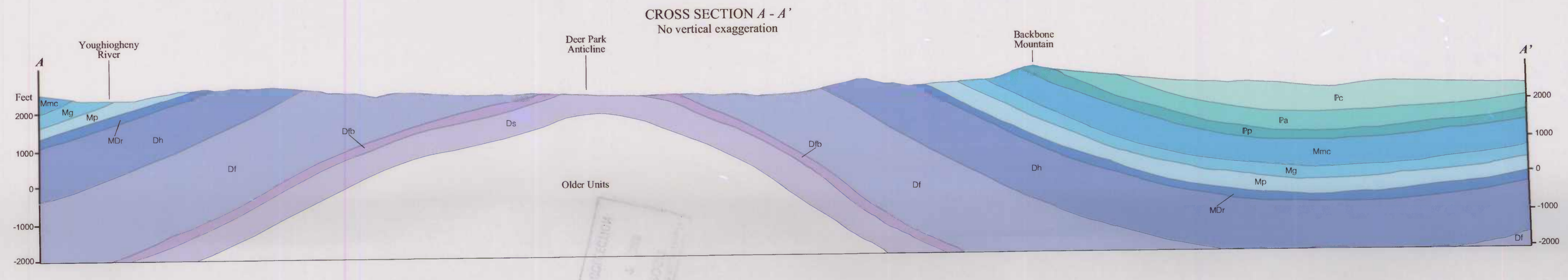
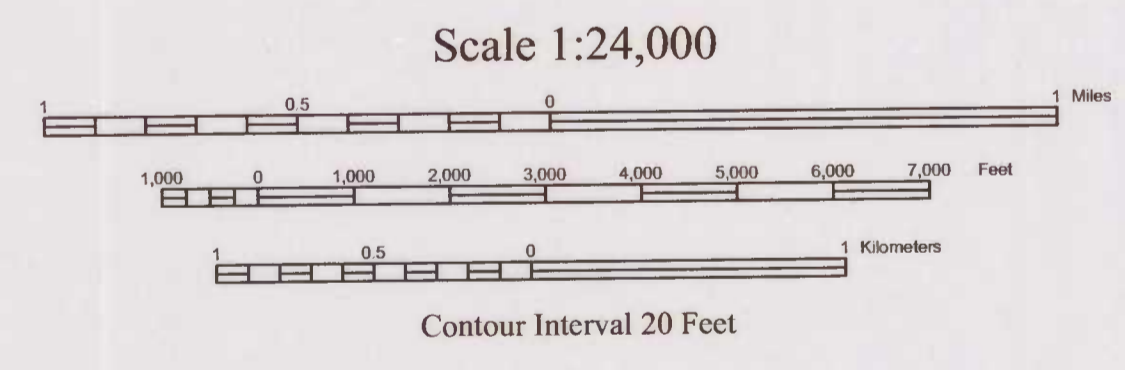
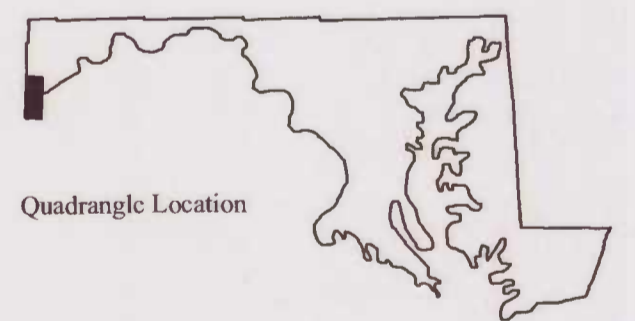


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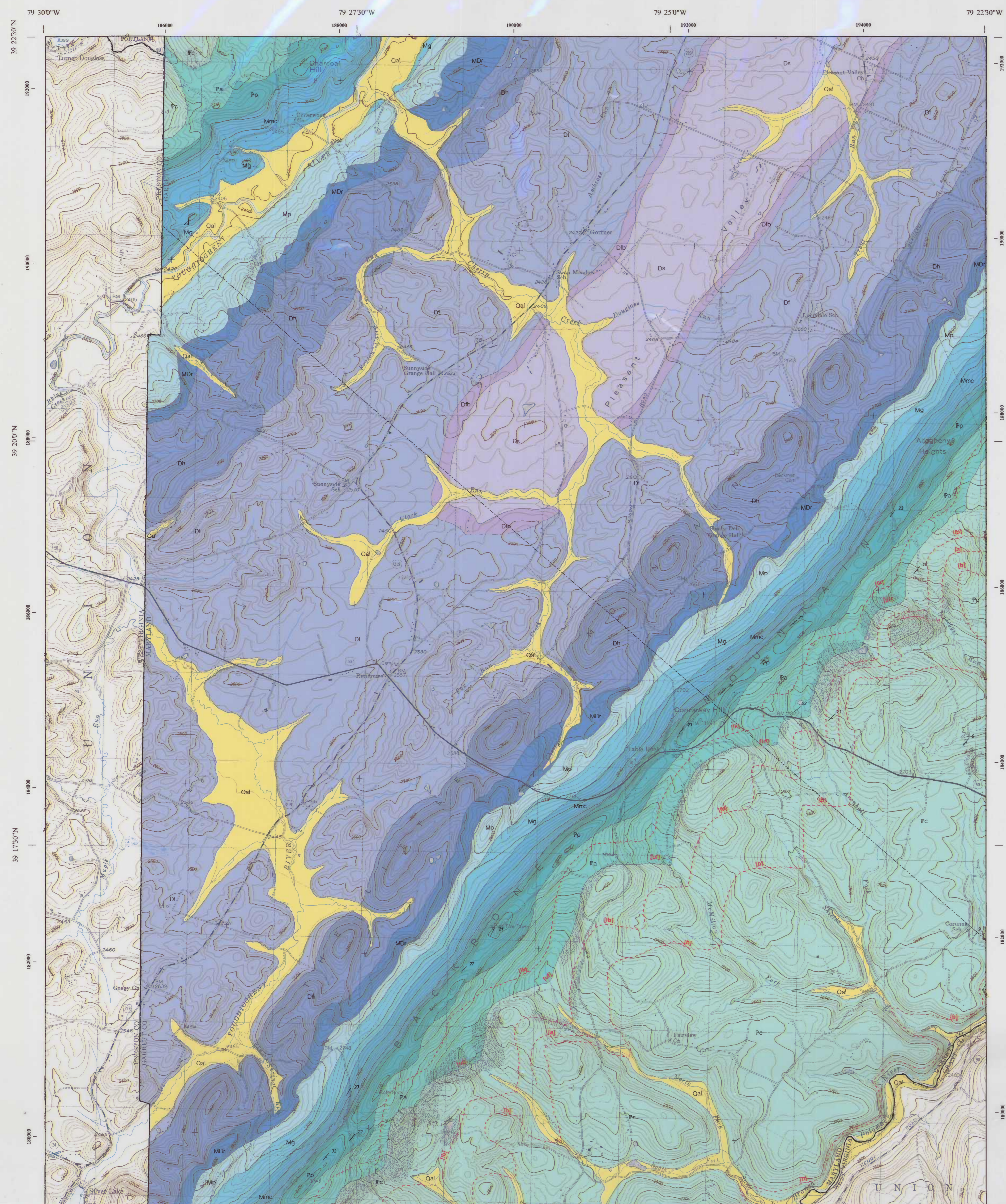
Geologic Map of the Maryland Portions of the Table Rock and Davis Quadrangles, Garrett County, Maryland
By David K. Brezinski and John D. Glaser
2003

Adjoining 7.5' Quadrangle Names (Portions of the Table Rock and Davis Quadrangles shaded)

1	2	3	1. Terra Alta
4	5	2. Oakland	2. Oakland
6	7	3. Deer Park	3. Deer Park
		4. Aurora	4. Aurora
		5. Goorman	5. Goorman
		6. Lead Mine	6. Lead Mine
		7. Davis	7. Davis
		8. Mount Storm Lake	8. Mount Storm Lake



Copies of this map are available in hard copy (paper) and digital form from: MARYLAND GEOLOGICAL SURVEY 2300 Saint Paul Street Baltimore, MD 21218 Ph: 410-554-5500 Fax: 410-554-5502 <http://www.mgs.md.gov/>



DESCRIPTION OF MAP UNITS

Quaternary	Qal	<p>Alluvium Sand, silt, and gravel. Pale-gray to dark-gray, tan, weathering orange to red-brown.</p> <p>Alluvium encompasses poorly sorted, sandy to gravelly unconsolidated sediments, generally with angular to subrounded cobbles and boulders of locally derived rock. Although dominantly quartzose, alluvial sand commonly contains abundant rock fragments.</p> <p>Alluvium underlies the channels and adjacent valley floors of all of the major streams and many of the minor streams in the map area, but especially along the Potomac River.</p>	Mississippian	Mo	<p>Purslane Sandstone Sandstone. Red-brown to purple.</p> <p>The Purslane Sandstone is represented in the map area by several tens of feet of fine- to medium-grained, hard quartzitic sandstone and quartz-pebble conglomerate. The rock in the lower part of the formation is typically thin-bedded and flaggy in 1- to 2-inch beds, shows conspicuous low-angle cross-bedding, and upon weathering yields a characteristic talus of thin slabs. Although the Purslane may be as much as 250 feet thick, it probably averages about 100 feet in thickness. It carries no determinate fauna or flora, and is non-marine in origin.</p> <p>Along most of the outcrop belt, the most conspicuous evidence of its presence is a rubble or talus of reddish-purple sandstone slabs distributed over the crests and back sides of knobs along Backbone Mountain.</p> <p>The Rockwell Formation comprises interbedded sandstone, siltstone, and shale. Most of the sandstones are soft, micaceous, commonly lignitic, lenticular and cross-bedded, and thin- to thick-bedded. The interbedded fine-grained rocks range from evenly laminated to massive and hackly. Rockwell shales are carbonaceous and pyritic in places. Some beds display burrows or burrow-mottling, as well as <i>Skolithus</i> tubes.</p> <p>Several named members have been recognized within the Rockwell, especially in nearby areas of West Virginia and Pennsylvania, but none of these has seen widespread use in Maryland. The Oswayo Member is a latest Devonian marine tongue and makes up the basal 40 to 50 feet of the formation. It consists of pale gray-green, flaggy sandstone. About 30 feet above this sandstone is a thin bed of polyimic diamictite. The Oswayo Member is succeeded by up to 180 feet of mostly gray-green sandstone and reddish-brown to red, interbedded, mostly non-marine siltstone and non-marine shale. Overlying this non-marine interval is a dark-gray siltstone known as the Riddlesburg Shale. This marine shale is correlative to the Sunbury Shale of Ohio, a basal Mississippian unit.</p> <p>In the Table Rock quadrangle, the Rockwell Formation forms low hills at the base of Dans Mountain.</p> <p>In the study area the top of the Rockwell is placed at the base of the lowest, deep red-brown to purple, flaggy cross-bedded quartzitic sandstone. The unit ranges in thickness from 250 to about 400 feet, and represents Late Devonian to Early Mississippian deposition. Fossils are rare in the Rockwell in this area, with the exception of plant fragments and trace fossils.</p>
	Pc	<p>Conemaugh Group Interbedded, greenish-gray and medium-gray shale, gray micaceous sandstone and siltstone; coal beds, and locally reddish claystones with two thin fossiliferous shales in the lower half of the group.</p> <p>Although the Conemaugh Group in western Maryland is made up of two formations, it is not differentiated herein. Only the lower half of the formation, which roughly coincides with the Glenshaw Formation, is present in the Davis Quadrangle. A couple of locally mined coal beds, like the Weltersburg [we] and Ames [a] are present near the middle of the group, but only two coal beds are consistently minable in the Davis Quadrangle. The lower coal is equivalent to the Lower Bakerstown [lb] of Pennsylvania. The upper coal, the Barton [b], is termed the Ellick coal in adjacent West Virginia. Important sandstone intervals include the Mahoning above the Upper Freeport coal at the base of the group, the Saltsburg Sandstone above the Bakerstown coal bed, the Morgantown Sandstone above the Barton coal. The Conemaugh Group is 800 to 900 feet thick.</p>		Mdr	<p>Rockwell Formation Sandstone, siltstone, shale, and minor conglomerate. Greenish-gray, pale-green or gray, reddish-brown to brownish-red.</p>
Pennsylvanian	Pa	<p>Allegheny Formation Interbedded, medium- to dark-gray shale and siltstone; tan to light-gray sandstone; and coal with a claystone interval near the base.</p> <p>Of the important coal beds within the Allegheny Formation only the Lower Kittanning [lk] and Upper Freeport [uf] are mapped here. The base of the formation is marked by the Lower Mount Savage claystone, which is present near the base of the formation. An important marker sandstone unit is the Westport Sandstone near the middle of the formation. The top of the formation is placed at the top of the Upper Freeport coal bed, and the base of the formation is placed at the top of the underlying Homewood Sandstone of the Pottsville Group.</p> <p>The Allegheny Formation is estimated to be 200 to 225 feet thick.</p>	Mississippian	Dh	<p>Hampshire Formation Sandstone, siltstone, and shale. Grayish-red to dusky-red; some grayish-green or mottled green and red beds.</p> <p>The Hampshire Formation consists of interbedded micaceous, fine- to medium-grained sandstone and siltstone or coarse hackly shale. Hampshire sandstones range from thin to very thick bedded (to 5 feet), are commonly cross-bedded and show lenticular bedding. Some beds contain shale-chip conglomerate. The associated siltstones are generally massive and grade into shale or mudrock. Scattered red beds bear indeterminate plant fragments.</p> <p>The upper contact with the Rockwell Formation is usually placed at the base of the first yellowish-gray or greenish-gray sandstone. Hampshire strata are normally poorly exposed along Backbone Mountains. This is because no major streams or highways cross this unit in the quadrangle and as such outcrops are relatively scarce.</p> <p>Typically, the unit is 1,800-2,000 feet thick across the study area.</p>
	Pp	<p>Pottsville Group Predominately light-gray sandstone at the top, grading downward into tan cross-bedded sandstone and conglomerate with subordinate amounts dark-gray shale, siltstone and coal.</p> <p>The basal formation, the Sharon Sandstone unconformably overlies red shale and claystone and green-gray sandstones of the Mauch Chunk Formation, and consists of a very light gray conglomeratic sandstone. The Sharon Sandstone is overlain by the Conoquenessing Sandstone which is typically thin-bedded, micaceous, and tan in color. Overlying the Conoquenessing is an interval of dark-gray shale and coal tentatively correlated with the Upper Mercer of Ohio and Western Pennsylvania. The uppermost formation of the Pottsville Group is the Homewood Sandstone. The Homewood consists of medium- to thick-bedded, very light gray, coarse-grained sandstone to granular or pebbly conglomerate. No minable coals are present in the mapped area in the Pottsville Group.</p> <p>Total thickness for the group is 180 to 200 feet.</p>		Df	<p>Foreknobs Formation Siltstone, sandstone, conglomerate, and minor shale. Olive-gray, reddish-gray, or yellowish-gray.</p> <p>The Foreknobs is a consistently coarser unit than the underlying Scher, consisting of siltstones punctuated by massive sandstone packages, interbedded with subordinate but significant amounts of conglomerate and pebbly sandstone. Moreover, scattered through the section are many brownish-gray to grayish-red "redbeds." These superficially resemble the red strata of the overlying Hampshire Formation but differ in having more brownish than red tones.</p> <p>Four named members of the Foreknobs have been recognized in the map area. The basal Mallow Member is 700 to 900 feet of chiefly olive-gray massive sandstone and siltstone, in places with conglomeratic strata at the base. The Mallow is wholly marine in origin and is a shallowing upward sequence. Overlying the Mallow is the Briery Gap Sandstone, comprised of thick beds of cross-bedded yellowish-gray sandstone and pebbly sandstone, accumulated as barrier bar deposits. The succeeding Blizard Member is 300 to 500 feet of interbedded olive-gray sandstone and siltstone, with minor amounts of shale and conglomerate, all of shallow marine origin. The Pound Sandstone, which overlies the Blizard, essentially repeats the Briery Gap lithology. This sandstone forms a series of low hills at the axis of the Deer Park Anticline.</p> <p>It is essentially a shallowing up sequence, which is basal marine in the lower portion, grading to shoreline deposits at the top. The first bright-red, non-marine beds of the Hampshire mark the top of the unit.</p> <p>The Foreknobs draws its name from outcrop in a series of prominent knobs lying below the larger knobs of the Purslane Formation along the Allegheny Front of West Virginia. The abundant shales in this formation make up the broad valley at the center of the Deer Park Anticline. In most places, the Foreknobs-Hampshire contact passes through or just below this series of knobs. Outcrops of the Foreknobs are generally quite limited in this area. As much as 1,800 feet of strata can be assigned to the unit in the map area.</p>
	Mmc	<p>Mauch Chunk Formation Shale, siltstone, and sandstone. Shale and siltstone red or pale-green; sandstone pale-gray to olive-drab.</p> <p>The Mauch Chunk is predominantly red shale and siltstone with interbedded flaggy micaceous sandstone. In the map area, the unit is fissile to hackly shale, and micaceous siltstone or mudstone. A well-exposed section of the lower 200 feet of the Mauch Chunk along the old Western Maryland Railway tracks west of Corriganville in the Cumberland quadrangle is 85 percent shale and siltstone, only 25 percent of which is non-red. The predominance of soft fine-grained rocks in this unit renders it one of the least visible units in the map area. Sandstones are fairly well spaced through the formation; most are cross-bedded or less commonly parallel-bedded, and fine- to medium-grained. Separating individual sandstone beds are intervals of red-brown, mudstone, with pervasive root casts.</p> <p>The top of the Mauch Chunk is generally placed at the base of the massive Sharon Sandstone Member of the overlying Pottsville Formation. The Mauch Chunk strata are predominantly if not wholly non-marine in the map area. Fossils other than plant fragments are absent.</p> <p>The thickness of the Mauch Chunk is approximately 500 feet.</p>		Dfb	<p>Greenbrier Formation Limestone, sandy to crystalline, calcareous sandstone; siltstone and shale. Limestones pale-gray, pale-red, and greenish-gray; terrigenous lithologies pale-red to bright-red.</p> <p>The Greenbrier in the map area is comprised of four members: from oldest to youngest, the basal Loyahanna Limestone, the Deer Valley Limestone, the Savage Dam Member, and the uppermost Wymps Gap Limestone. The Loyahanna is a conspicuously cross-stratified, pale-red sandy limestone. The pervasive red and gray laminations are enhanced on weathered surfaces, and render the Loyahanna instantly recognizable in the map area. Some cross-bedded units are as thick as 15 feet. The Loyahanna is unfossiliferous.</p> <p>Over the northern part of the map area, the sandy limestone of the Loyahanna is sharply overlain by the Deer Valley Limestone. The Deer Valley is a single thick bed of gray to reddish, fine-grained, massive, crystalline limestone with a silky luster and a hackly irregular fracture. Fossils are rare and inconspicuous. It</p>
Mississippian	Mg	<p>Greenbrier Formation Limestone, sandy to crystalline, calcareous sandstone; siltstone and shale. Limestones pale-gray, pale-red, and greenish-gray; terrigenous lithologies pale-red to bright-red.</p>	Devonian	Df	<p>Foreknobs Formation Siltstone, sandstone, conglomerate, and minor shale. Olive-gray, reddish-gray, or yellowish-gray.</p>
	Md	<p>Rockwell Formation Sandstone, siltstone, shale, and minor conglomerate. Greenish-gray, pale-green or gray, reddish-brown to brownish-red.</p>			