DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

REGIONAL AQUIFER–SYSTEM ANALYSIS—
APPALACHIAN VALLEY AND PIEDMONT

PROFESSIONAL PAPER 1422–C
Stratigraphic columns—PLATE 1
Hollyday, E.F., and Hileman, G.E., 1997, Hydrogeologic terranes and potential yield of water to wells in the Valley and Ridge Physiographic Province in the Eastern and Southeastern United States

COLUMNS

SYSTEM	SERIES	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	SERIES	SYSTEM
		ALABAMA			GEORGIA	TENNESSEE			VIRGINIA			WEST VIRGINIA	VIRGINIA			WEST VIRGINIA	MARYLAND		PENNSYLVANIA			NEW JERSEY		
		VALLEY AND RIDGE, SOUTHERN SEGMENT (Southern Appalachian COSUNA, Columns 7&8)	CALHOUN, ST. CLAIR, AND TALLADEGA COUNTIES (Southern Appalachian COSUNA, Column 6)	VALLEY AND RIDGE, NORTHERN SEGMENT (Southern Appalachian COSUNA, Columns 4&5)	VALLEY AND RIDGE AND PLATEAU (Southern Appalachian COSUNA, Columns 9,10,&15)	SOUTHEASTERN VALLEY AND RIDGE (Southern Appalachian COSUNA, Column 13)	NORTHWESTERN VALLEY AND RIDGE (Southern Appalachian COSUNA, Columns 12&13)	NORTHEASTERN VALLEY AND RIDGE (Southern Appalachian COSUNA, Column 14)	LEE AND WISE COUNTIES (Southern Appalachian COSUNA, Column 20)	SCOTT, RUSSELL, TAZEWELL, BLAND, AND GILES COUNTIES (Southern Appalachian COSUNA, Column 25)	WASHINGTON, SMYTH, WYTHE, AND PULASKI COUNTIES (Southern Appalachian COSUNA, Column 25)	SOUTHEASTERN (Northern Appalachian COSUNA, Column 3)	CRAIG, ALLEGHANY, BATH, AND HIGHLAND COUNTIES (Northern Appalachian COSUNA, Column 4)	MONTGOMERY, ROANOKE, BOTETOURT, AND ROCKBRIDGE COUNTIES (Northern Appalachian COSUNA, Column 5)	NORTHWESTERN (Northern Appalachian COSUNA, Column 6)	NORTHEASTERN (Northern Appalachian COSUNA, Column 10)	ALLEGANY COUNTY (Northern Appalachian COSUNA, Column 13)	WASHINGTON COUNTY (Northern Appalachian COSUNA, Column 14)	SOUTH-CENTRAL (Northern Appalachian COSUNA, Column 18)	SOUTHEASTERN (Northern Appalachian COSUNA, Column 19)	EASTERN (Northern Appalachian COSUNA, Column 24)	NORTHWESTERN (Northern Appalachian COSUNA, Column 25)		
Permian	Lower																						Lower	Permian
Pennsylvanian	Upper																						Upper	Pennsylvanian
	Middle																						Middle	
	Lower																						Lower	
Mississippian	Upper																						Upper	Mississippian
	Lower																						Lower	
Devonian	Upper																						Upper	Devonian
	Middle																						Middle	
	Lower																						Lower	
Silurian	Upper																						Upper	Silurian
	Middle																						Middle	
	Lower																						Lower	
Ordovician	Middle																						Middle	Ordovician
	Lower																						Lower	
Cambrian	Upper																						Upper	Cambrian
	Middle																						Middle	
	Lower																						Lower	

1. Monteagle Limestone in column 18 is the Monteagle Limestone of Hanford, 1978.
2. Tuscumbia Formation in column 18 is the Tuscumbia Formation of McLemore, 1971.
3. Mixed or interbedded lithology (limestone, sandstone, shale, or chert) that behaves hydraulically like limestone.
4. Predominantly dolomite and limestone to north and east (Cumberland County); predominantly limestone to south and west (Franklin County).
5. Predominantly dolomite and limestone to north and east (Northampton and Lehigh Counties); predominantly limestone to south and west (Berks County).

Abbreviations: COSUNA, Correlation of stratigraphic units of North America; Dol., Dolomite; Fm., Formation; Gp., Group; Ls., Limestone; Mbr., Member; Qtz., Quartzite; Sh., Shale; Ss., Sandstone

EXPLANATION

(See figure 3 for the location of the areas described in the stratigraphic columns)

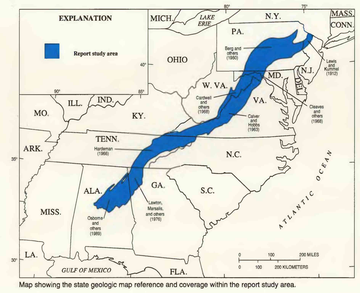
Explanation of rock types — Geologic units are classified into one of four rock types based on lithology

- **Dolomite** — Includes units that are predominantly dolomite, a combination of dolomite and sandstone or chert, and dolomite and limestone with as much as 70 percent limestone
- **Limestone** — Includes units that are predominantly limestone and limestone with less than 30 percent dolomite
- **Argillaceous carbonate rock** — Includes units that are predominantly clay-rich dolomite or limestone, as well as shale units that contain abundant calcite or magnesium calcite. Also includes units with a mixture of rock types
- **Siliciclastic rock** — Includes units that are predominantly shale with little or no carbonate content, claystone, siltstone, sandstone, and conglomerate that consist of clay minerals, quartz grains, or siliceous rock fragments. Includes one unit that contains a substantial amount of slate
- **Undesignated** — Includes units that are too varied in lithology to designate a rock type

Explanation of geologic contacts—Contacts may be either conformable or unconformable and of established or uncertain age

- Contact between two units of equivalent age and stratigraphic position
- Contact between successive synchronous units
- Contact between successive time-transgressive units

Explanation of geologic map symbol—Symbols were taken from the State geologic map referenced above the stratigraphic columns and refer to the geologic unit(s) named in the column to the left of the symbol; for example,



Map showing the state geologic map reference and coverage within the report study area.

GEOLOGICAL SURVEY, RESTON, VIRGINIA—1997

CHART WITH COLUMNS SHOWING THE STRATIGRAPHIC POSITION AND LITHOLOGY OF THE GEOLOGIC UNITS IN THE VALLEY AND RIDGE PHYSIOGRAPHIC PROVINCE

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1997

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