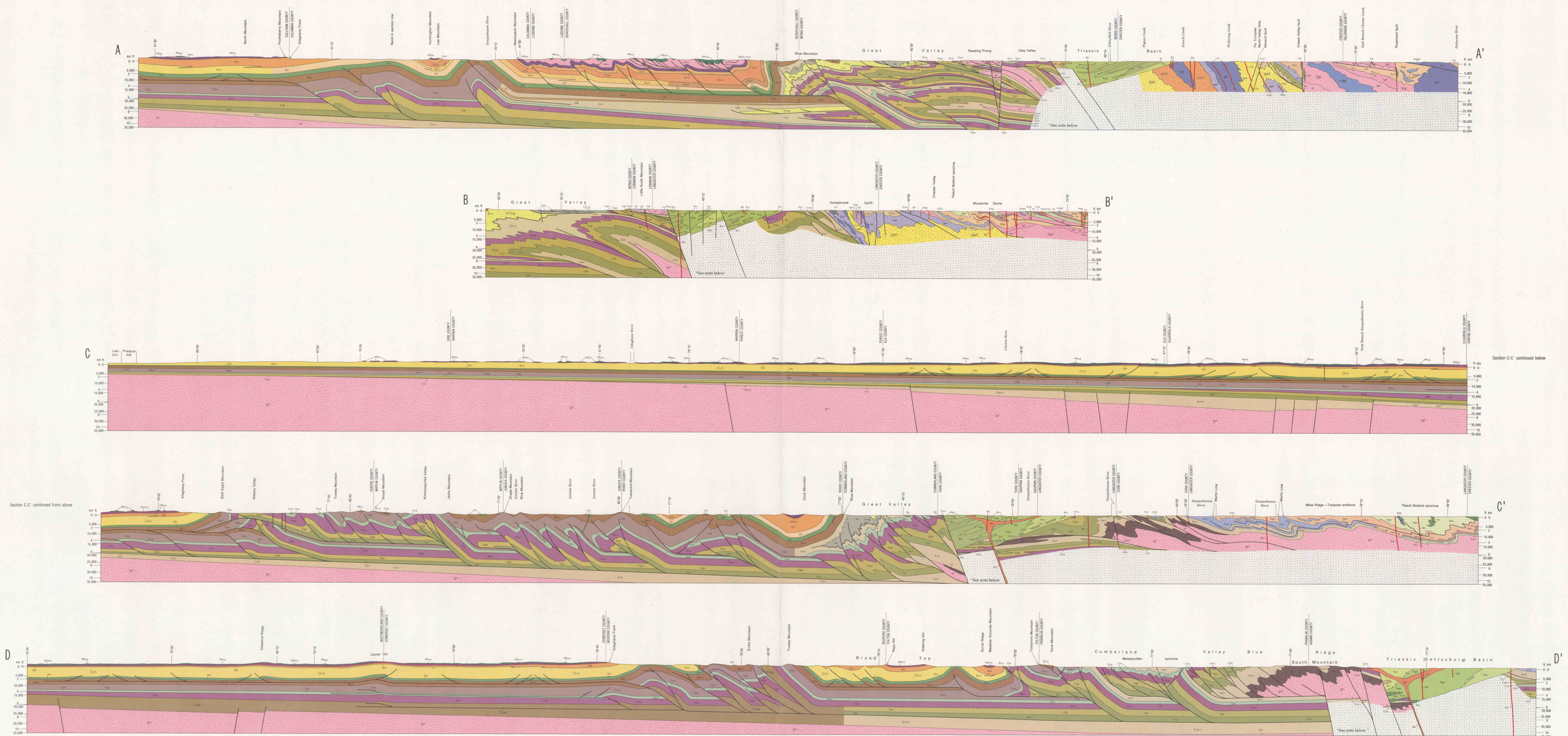


INTERPRETIVE GEOLOGIC CROSS SECTIONS

(Horizontal scale same as map scale; no vertical exaggeration)



TRIASSIC	PERMIAN AND PENNSYLVANIAN	DEVONIAN UPPER	DEVONIAN MIDDLE AND LOWER	ORDOVICIAN	ORDOVICIAN AND CAMBRIAN	PROBABLY LOWER PALEOZOIC	PRECAMBRIAN
<ul style="list-style-type: none"> DBASE LIMESTONE FANGLOMERATE QUARTZ FANGLOMERATE GETTYSBURG, HAMMER CREEK, AND BRUNSWICK FORMATIONS, UNDIVIDED HEDLERSBURG MEMBER OF GETTYSBURG FORMATION LOCKATONG FORMATION HAMMER CREEK CONGLOMERATE NEW OXFORD AND STOCKTON FORMATIONS, UNDIVIDED NEW OXFORD CONGLOMERATE 	<ul style="list-style-type: none"> WATKINSBURG FORMATION, MONONGAHELA GROUP, COMMONWEALTH GROUP, ALLEGHENY GROUP, AND POTTSVILLE GROUP, UNDIVIDED (western Pennsylvania); LITWELL FORMATION AND POTTSVILLE GROUP, UNDIVIDED (eastern Pennsylvania) MISSISSIPPIAN MAUCH CHUK FORMATION MISSISSIPPIAN AND DEVONIAN SHENANDO FORMATION, CUYAHOGA GROUP, BERA OR CORY SANDSTONE, BEDFORD SHALE, CUSHEWAD SANDSTONE, AND HINCHELL FORMATION OR CONWAY FORMATION, UNDIVIDED (western Pennsylvania); SHENANDO SANDSTONE AND HINCHELL MOUNTAIN FORMATION OR ROCKWELL FORMATION, UNDIVIDED (western and western Pennsylvania); POCOCK AND SPOCKY KOPF FORMATIONS, UNDIVIDED (eastern Pennsylvania) 	<ul style="list-style-type: none"> CATSKILL FORMATION DUNCANSON MEMBER OF CATSKILL FORMATION CLARKS FERRY MEMBER OF CATSKILL FORMATION SHERMAN CREEK MEMBER OF CATSKILL FORMATION IRISH VALLEY MEMBER OF CATSKILL FORMATION BEAVERDAM RUN, WALCOWVILLE, AND TOWNSHEND MEMBERS OF CATSKILL FORMATION, UNDIVIDED TRIMBURG ROCK FORMATION VENANGO GROUP, CHADRON FORMATION, GRAYD SHALE, WESTVALE SHALE, SHENOA SILTSTONE, WESTVALE SHALE, LAMAR SILTSTONE, PERKINSBURG FORMATION, JAVA FORMATION, WEST FALLS FORMATION, SWAIN FORMATION, AND COAL FORMATION, UNDIVIDED (western Pennsylvania); VENANGO GROUP, CHADRON FORMATION, HINCHELL MOUNTAIN FORMATION, UNDIVIDED (western Pennsylvania); LOCK HAVEN, FORDENBURG, SCHON, BRALLIER, AND HANSELL FORMATIONS, UNDIVIDED (Valley and Ridge province, northern Pennsylvania) 	<ul style="list-style-type: none"> TULLY LIMESTONE, HAMILTON GROUP, ONONDAGA FORMATION, BESS BLAIC FORMATION, ORISKANY SANDSTONE, AND MARBLE FORMATION, UNDIVIDED (northwestern Pennsylvania); HAMILTON GROUP, ONONDAGA FORMATION, OLD PORT FORMATION, AND UPPER PART OF KATONAH FORMATION, UNDIVIDED (western Pennsylvania); VALLEY AND RIDGE province; MAHAMANGO FORMATION, MARCELLUS FORMATION, BUTTERNUT FALLS LIMESTONE, HAMILTON SANDSTONE, SCHADERSHOLE FORMATION, ESCOPE FORMATION, RIDGELY SANDSTONE, SHREVE CREEK, AND HELDRETH GROUP, UNDIVIDED (eastern Pennsylvania) SILURIAN BASS ISLANDS GROUP, SALINA GROUP, LOCKPORT DOLOMITE, ROCHESTER SHALE, HONGONTSOY DOLOMITE, REYNOLDS DOLOMITE, AND MEDINA GROUP, UNDIVIDED (northwestern and western Pennsylvania); CONANT AND MIDDLE PARTS OF BECKER FORMATION, HAMILTON FORMATION, WILLS CREEK FORMATION, BLOOMSBURG FORMATION, MERTONIA FORMATION, CLINTON GROUP, AND TUSCARORA FORMATION, UNDIVIDED (Valley and Ridge province, western Pennsylvania); ROSKOPF LIMESTONE, POCOCK SANDSTONE, BLOOMSBURG FORMATION, AND SHANNONVILLE FORMATION, UNDIVIDED (western Pennsylvania) 	<ul style="list-style-type: none"> QUEENSTON SHALE, JENNETTA FORMATION, BALD EAGLE FORMATION, REEDVILLE FORMATION, AND LITCA FORMATION OR ARTES SHALE, UNDIVIDED JUNATA FORMATION BALD EAGLE FORMATION REEDVILLE FORMATION AND LITCA FORMATION OR ARTES SHALE, UNDIVIDED (western Pennsylvania, Valley and Ridge province, MANTHORPE FORMATION (Great Valley)) HAMBURG SEQUENCE ROCKS (phyllite shale) HAMBURG SEQUENCE ROCKS (shale and graywacke) COLUMBIA, SALONA, NEALMONT, BENNER, SNYDER, HATTER, AND LINDSEY FORMATIONS, UNDIVIDED (western Pennsylvania); VALLEY AND RIDGE province; PARRISVILLE FORMATION, UNDIVIDED (western Pennsylvania); PERRYVILLE FORMATION, UNDIVIDED (western Pennsylvania); BARTON, JACKSONVILLE FORMATION, AND ALLIANCE FORMATION, UNDIVIDED (Great Valley) SHADOW LAKE, BELLEFONTE, AXMINSTER, MATTAWAY, AND STONERIDGE FORMATIONS, UNDIVIDED (western Pennsylvania); VALLEY AND RIDGE province; PARRISVILLE FORMATION, UNDIVIDED (western Pennsylvania); BARTON, JACKSONVILLE FORMATION, AND ALLIANCE FORMATION, UNDIVIDED (western Pennsylvania); BARTON, JACKSONVILLE FORMATION, AND ALLIANCE FORMATION, UNDIVIDED (western Pennsylvania); BARTON, JACKSONVILLE FORMATION, AND ALLIANCE FORMATION, UNDIVIDED (western Pennsylvania) 	<ul style="list-style-type: none"> CONESTOGA FORMATION CAMBRIAN GATESBURG FORMATION AND UPPER PART OF WARRIOR FORMATION, UNDIVIDED (western Pennsylvania); VALLEY AND RIDGE province; SCHUYLER FORMATION, ZILLINGER FORMATION, AND UPPER PART OF ELKHORN FORMATION, UNDIVIDED (Cambrian, Valley and Ridge province); BURNING SPRING, SCHUYLER FORMATION, AND DIRT CREEK FORMATIONS, UNDIVIDED (Lanark Valley sequence, Allegheny Valley sequence) BATESBURG, WARRIOR, PLEASANT HILL, POTSDAM, ELKHORN, AND WARRIOR FORMATIONS, UNDIVIDED POTSDAM FORMATION (western Pennsylvania); MIDDLE AND LOWER PARTS OF ELKHORN FORMATION, LOWER PART OF WARRIOR FORMATION, AND PLEASANT HILL FORMATION, UNDIVIDED (Valley and Ridge province); BURNING SPRING AND ZILLINGER FORMATIONS, UNDIVIDED (Lanark Valley sequence, Allegheny Valley sequence) WARRIOR, WARRIOR, ANTIAM, HARRIS, AND WARRIOR FORMATIONS, UNDIVIDED (eastern Pennsylvania); LEONARD, SCHUYLER, VALLEY, ANTIAM, HARRIS, CHECKER, AND HARRIS FORMATIONS, UNDIVIDED (Lanark Valley and Allegheny Valley sequences, northern Pennsylvania) 	<ul style="list-style-type: none"> PEGMATITE ANORTHOSITE GRANITIC GNEISS AND GRANITE MAFIC GNEISS, HORNBLENDE-BEARING MAFIC GNEISS, PYROXENE-BEARING SERPENTINITE FRONT BOTTOM SLATE AND CARBIDE CONGLOMERATE, UNDIVIDED PETERS CREEK SCHIST WISAHOCK FORMATION, ALBITE-CHLORITE SCHIST WISAHOCK FORMATION, GLOUCCI-MICA SCHIST COOKSVILLE MARBLE SETTERS QUARTZITE 	<ul style="list-style-type: none"> METAVOLCANIC ROCKS METADIASE QUARTZ MONZONITE AND QUARTZ MONZONITE GNEISS GRANODIORITE AND GRANODIORITE GNEISS GABBROIC GNEISS AND GABBRO GRAPHIC GNEISS FELIC GNEISS, HORNBLENDE-BEARING FELIC GNEISS, PYROXENE-BEARING HORNBLENDE GNEISS MAFIC GNEISS, PYROXENE-BEARING GRANITIC GNEISS

*Note: Discontinuity surfaces may extend under the Pennsylvania Piedmont, based on seismic research in the southern Appalachians and in Quebec, but no data are presently available to extend this structural interpretation into Pennsylvania.