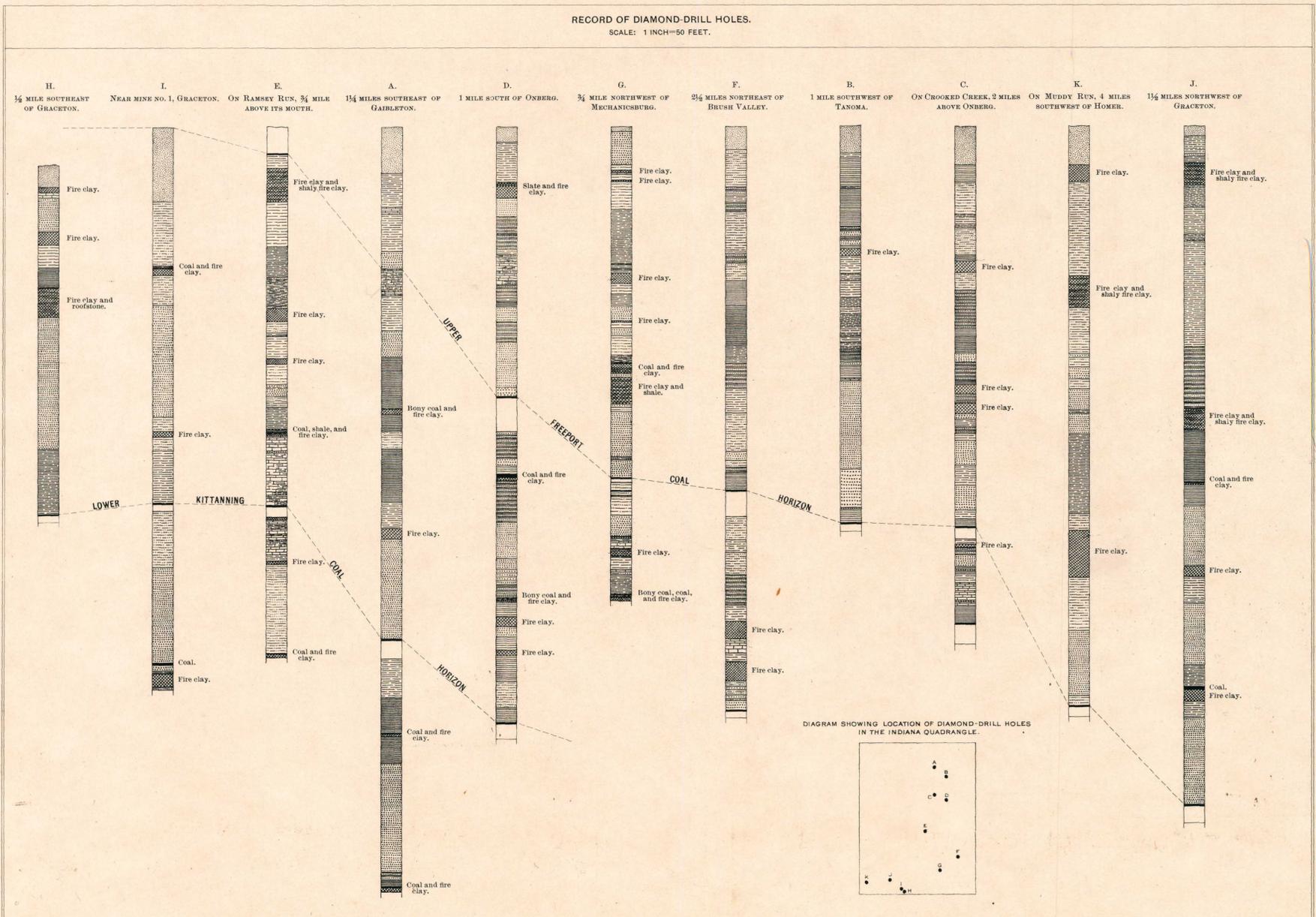


# COLUMNAR SECTION SHEET 1

GENERALIZED SECTION OF THE ROCKS OF THE INDIANA QUADRANGLE.  
SCALE: 1 INCH=200 FEET.

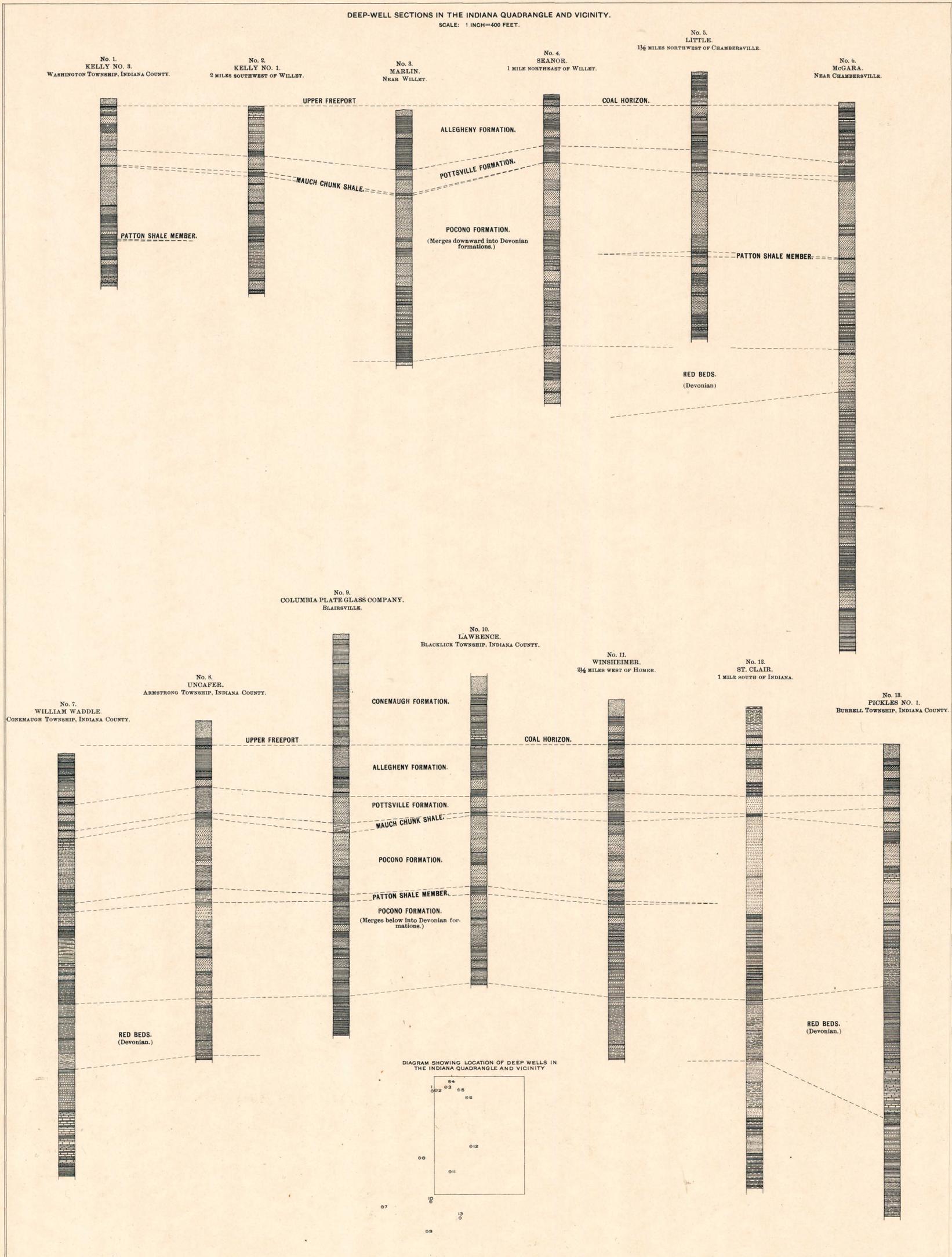
PERIOD.	FORMATION NAME.	SYMBOL.	COLUMNAR SECTION.	THICKNESS IN FEET.	NAMES OF MEMBERS.	CHARACTER AND DISTRIBUTION OF MEMBERS.	CHARACTER OF FORMATION.
CARBONIFEROUS PENNSYLVANIAN SERIES	Monongahela formation.				Pittsburg coal.	Not present in the quadrangle.	Not present in the quadrangle.
					Connellsville sandstone.	Thin-bedded drab sandstone. Occurs on a few hills in the southwest corner of the quadrangle.	
					Morgantown sandstone.	Massive buff sandstone. Occurs on hills west of Homer, and on White, Coleman, and Warner hills.	
	Conemaugh formation.	Ccm		700±			Chiefly drab and reddish shales, with interbedded sandstones, a few thin limestones, and coal beds. The sandstones are not persistent strata but lenses, which form conspicuous outcrops. Locally, in the vicinity of Gaibleton, south of Onberg, and in Brush Valley, some of the coal beds attain workable dimensions.
					Saltsburg sandstone.	Massive buff sandstone. Occurs at Homer and Edgewood and on Dias Ridge.	
					Maboning sandstone.	Massive sandstone, often conglomeratic. Occurs above the Upper Freeport coal on Chestnut Ridge, along Crooked Creek near Chambersville, and along McKee Run.	
	Allegheny formation.	Ca		300±	Upper Freeport coal. Freeport limestone. Bolivar fire clay. Lower Freeport coal.	Generally present at the top of the formation. Freeport limestone and Bolivar fire clay not always present. Occurs infrequently. It is mined on Dixon Run.	
					Kittanning coals.	The Lower Kittanning is the most important of the Kittanning coals. It outcrops along the deeper gorges of Chestnut Ridge.	Shales and sandstones, with occasional beds of limestone and fire clay, and several workable beds of coal.
					Vanport (Ferriferous) limestone.	Feebly developed. It outcrops in Yellow Creek gorge.	
					Clarion-Brookville coals.	Unimportant in the quadrangle.	
	Pottsville formation.	Cpv		100±			Massive sandstone and interbedded shale.
MISSISSIPPIAN	Mauch Chunk shale.	Cmc		50±			Red and green shales.



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COLUMNAR SECTION SHEET 2

DEEP-WELL SECTIONS IN THE INDIANA QUADRANGLE AND VICINITY.  
SCALE: 1 INCH=400 FEET.



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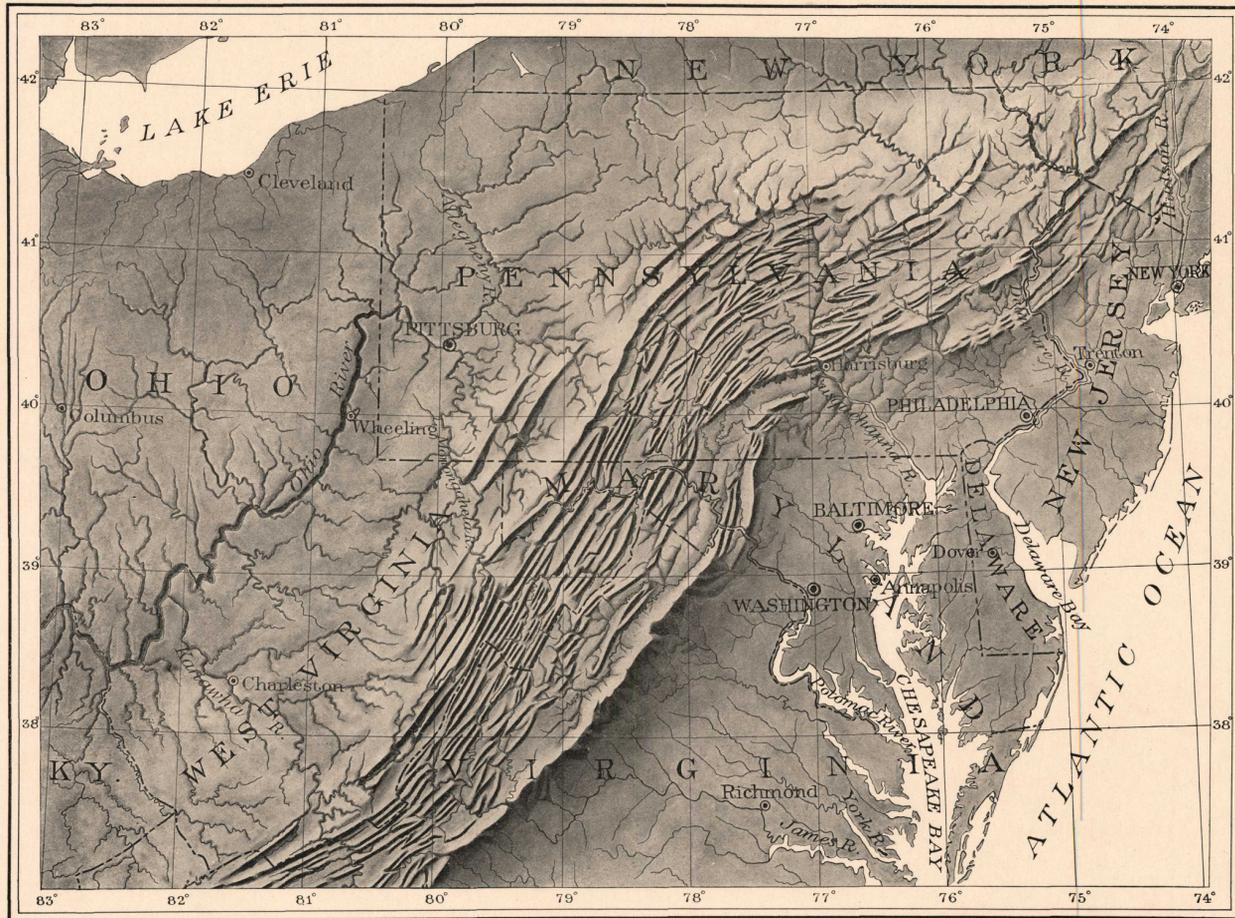


FIG. 14.—RELIEF MAP OF THE NORTHERN APPALACHIAN MOUNTAINS.  
 The Indiana quadrangle is situated on the plateau west of the belt of valley ridges, in the central western part of Pennsylvania.

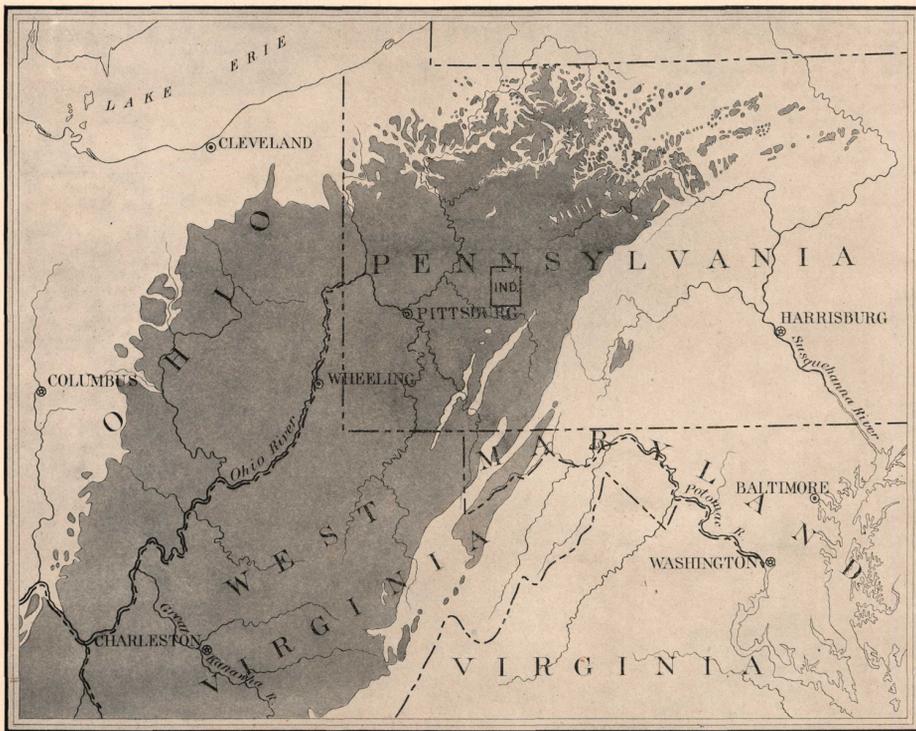


FIG. 15.—MAP SHOWING THE EXTENT OF THE NORTHERN PART OF THE APPALACHIAN COAL FIELD.  
 The position of the Indiana quadrangle within the coal field is shown by the rectangle.

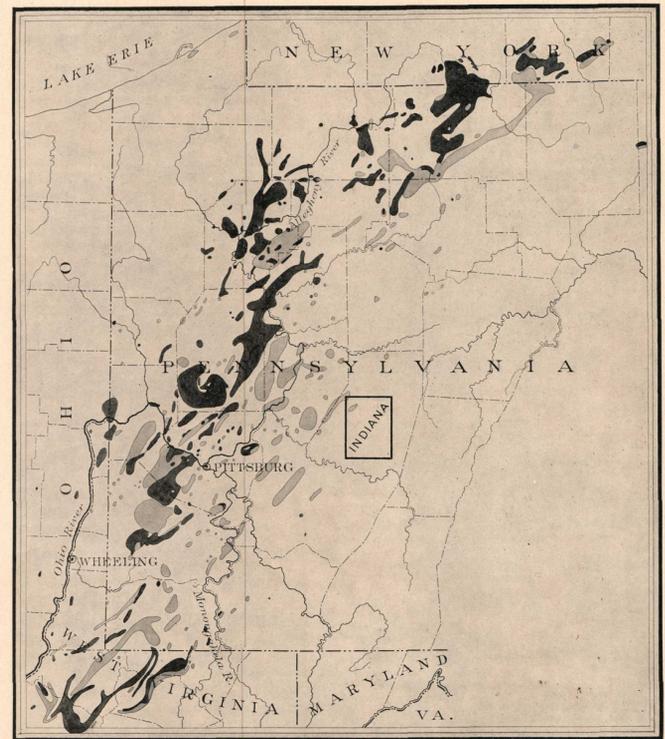


FIG. 16.—MAP OF THE OIL AND GAS PRODUCING AREAS OF THE NORTHERN APPALACHIANS.  
 Compiled from map by the Second Geological Survey of Pennsylvania, with additions by F. H. Oliphant, 1902. Black areas, oil; shaded areas, gas.