

# OUTSTANDING GEOLOGIC FEATURE OF PENNSYLVANIA

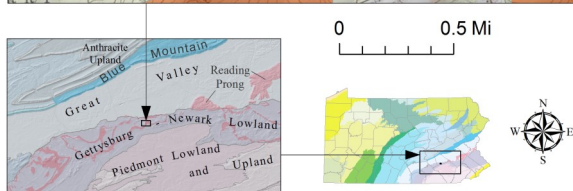
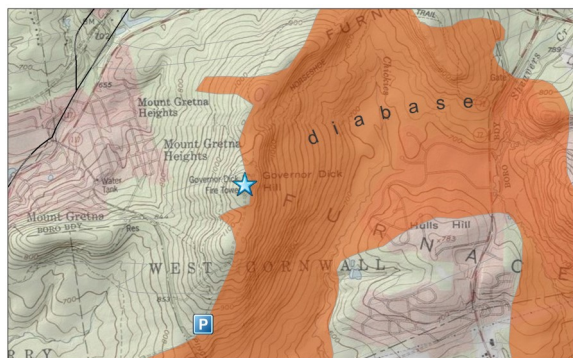
## GOVERNOR DICK, LEBANON COUNTY

Stuart O. Reese, 2016



### Location

Clarence Schock Memorial Park at Governor Dick, West Cornwall Twp., Lebanon Co., lat: 40.24627, lon: -76.45560 (observation tower); lat: 40.237561, lon: -76.45927 (Environmental Center parking); Manheim 7.5-minute quadrangle



### Geology

From the tower at Governor Dick Hill (aka Governor Dick), a visitor can see 800 million years of rocks in the landscape. To the east, 1-billion-year-old Proterozoic metamorphic rocks—some of the oldest rocks in Pennsylvania—form resistant knobs in the Reading Prong. To the south, Cambrian metamorphic rocks of the Piedmont Upland support ridges, and Cambrian and Ordovician shales and limestones underlie the Piedmont Lowland. These rocks range in age from 541 to 443 million years old. To the north, more Ordovician shales, sandstones, and limestones underlie the Great Valley. Beyond that, one can see Blue Mountain, which is capped by Silurian-age Tuscarora sandstone (approximately 440 million years old). Even further north are higher ridges of Pennsylvanian-age rocks (323 to 299 million years old). These rocks are part of the Anthracite Upland, which appears on the horizon.

Governor Dick itself lies within the Gettysburg-Newark Lowland section of the Piedmont province and is underlain by the youngest rocks in the area (Late Triassic-Early Jurassic). Sediments that would become the Hammer Creek Formation poured into this depositional basin as Africa separated from North America about 225 to 200 million years ago. Late in this time frame, sills and dikes of molten diabase rock intruded the sediments, locally baking them and forming very hard rocks. After millions of years of erosion, the hard basin rocks remain as a resistant highland.

### Recommended Reading

Faill, R. T., 2004, The Birdsboro basin:

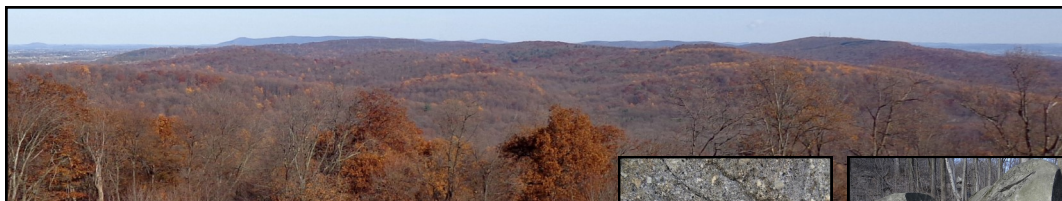
[Pennsylvania Geology](#), v. 34, no. 4, p. 2–11.

Lapham, D. M., and Gray, Carlyle, 1973, Geology and origin of the Triassic magnetite deposit and diabase at Cornwall, Pennsylvania: Pennsylvania Geological Survey, 4th ser., [Mineral Resource Report 56](#), 343 p.

Sevon, W. D., 2000, Physiographic provinces of Pennsylvania (4th ed.): Pennsylvania Geological Survey, 4th ser., [Map 13](#), scale 1:2,000,000.

[Clarence Schock Memorial Park at Governor Dick website](#).

The tower (right) stands 66 feet above the hilltop, which is at an elevation of 1,152 feet. The observation deck is accessed by climbing ladders inside.



View to the east. The east side of the hill is strewn with diabase boulders (right inset). Conglomeratic sandstone of the Hammer Creek Formation (left inset) is found on the west side of the hill. Most of the Great Valley to the north (far left) and Piedmont Lowland to the south (far right) lies between 400 and 600 feet elevation.

