

OUTSTANDING GEOLOGIC FEATURE OF PENNSYLVANIA

SPRING MOUNTAIN THRUST FAULT, SCHUYLKILL COUNTY



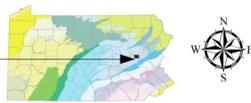
Stuart O. Reese, 2016

Location

I-81 mile marker 138.3, Schuylkill Co., Kline Twp., lat: 40.88838, lon: -76.01923 (no parking); Conyngham 7.5-minute quadrangle



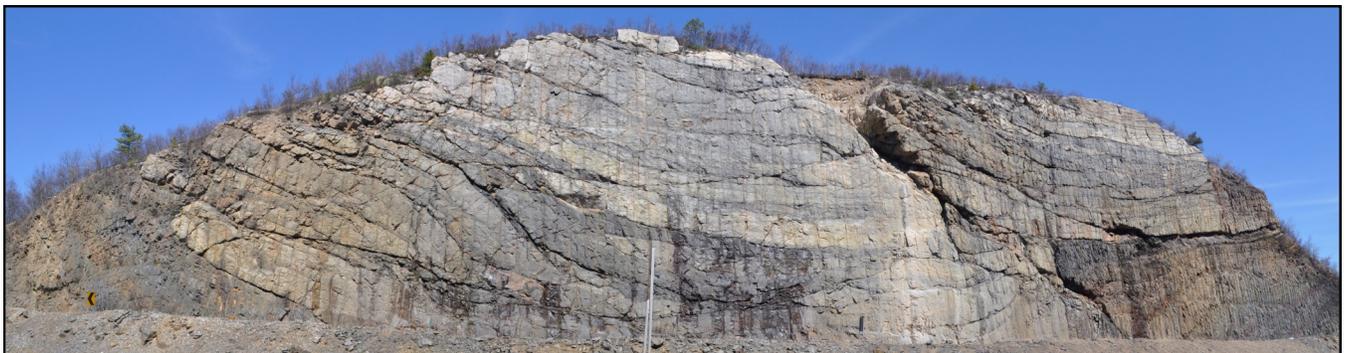
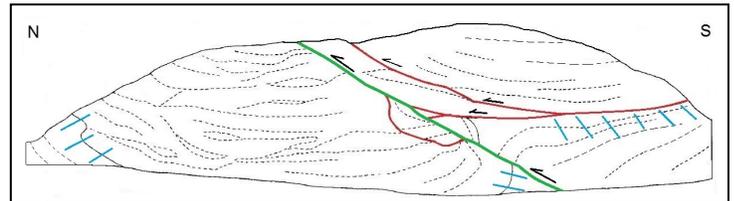
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Sketch of roadcut (modified from references below): green line, Spring Mountain thrust fault; red lines, associated faults; black arrows, directions of movement; dashed lines, bedding traces; and blue lines, transition zone between reddish Mauch Chunk rocks and overlying grayish Pottsville rocks.

Geology

An excellent cross section of a thrust fault can be seen as you drive through a large roadcut in Spring Mountain on Interstate 81 just north of the McAdoo-Tamaqua exit. The cut is perpendicular through a faulted syncline (downfold) in the rocks. Within the fold, the Spring Mountain thrust fault and minor associated faults are easily seen. The rocks are the Pennsylvanian-age Pottsville Formation, composed of sandstone and conglomerate, and underlying Mississippian-age Mauch Chunk Formation shales and siltstones. A transition zone between the two units can be seen here. At least 50 feet of movement can be measured along the fault, where part of the south limb of the syncline is pushed over the north limb. Faulting occurred beneath thousands of feet of rock during the Alleghanian mountain-building episode, which ended about 270 million years ago. Since then, the overlying rocks have weathered away, exposing the faults.



Looking east at the 850-foot-long, 110-foot-high roadcut along the northbound lanes. **There is no safe place to stop on the interstate.** Rocks can be viewed using online mapping programs. Photograph by Thomas G. Whitfield, Pennsylvania Geological Survey.

Recommended Reading

- Bolles, W. H., and Geyer, A. R., 1976, Pennsylvania Interstate 81 geologic guide: Pennsylvania Department of Education, 35 p.
- Hoskins, D. M., 1974, Field trip to a faulted syncline: [Pennsylvania Geology](#), v. 5, no. 6., p. 13–16.
- Sevon, W. D., Rose, A. W., Smith, R. C., II, and Hoff, D. T., eds., 1978, Stop 5, Spring Mountain thrust fault, in Sevon, W. D., and others, eds., Uranium in Carbon, Lycoming, Sullivan, and Columbia Counties, Pennsylvania: Annual Field Conference of Pennsylvania Geologists, 43rd, Hazleton, Pa., [Guidebook](#), p. 75–77.