AREAL GEOLOGY

STATE OF PENNSYLVANIA

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U. S. GEOLOGICAL SURVEY
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PENNSYLVANIA
SEWICKLEY QUADRANGLE

LEGEND

SEDIMENTARY ROCKS

(Areas of subaqueous deposits are shown by patterns of parallel lines; subaerial deposits by patterns of dots and circles.)

QUATERNARY

Recent

- **Qal** — Alluvium *(in flood plains of the larger streams)*

Pleistocene

- **Qg** — Latest glacial gravel *(outwash sand and gravel of distant origin on lower terraces, probably of Wisconsin age)*
- **Qlg** — Later glacial gravel *(outwash sand and gravel of distant origin on rock terraces)*
- **Qeg** — Earlier glacial gravel *(outwash sand and gravel of distant origin on higher rock terraces; probably of Kansan or pre-Kansan age)*
- **Qcm** — Carmichaels formation *(clay sand and bowlders of local derivation on higher terraces, probably of Kansan or pre-Kansan age)*

CARBONIFEROUS

Pennsylvanian

- **Cm** — Monongahela formation *(coarse sandstone and shale with the Pittsburg coal at the base)*
- **Ccm** — Conemaugh formation and Ames limestone lentil *(sandstone, shale, and limestone, with a few small coal beds)*
- **Ca** — Allegheny formation *(shale and massive sandstone with beds of limestone and valuable seams of coal and fire clay)*

H. M. Wilson, Geographer.
Robt. D. Cummin and J. H. Jennings, in charge of section.
Topography by Robt. D. Cummin, E. B. Clark, J. H. Wheat, A. C. Roberts, E. G. Hamilton, J. S. B. Daingerfield, Ira M. Flocker, and E. W. McCrary.
Control by D. H. Baldwin and C. A. Clunet.
Surveyed in 1903 and 1905-1906.

SURVEYED IN COOPERATION WITH THE STATE OF PENNSYLVANIA.

Geology by M. J. Munn and E. W. Shaw, under the supervision of Geo. H. Ashley.
Surveyed in 1906-08.

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