

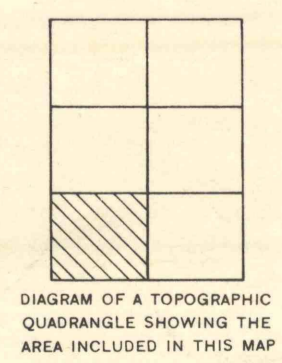
- EXPLANATION**
- Boundary of mine
  - Warranty tract
  - Through line
  - Township line
  - County line
  - Principal shaft
  - Strip-mined area
  - Back-filled striping
  - Exploratory trench
  - Crop fall
  - Barrier pillar
  - Barrier pillar
  - Mine waste
  - Steam-transported waste
  - Structural cross section
  - Surface opening on a coal bed
  - Coal outcrop
  - Fault showing dip and relative position of sides
  - Anticline
  - Syncline

Base: U. S. Geological Survey topographic maps, 1944 Polyconic projection, 1927 North American datum.  
Topography was contoured from aerial photographs made in 1942. Corrections have not been made for topographic changes resulting from strip mining or alteration of mine refuse banks since 1942.

APPROXIMATE MEAN DECLINATION, 1944

**COAL OUTCROP MAP**

SCALE 1:6,000  
Contour interval is 20 feet  
Datum is mean sea level



Prepared in 1949 from data supplied by the Philadelphia and Reading Coal and Iron Company and the Susquehanna Collieries Company with modifications by the U. S. Geological Survey.  
Separate copies of the base for this map, showing ownership, topography and culture may be purchased from the U. S. Geological Survey.

**GEOLOGY OF ANTHRACITE IN THE SOUTHWESTERN PART OF THE MOUNT CARMELO QUADRANGLE, PENNSYLVANIA**

By  
Howard E. Rothrock, Holly C. Wagner, Boyd R. Haley and Harold H. Arndt  
1951