



LEGEND

SEDIMENTARY ROCKS

(Areas of sedimentary deposits are shown by patterns of parallel lines, subvertical deposits by patterns of dots and circles)

- | | | |
|---------------|--|---------------|
| Recent | | QUATERNARY |
| | | |
| Pleistocene | | CARBONIFEROUS |
| | | |
| Pennsylvanian | | |
| | | |
| | | |
| | | |
| Mississippian | | |
| | | |

IGNEOUS ROCKS

Peridotite dikes
(contain garnet and olivine)

ECONOMIC AND STRUCTURE DATA

Coal outcrops
(dashed lines indicate unconformity or thickness of beds)
pb, Pittsburgh coal
uf, Upper Freeport coal
mk, Middle Kittanning coal
lv, Lower Leeward coal
qt, Quaternary coal
bc, Barren Creek coal

Refractory and pottery clays
(in the Allegheny and Pottsville formations)

Structure contours
on the sandstone at the top of the Pottsville formation
(contour interval is 50 feet; datum is mean sea level)

* Mines and quarries
Coal unless otherwise specified
A, indicates abandoned coal mines
● Oil wells, abandoned
* Gas wells

LIST OF MINES

- Location indicated on the map by numbers
1. Coalgrove Coal & Stone Co.
 2. Clinton or Ashland Iron & Mining Co. No. 8
 3. Princess Land & Mining Co.
 4. Kentucky Cannel Co., Hunnewell mine
 5. Bailey mine
 6. Norton Branch Coal Co.
 7. Adkins Coal Co.
 8. Ashland Iron & Mining Co., Rush No. 10
 9. Ashland Iron & Mining Co., Rush No. 12
 10. Morning Glory Coal Co.
 11. Kentucky Cannel Co., Boghead mines
 12. Straight Creek Coal Co.
 13. Eastern Kentucky Railroad, Lost Creek mine
 14. Torchlight Coal Co.

Note: Besides the mapped coal and clay beds there are workable clays and shales in the Pottsville, Allegheny, and Conemaugh formations and in the alluvium; the Maxville limestone is of commercial value for lime and possibly for flux; iron ore occurs in the Pottsville and Allegheny; building stone in all the consolidated formations; glass sand in the Pottsville, Allegheny, and Conemaugh; oil and gas in the deeply buried formations in various parts of the quadrangle.

H. M. Wilson, Geographer in charge.
Triangulation by U.S. Coast and Geodetic Survey.
Topography by W. N. Morrill.
Surveyed in 1900-1901.

Scale 1:25000
Miles
Kilometers

Contour interval 100 feet.
Datum is mean sea level.
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assisted by George H. Ashley.
Surveyed in 1905 and 1910.

SURVEYED IN COOPERATION WITH THE STATES OF WEST VIRGINIA AND OHIO.

APPROXIMATE MEAN
DECLINATION 1902