



**EXPLANATION**

**QUATERNARY**

Qal Alluvium  
Silt, sand, and gravel in flood plains of present streams. Includes glacial deposits in northwestern part of county.

**UNCONFORMITY**

**UPPER PENNSYLVANIAN**

Conemaugh Formation  
du, Duquesne coal  
Pca, Area Limestone Member  
M, Bakers coal  
B, Bakers coal  
K, Brook Creek coal  
ma, Mahoning coal

Freeport Formation  
of Upper Freeport coal  
W, Lower Freeport coal

**PENNSYLVANIAN**

**MIDDLE AND UPPER PENNSYLVANIAN**

Allegheny Group

Kittanning Formation  
ok, Upper Kittanning coal  
mk, Middle Kittanning coal  
K, Lower Kittanning coal

Vanport Limestone  
Dashed where discontinuous

Clarion Formation  
of Clarion coal  
by Brookville coal

**MISSISSIPPIAN**

**LOWER AND MIDDLE PENNSYLVANIAN**

Pottsville Group

Conoquesing, Moxer, and Homewood Formations, undivided  
hc, Homewood coal

**UNCONFORMITY**

Sedimentary rocks  
Mottled sandstone

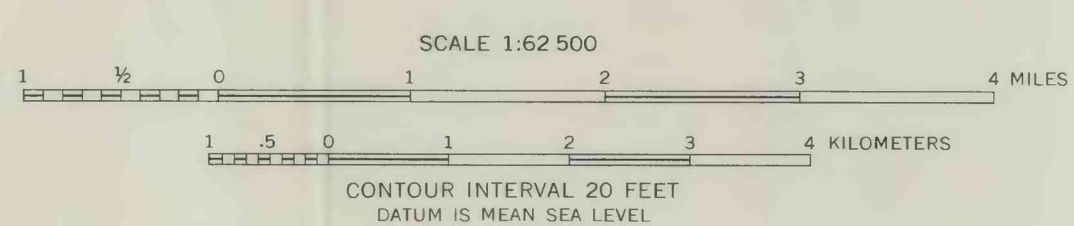
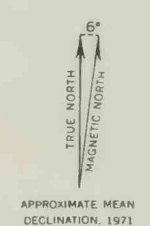
Coal or limestone bed  
Dashed where approximately located;  
dotted where concealed. Bar at  
end of line marks pinchout.

Contact not marked by coal bed, or  
contact at inferred position of  
coal bed  
Dotted where concealed

Contact  
Dashed where approximately located;  
dotted where concealed

Limit of thick glacial deposits  
Teeth point toward thicker deposits

Base compiled by U.S. Geological Survey  
from 15-minute topographic quadrangles



INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D.C.—1971—G48434  
Geology mapped in 1957-58

**GEOLOGIC MAP OF BUTLER COUNTY, PENNSYLVANIA**