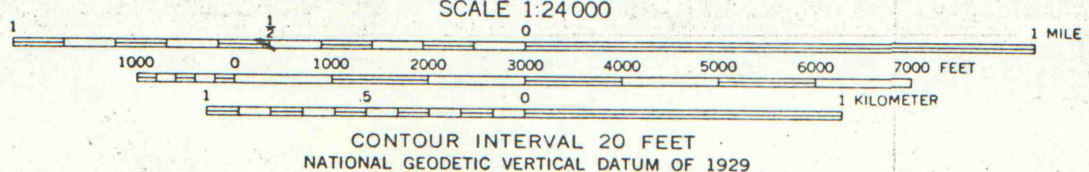
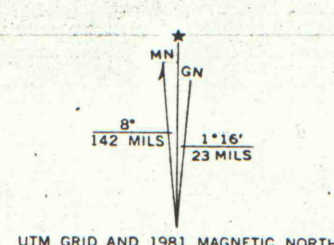




Maped, edited, and published by the Geological Survey
Control by USGS and NOS/NOAA

Topography by photogrammetric methods from aerial
photographs taken 1961. Field checked 1963
Polyconic projection. 10,000-foot grid ticks based on Pennsylvania
coordinate system, south zone. 1000-meter Universal Transverse
Mercator grid ticks, zone 17, shown in blue. 1927 North
American Datum. To place on the predicted North American Datum
1983 move the projection lines 4 meters south and 21 meters
west as shown by dashed corner ticks

Fine red dashed lines indicate selected fence and field lines where
generally visible on aerial photographs. This information is unchecked
may be private inholdings within the boundaries
National or State reservations shown on this map



THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

LOWER KITTANNING SEAM

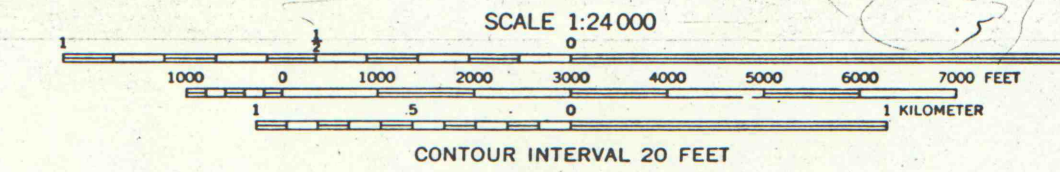
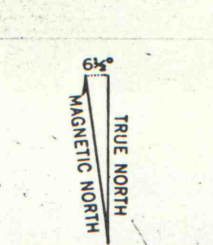
X - BAD ROOF NOTED ON MINER MAP
4 1/2' COAL THICKNESS (IN)
25' SHALE THICKNESS (FT)
10' SANDSTONE THICKNESS (FT)

Revisions shown in purple and woodland compiled in cooperation with
Commonwealth of Pennsylvania agencies from aerial photographs taken 1977
and other sources. This information not field checked. Map edited 1981

Maped, edited, and published by the Geological Survey
Control by USGS and USGAS

Topography by photogrammetric methods from aerial
photographs taken 1958. Field checked 1961
Polyconic projection. 1927 North American datum
10,000-foot grid based on Pennsylvania coordinate system,
south zone
1000-meter Universal Transverse Mercator grid ticks,
zone 17, shown in blue
Fine red dashed lines indicate selected fence and field lines where
generally visible on aerial photographs. This information is unchecked

CLYMER, PA.
N4037.5-W7900/7.5
1963
PHOTOREVISED 1981
DMA 5165 II NE-SERIES 1931



THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, WASHINGTON 20506
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LOWER KITTANNING SEAM

GREEN - COAL TH
RED - SHALE TH

Revisions shown in purple and woodland compiled in cooperation with
Commonwealth of Pennsylvania agencies from aerial photographs taken 1977
and other sources. This information not field checked. Map edited 1981

COMMODORE, PA.
N4037.5-W7852.5/7.5
1961

IMAPS # 11521