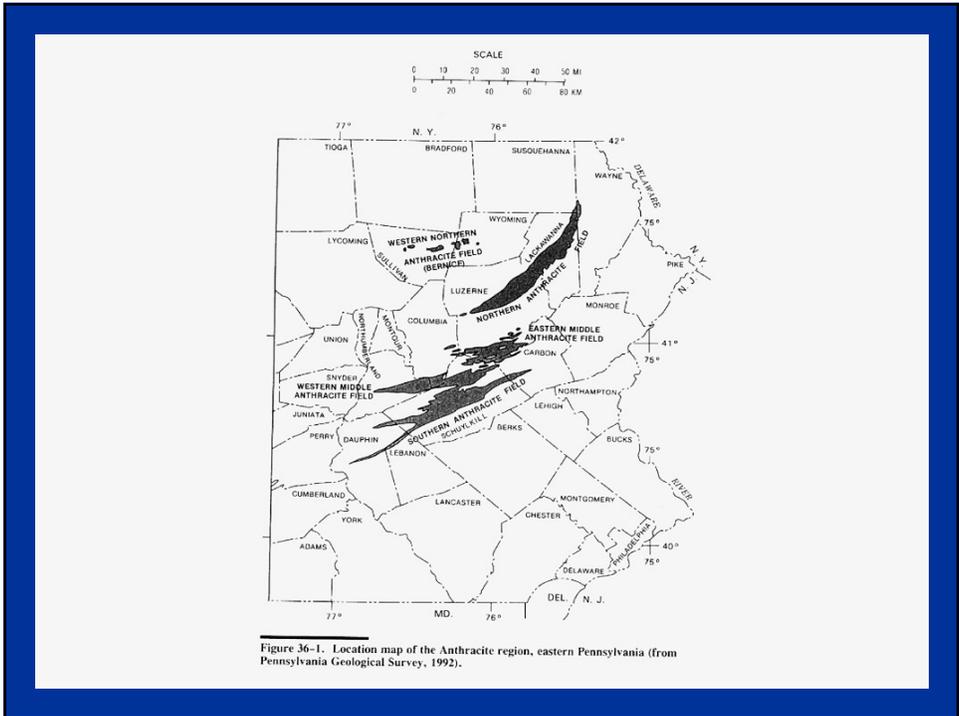
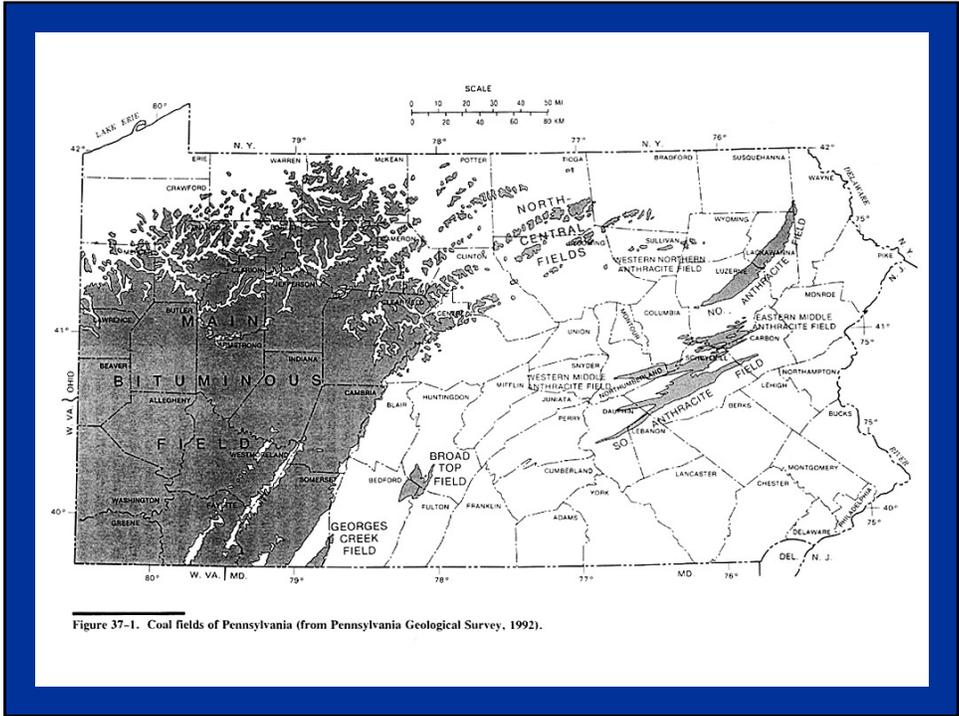


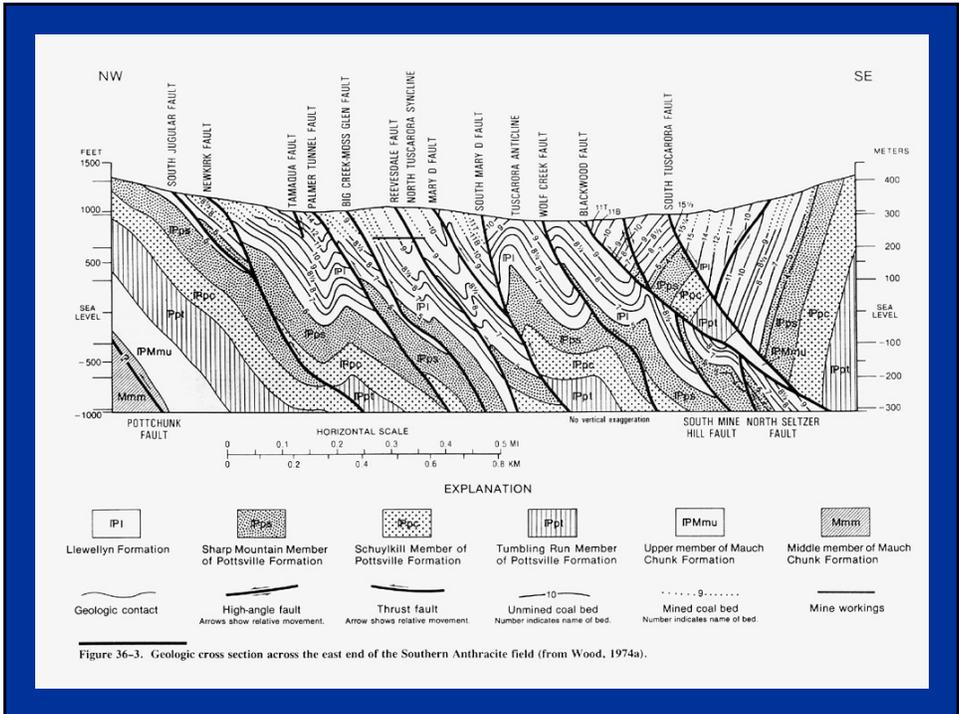
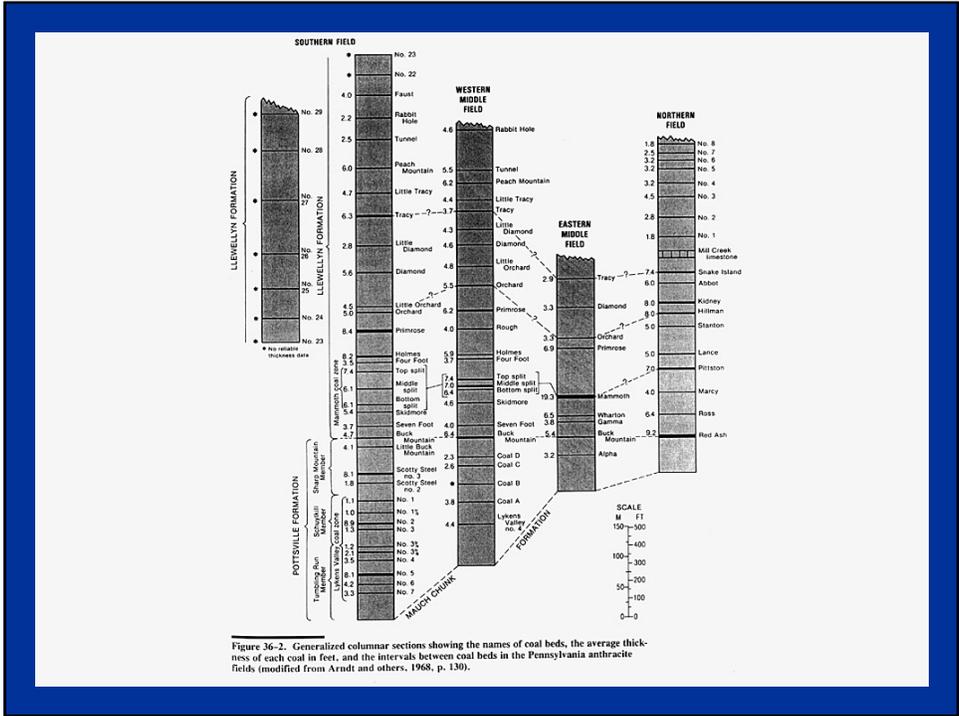
# Abandoned Underground Coal Mines and the Pennsylvania Turnpike



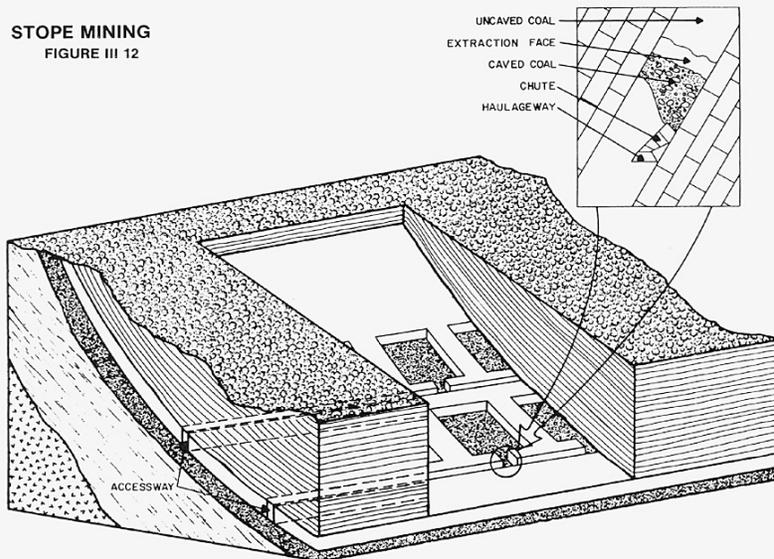
**Baker**  
Engineering & Energy  
*ChallengeUs.*

# Pennsylvania Coal Tale of Two Regions





**STOPE MINING**  
FIGURE III 12



SOURCE: RESOURCE AND ENVIRONMENTAL PLANNING DEPARTMENT, MICHAEL BAKER JR., INC. AS ADAPTED FROM GENERAL ANALYTICS, INC. (1974).

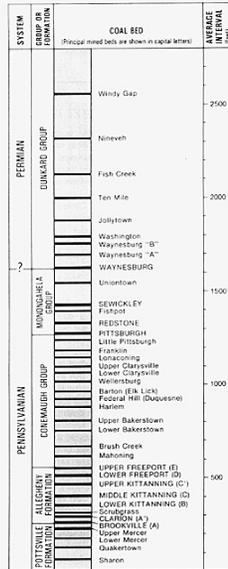


Figure 37-2. Coal beds of the Main Bituminous and George Creek coal fields (modified from Edmunds and others, 1979, Figure 16).

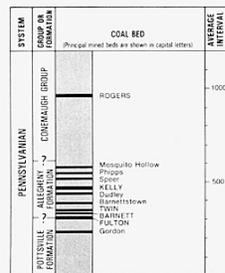


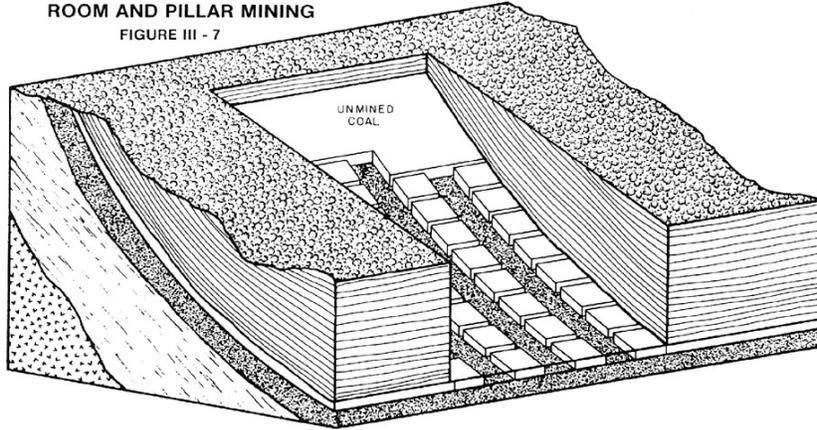
Figure 37-3. Coal beds of the Broad Top coal field (modified from Edmunds and others, 1979, Figure 16).



Figure 37-4. Coal beds from the North Central coal fields (modified from Edmunds and others, 1979, Figure 16).

### ROOM AND PILLAR MINING

FIGURE III - 7



SOURCE: RESOURCE AND ENVIRONMENTAL PLANNING DEPARTMENT, MICHAEL BAKER JR., INC.  
AS ADAPTED FROM GENERAL ANALYTICS, INC. (1974).

## Coal Mine Problems

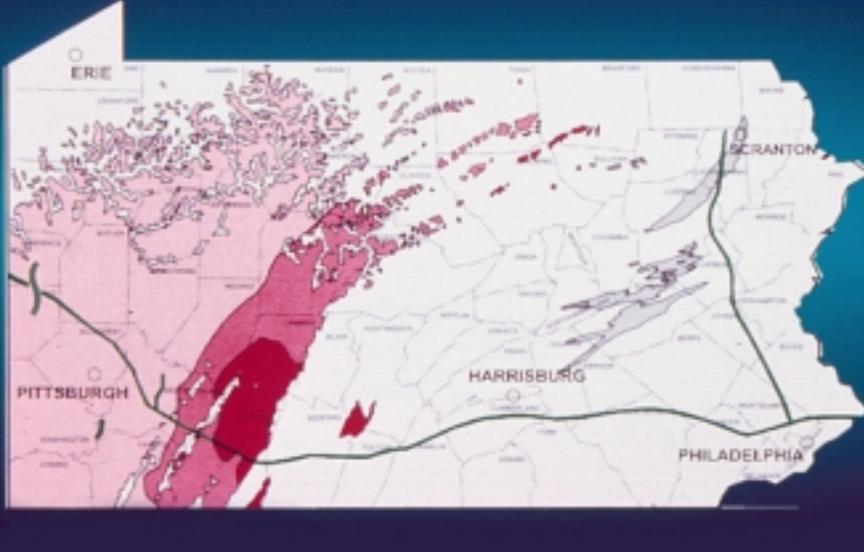
- Subsidence
- Waste
- Acid Mine Drainage
- Mine Fire



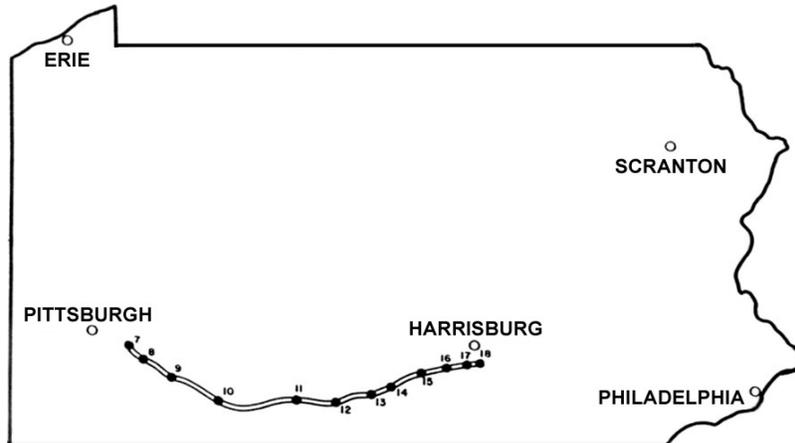
# **Pennsylvania Turnpike**

**America's First Superhighway**

## Bituminous Fields / Anthracite Fields



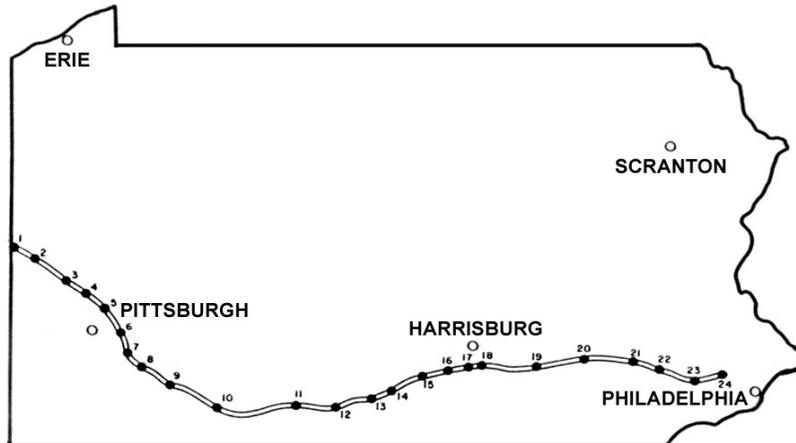
## Original Turnpike



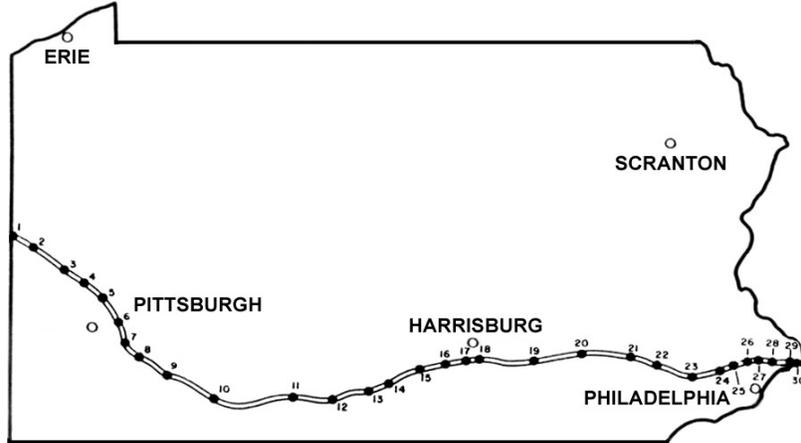




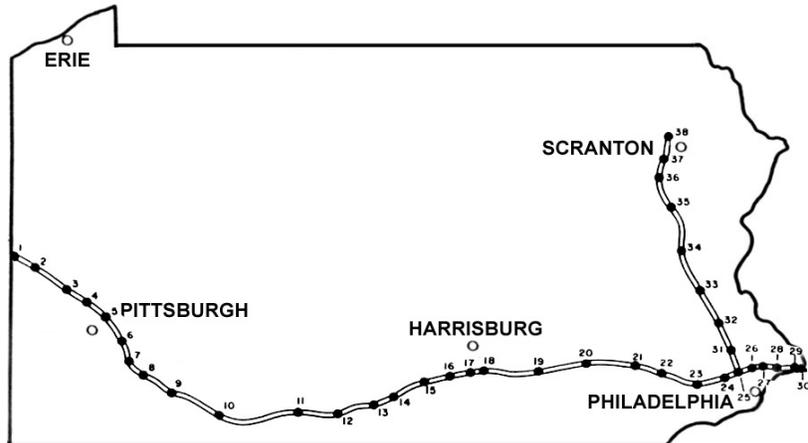
## First Turnpike Expansions



# Delaware River Expansion



# Northeast Extension



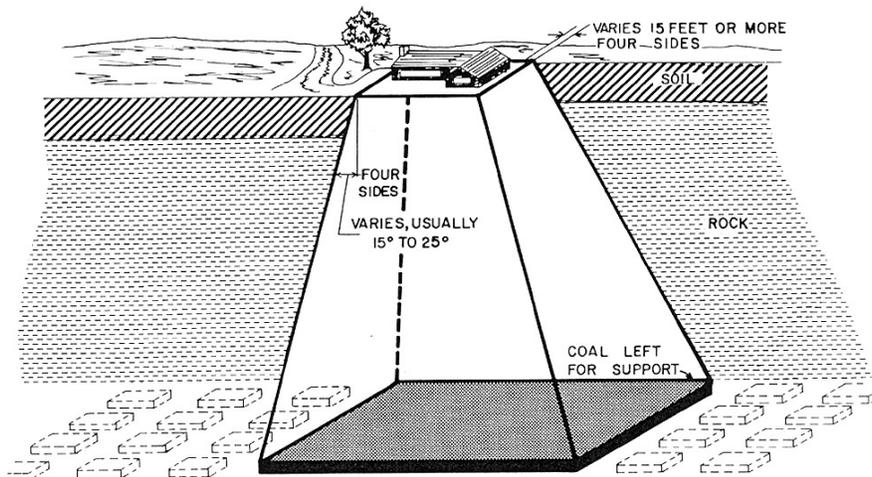


## **Hurricane Agnes 1972**

**12" – 18" rain in 2 days  
Record floods and damage  
PA "Disaster Area"**



**MINERAL ABANDONMENT**  
FIGURE III - 6



Source: General Analytics, Inc. State of the Art of Subsidence Control.

# System Improvements

## Beaver Valley Climbing Lane









# Expansion Projects

## Mon-Fayette Expressway

### Bituminous Fields / Anthracite Fields



