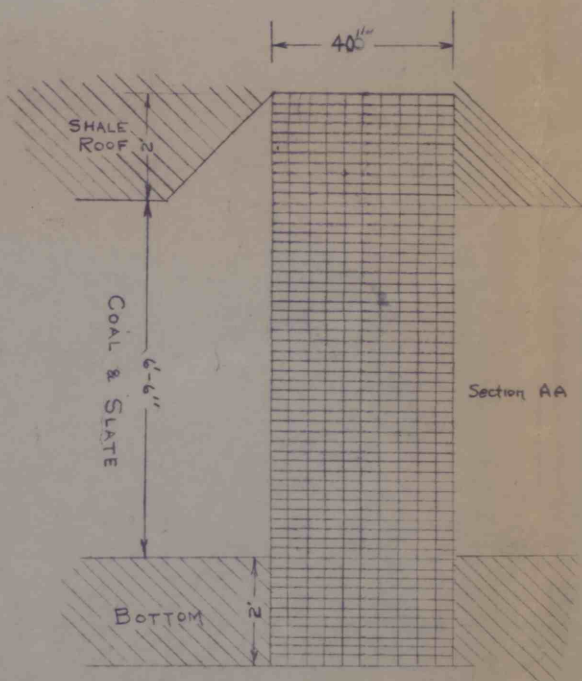


PITTSBURGH COAL COMPANY  
 DIVISION OF PITTSBURGH CONSOLIDATION COAL CO.  
 CONSTRUCTION PLAN OF BULKHEAD  
 3<sup>RD</sup> EAST WESTLAND MINE  
 DAM # 5 SCALE 1"=2'

REF. D



FORMULA FOR DAM THICKNESS

$$T = \frac{PW\sqrt{4R-1}}{4S}$$

T = THICKNESS OF DAM IN INCHES  
 R = SHORTER RADIUS IN INCHES  
 W = WIDTH OF OPENING IN INCHES  
 S = COMPRESSIVE STRENGTH OF BRICK IN LBS. PER SQ. IN.  
 USED 1000 LBS. PER SQ. IN.  
 P = WATER PRESSURE AT DAM IN POUNDS  
 PER SQUARE INCH.