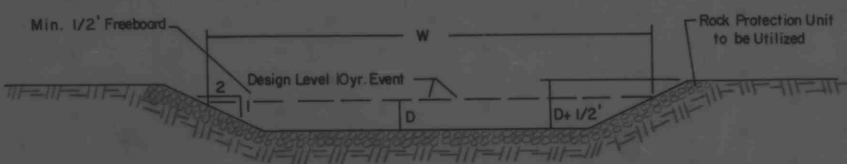


113  
ROCHESTER MILLS 172403

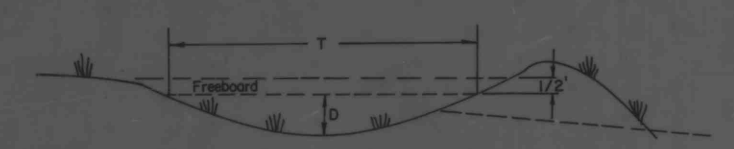
STABILIZED CHANNELS  
FOR  
POST-MINING DIVERSION OUTLETS

| Identification | Effective Length ft. | Slope % | (W) Width | (D) Depth | Rock Protection Unit | Required cfs 10 Year Event | Anticipated Velocity ft./sec. |
|----------------|----------------------|---------|-----------|-----------|----------------------|----------------------------|-------------------------------|
| SC1            | 350                  | 17      | 20        | 3/4       | 4                    | 170                        | 11.9                          |
| SC2            | 300                  | 26      | 14        | 1/2       | 4                    | 75                         | 11.3                          |
| SC3            | 250                  | 12      | 12        | 3/4       | 3                    | 80                         | 9.7                           |
| SC4            | 350                  | 31      | 10        | 1/2       | 4                    | 80                         | 12.1                          |
| SC5            | 450                  | 24      | 8         | 1/2       | 3                    | 50                         | 10.5                          |
| SC6            | 230                  | 13      | 8         | 1/2       | 3                    | 23                         | 7.7                           |



STABILIZED CHANNELS  
FOR  
POST-MINING DIVERSION DITCHES

| Identification | Slope % | Desired Velocity fps | Design Velocity fps | (T) Top Width ft. | (D) Depth ft. | Retardant | Required Q cfs 10 Year Event | Feeds Stabilized Channel No. |
|----------------|---------|----------------------|---------------------|-------------------|---------------|-----------|------------------------------|------------------------------|
| SC1-1          | 1 1/2   | 3.0                  | 3.0                 | 14                | 2.1           | 0         | 20                           | SC1                          |
| SC1-2          |         |                      | 3 1/2               | 35                | 2.2           |           | 80                           | SC1                          |
| SC2-1          |         |                      | 3.0                 | 10                | 2.2           |           | <15                          | SC2                          |
| SC2-2          |         |                      |                     |                   |               |           |                              | SC2                          |
| SC2-3          |         |                      |                     |                   |               |           |                              | SC2                          |
| SC2-4          |         |                      |                     |                   |               |           |                              | SC2                          |
| SC3-1          |         |                      |                     |                   |               |           |                              | SC3                          |
| SC3-2          |         |                      |                     |                   |               |           |                              | SC3                          |
| SC4-1          |         |                      |                     |                   |               |           |                              | SC4                          |
| SC4-2          |         |                      |                     |                   |               |           |                              | SC4                          |
| SC4-3          |         |                      |                     |                   |               |           |                              | SC4                          |
| SC5-1          |         |                      |                     |                   |               |           |                              | SC5                          |
| SC5-2          |         |                      |                     |                   |               |           |                              | SC5                          |
| SC5-3          |         |                      |                     |                   |               |           |                              | SC5                          |
| SC6-1          |         |                      |                     |                   |               |           |                              | SC6                          |
| SC6-2          |         |                      |                     |                   |               |           |                              | SC6                          |



LEGEND

- MINE DRAINAGE PERMIT 329.2 acres
- BARRIER ZONES
- OCCUPIED DWELLINGS
- KEY NO. TO INDIVIDUAL PROPERTY OWNERS (5)
- PROPERTY LINE
- PREVIOUSLY SURFACE MINED AREAS
- STABILIZED CHANNEL
- FINAL DIVERSION DITCH DRAINAGE PATTERN
- POSTMINING SEDIMENTATION & EROSION CONTROL (To remain until the bond which would eliminate requirements for ponds has been released.)
- FORESTLAND IF AFFECTED-RETURNED TO FORESTLAND
- PREVIOUSLY SURFACE MINED IF AFFECTED RETURNED TO FORESTLAND

INDEX TO SMALL PARCEL OWNERS

- 2 John Kollar
- 3 William D. Wagner
- 4 Clair J. Braugher
- 6 Eva Jean Hill
- 22 James D. Quigley
- 23 William R. Quigley
- 24 William J. Yeager
- 21 Peter Quigley
- 28 Harry G. McAffose
- 29 Phillip B. Leasure

VAPCO ENGINEERING  
PUNXSUTAWNEY, PENNSYLVANIA



|               |               |               |               |
|---------------|---------------|---------------|---------------|
| APPROVED DATE | APPROVED DATE | APPROVED DATE | APPROVED DATE |
| DATE          | DATE          | DATE          | DATE          |
| BY            | CHECKED BY SH | SCALE 1"=400' | FILE NO.      |
| REVISIONS     | DATE 9-15-83  |               |               |

NOTES  
1. This map has been prepared from county tax maps, deed & field notes. This does not represent an actual survey of properties shown.  
2. Contours and natural features were taken from enlarged 7.5 min. Rochester Mills USGS quadrangle.

PROPOSED SURFACE MINE  
**P8N COAL CO. INC.**  
ROCHESTER MILLS MINE  
East Mahoning & Grant Twp. Indiana Co.

EXHIBIT 18  
LAND USE  
&  
RECLAMATION  
MAP