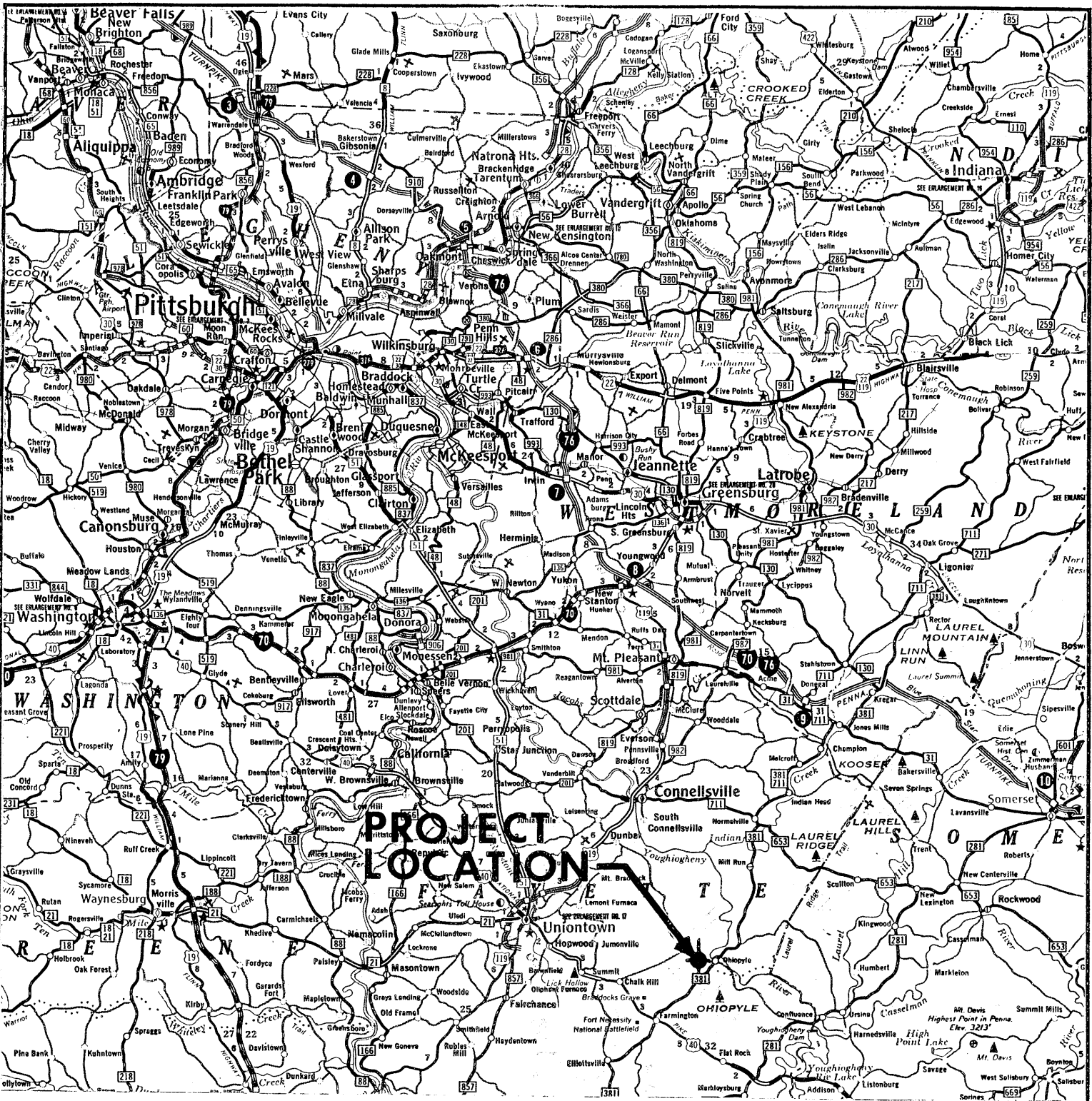
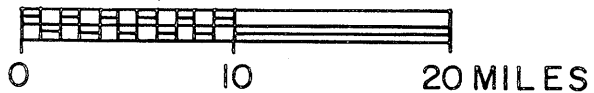


E. D. Apollonia Consulting Engineers, Inc.

FIGURES



SCALE



"DO NOT SCALE THIS DRAWING"



C. D. Appolonia Consulting Engineers, Inc.

CUCUMBER RUN
VICINITY MAP

PITTSBURGH • CHESTERTON • WILMINGTON • DENVER • BRUSSELS
DEPARTMENT OF ENVIRONMENTAL RESOURCES
COMMONWEALTH OF PENNSYLVANIA

| | | |
|-------------|-------|---------|
| DRAWN BY | D. W. | 3-27-75 |
| CHECKED BY | JHP | 3-31-75 |
| APPROVED BY | | |

| | |
|-------------|-----------|
| DRAWING NO. | 69-144-A8 |
| FIGURE NO. | 1 |

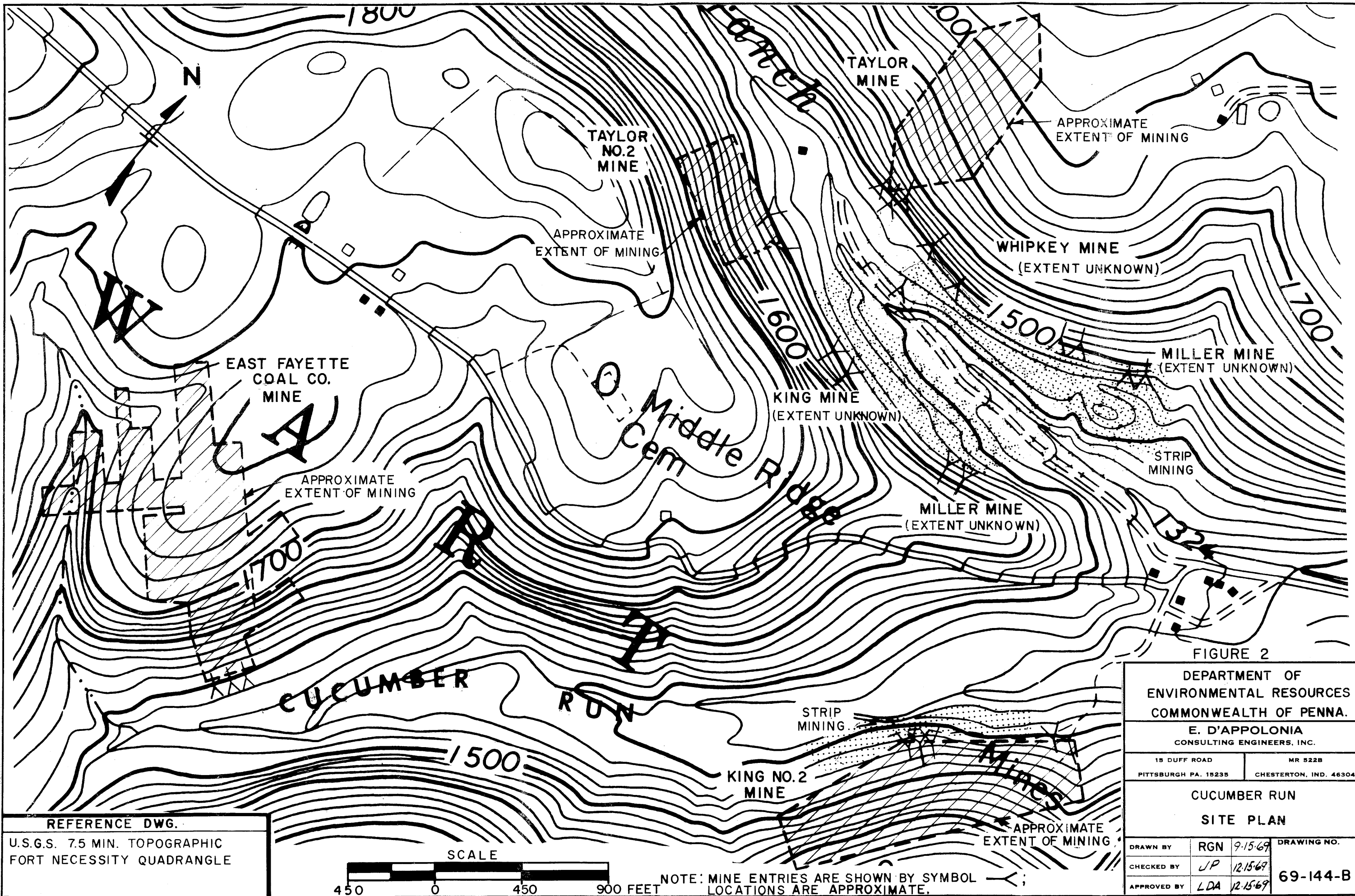


FIGURE 2

DEPARTMENT OF ENVIRONMENTAL RESOURCES
COMMONWEALTH OF PENNA.

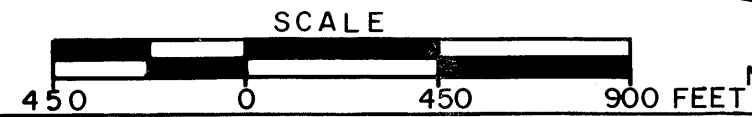
E. D'APPOLONIA
CONSULTING ENGINEERS, INC.

15 DUFF ROAD MR 522B
PITTSBURGH PA. 15235 CHESTERTON, IND. 46304

CUCUMBER RUN
SITE PLAN

| | | | |
|-------------|------|----------|-------------|
| DRAWN BY | RGN | 9-15-69 | DRAWING NO. |
| CHECKED BY | J.P. | 12-15-69 | 69-144-B1 |
| APPROVED BY | LDA | 12-15-69 | |

REFERENCE DWG.
U.S.G.S. 7.5 MIN. TOPOGRAPHIC
FORT NECESSITY QUADRANGLE



NOTE: MINE ENTRIES ARE SHOWN BY SYMBOL LOCATIONS ARE APPROXIMATE.

GENERALIZED COLUMNAR SECTION-
SOUTHWESTERN PENNSYLVANIA

| PERIOD | GROUP OR FORMATION | COLUMNAR SECTION | THICKNESS | MEMBERS |
|--------------------------------|--------------------|------------------|-------------|---|
| PERMIAN | Dunkard | | 300' + | Washington coal Waynesburg "A" coal Waynesburg sandstone |
| | Monongahela | | 310' - 400' | Waynesburg coal Uniontown coal Benwood limestone Sewickley coal Redstone coal Pittsburgh coal |
| CARBONIFEROUS PENNSYLVANIAN | Conemaugh | | 600' | Connellsville limestone Morgantown sandstone Ames (crinoidal) limestone Saltsburg sandstone Mine Creek limestone Brush Creek limestone Mahoning sandstone |
| | Allegheny | | 280' | Upper Freeport coal Bolivar fire clay Lower Freeport coal Upper Kittanning coal Middle Kittanning coal Lower Kittanning coal Brookville-Clarion coal |
| | Pottsville | | 150' | Homewood sandstone Mercer coal group Conoquenessing sandstone |
| | Mauch Chunk | | 150' | Greenbriar limestone |
| MISSISSIPPIAN | Loyalhanna | | 400' + | Loyalhanna limestone |
| | Pocono | | 400' + | Burgoon sandstone (Big injun sand) |



APPROXIMATE
SECTION
EXPOSED
AT SITE

"Do Not Scale This Drawing"



E. D. Appolonia Consulting Engineers, Inc.

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DEPARTMENT OF ENVIRONMENTAL RESOURCES
COMMONWEALTH OF PENNSYLVANIA

STRATIGRAPHIC COLUMN NOTING
SECTION EXPOSED AT CUCUMBER RUN SITE

| | | | |
|-------------|-------|---------|-----------------------|
| DRAWN BY | D. W. | 3-25-75 | DRAWING NO. 69-144-A7 |
| CHECKED BY | JHR? | 3-31-75 | |
| APPROVED BY | | | FIGURE NO. 3 |

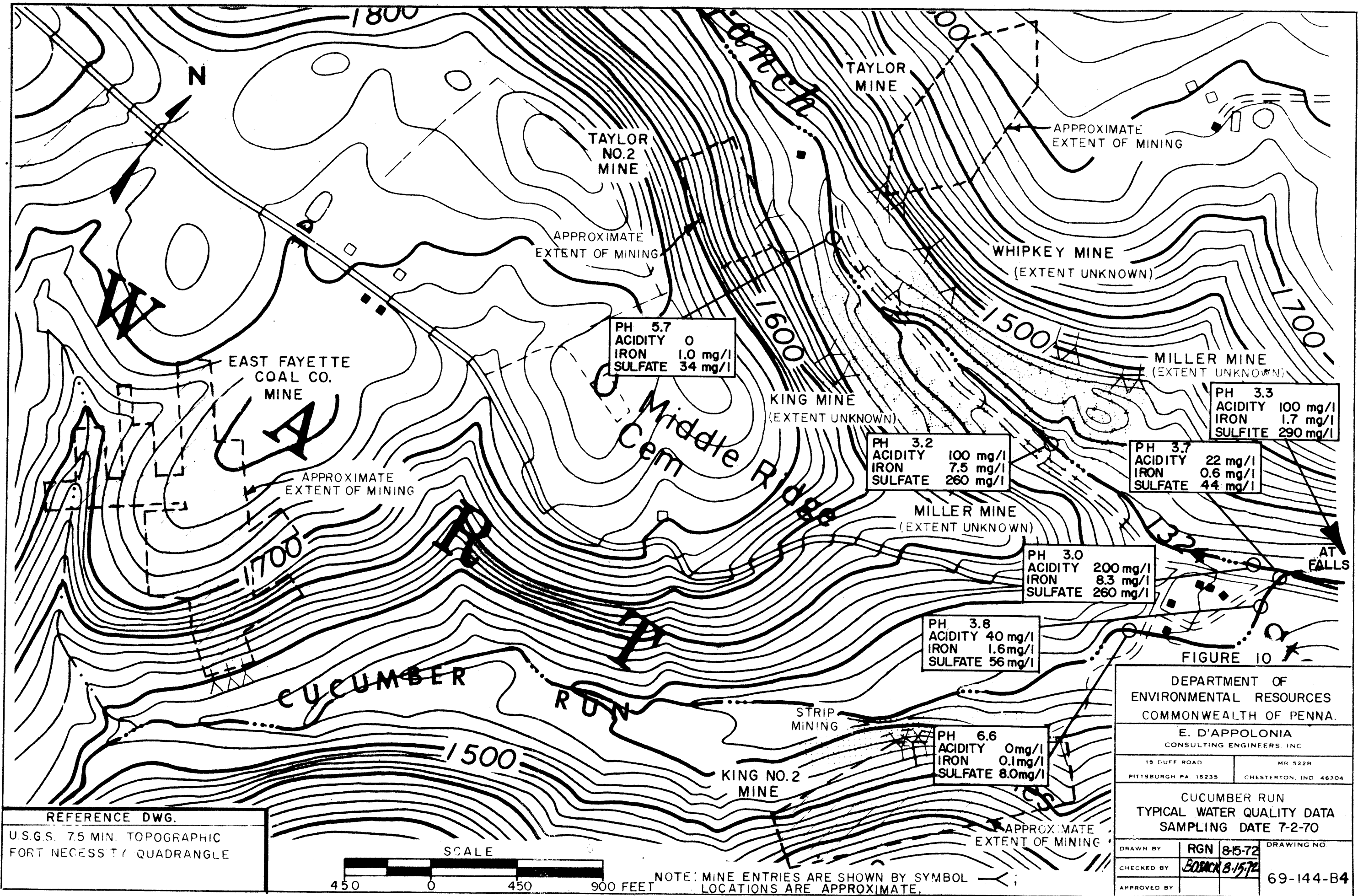


FIGURE 10

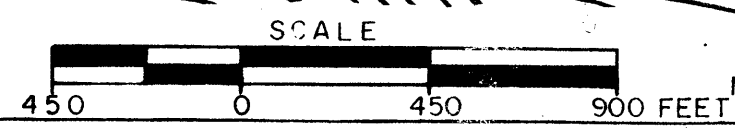
DEPARTMENT OF ENVIRONMENTAL RESOURCES
COMMONWEALTH OF PENNA.
E. D'APPOLONIA
CONSULTING ENGINEERS, INC.

15 DUFF ROAD MR 522B
PITTSBURGH PA 15235 CHESTERTON, IND 46304

CUCUMBER RUN
TYPICAL WATER QUALITY DATA
SAMPLING DATE 7-2-70

| | | |
|-------------|-----------------|-------------|
| DRAWN BY | RGN 8-5-72 | DRAWING NO. |
| CHECKED BY | BOSNICK 8-15-72 | 69-144-B4 |
| APPROVED BY | | |

REFERENCE DWG.
U.S.G.S. 7.5 MIN. TOPOGRAPHIC
FORT NECESSITY QUADRANGLE



NOTE: MINE ENTRIES ARE SHOWN BY SYMBOL
LOCATIONS ARE APPROXIMATE.

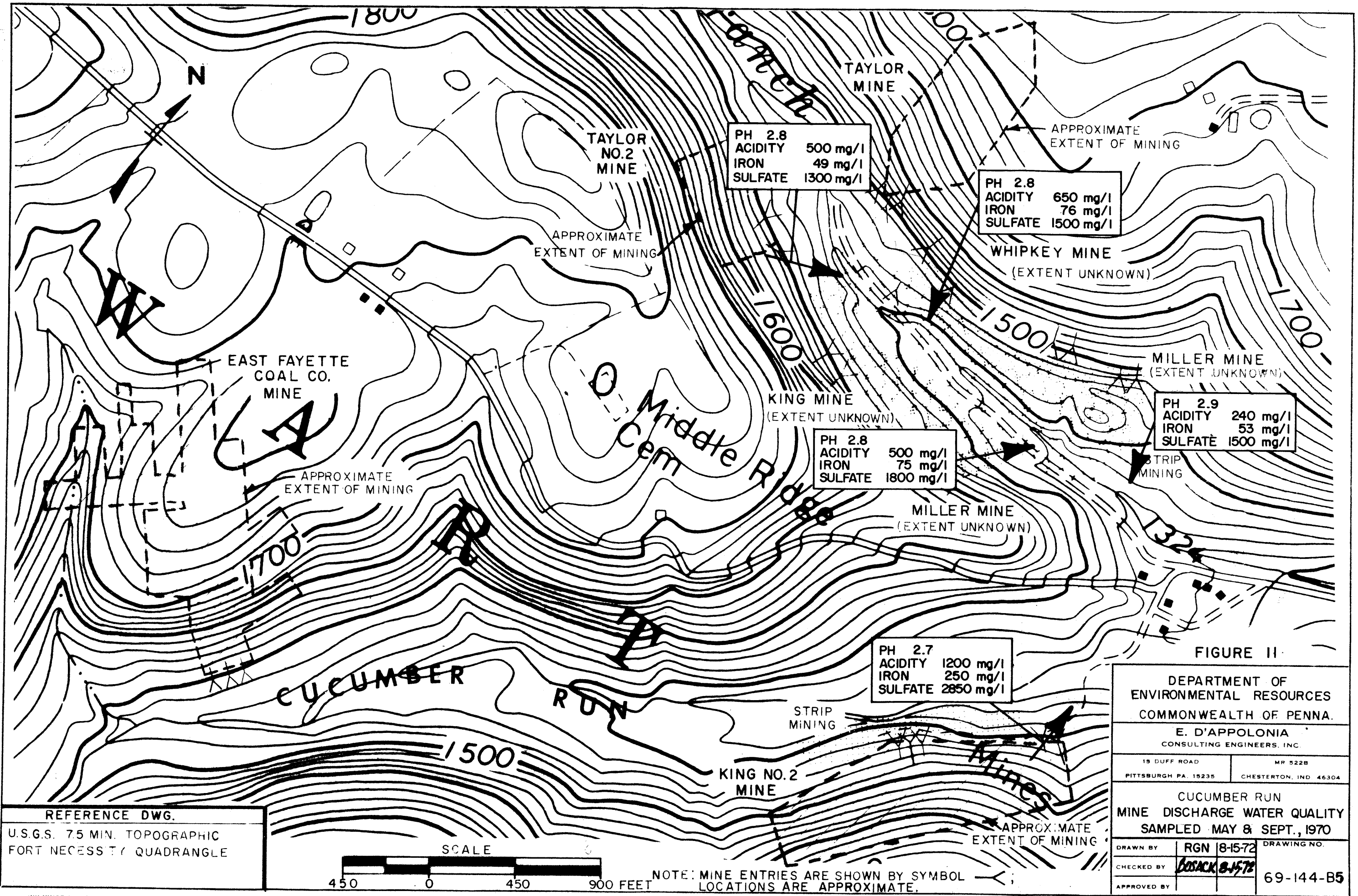
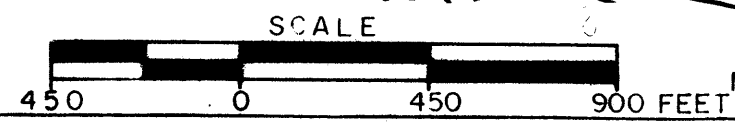


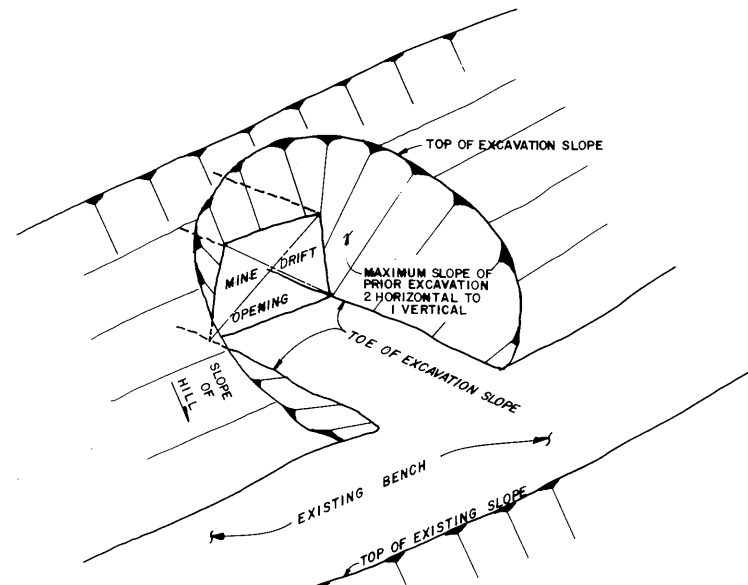
FIGURE II

| | |
|---|-----------------------------------|
| DEPARTMENT OF ENVIRONMENTAL RESOURCES COMMONWEALTH OF PENNA. | |
| E. D'APPOLONIA CONSULTING ENGINEERS, INC. | |
| 15 DUFF ROAD PITTSBURGH PA. 15235 | MP 522B CHESTERTON, IND. 46304 |
| CUCUMBER RUN MINE DISCHARGE WATER QUALITY SAMPLED MAY & SEPT., 1970 | |
| DRAWN BY | RGN 8-15-72 |
| CHECKED BY | LOSACK 8-15-72 |
| APPROVED BY | |
| DRAWING NO. 69-144-B5 | |

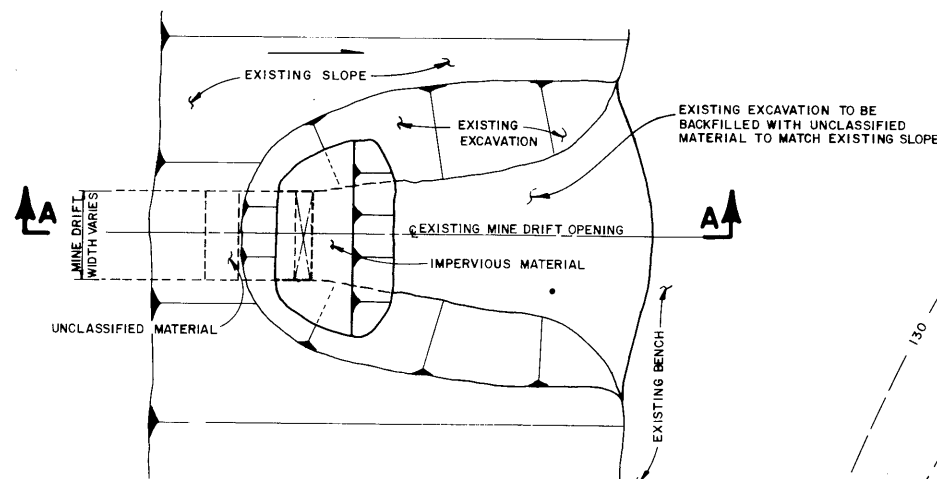
REFERENCE DWG.
U.S.G.S. 7.5 MIN. TOPOGRAPHIC
FORT NECESSITY QUADRANGLE



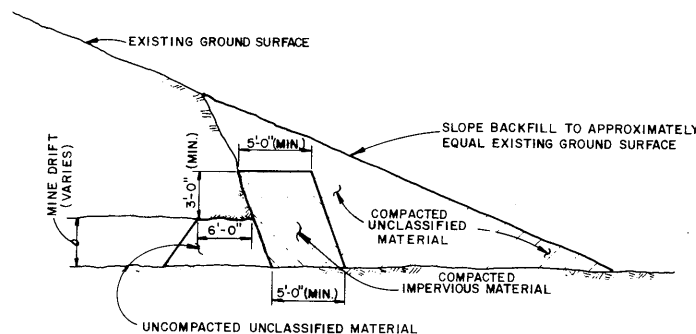
NOTE: MINE ENTRIES ARE SHOWN BY SYMBOL
LOCATIONS ARE APPROXIMATE.



ISOMETRIC SKETCH OF PRIOR EXCAVATION
N.T.S.



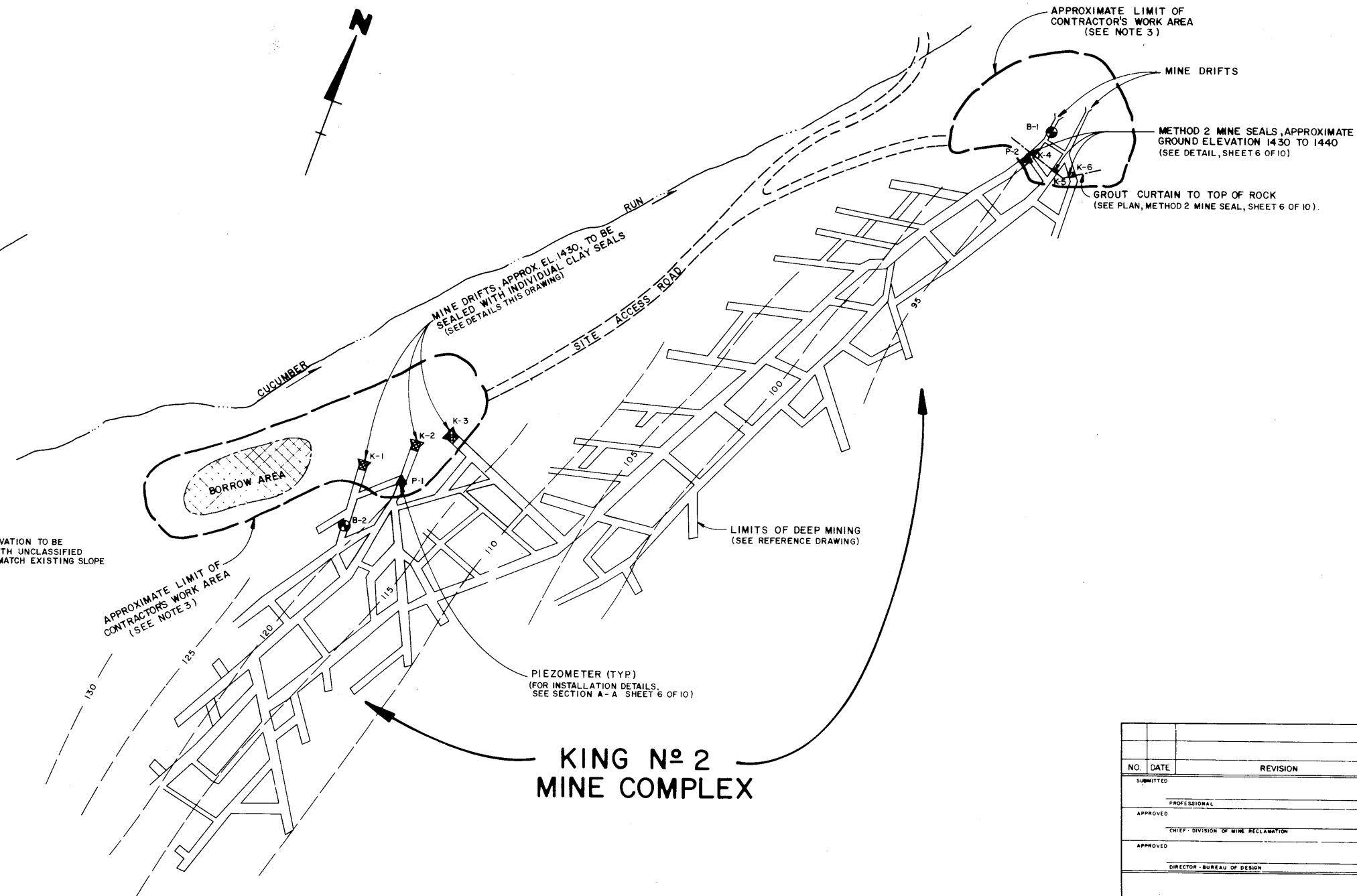
PLAN OF INDIVIDUAL CLAY SEALS
N.T.S.



SECTION A-A
N.T.S.

MINE MAP DATA FROM PROPERTY OF JAMES A. KING, SITUATED IN STEWART TOWNSHIP, FAYETTE COUNTY, PENNSYLVANIA, BY L. J. SWISHER, INDIAN HEAD, C. E., SCALE: 1"=100', DATED NOVEMBER 23, 1958.

REFERENCE DRAWINGS



KING No 2 MINE COMPLEX

PLAN



LEGEND:

- K-1 MINE SEAL
- - - CONTOUR OF BOTTOM OF COAL ELEV., ARBITRARY DATUM (SEE NOTE 2)
- B-1 BORING
- P-1 PIEZOMETER
- - - - - GROUT CURTAIN

NOTES:

1. LOCATION OF DEEP MINE SEALING IS SHOWN ON SHEET 3 OF 10.
2. ARBITRARY DATUM IS APPROXIMATELY U.S.G.S. EL. 1305.
3. EXACT LIMITS OF CONTRACTOR'S WORK AREAS WILL BE ESTABLISHED IN THE FIELD BY THE ENGINEER AT THE BEGINNING OF CONSTRUCTION.

| NO. | DATE | REVISION | APPR. |
|--------------------------------------|------|----------|-------|
| | | | |
| SUBMITTED | | | |
| PROFESSIONAL | | | |
| APPROVED | | | |
| CHIEF - DIVISION OF MINE RECLAMATION | | | |
| APPROVED | | | |
| DIRECTOR - BUREAU OF DESIGN | | | |

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
OFFICE OF RESOURCES MANAGEMENT

CONTRACT NO. SL138-3-1011

DEEP MINE SEALING
CUCUMBER RUN WATERSHED
OHIOPILE STATE PARK

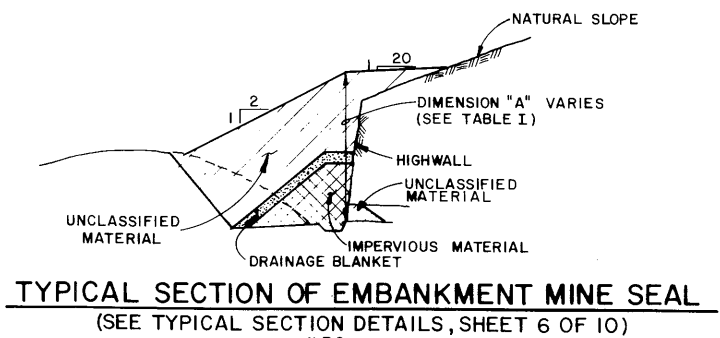
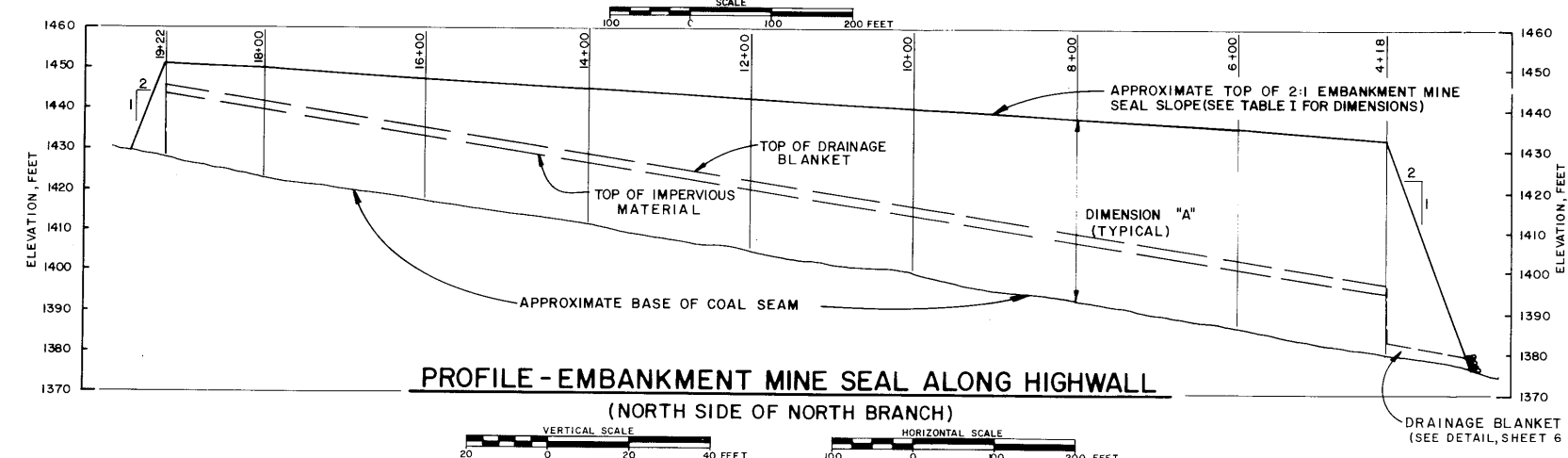
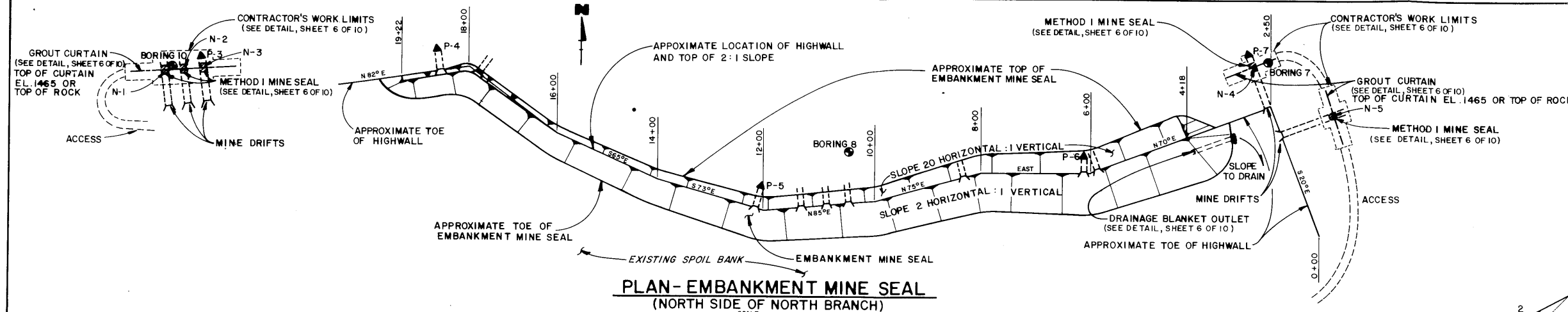
E. D'APPOLONIA CONSULTING ENGINEERS, INC.
10 Duff Road
Pittsburgh, Pennsylvania

PLAN SEALING KING NO. 2 MINE COMPLEX

| | | |
|----------------------|-------------------|--------------------------|
| DRAWN BY J. G. S. | DATE 2-20-75 | DRAWING NO. 69-144-E8 |
| CHECKED BY | SCALE AS NOTED | Sheet 4 of 10 |

FIGURE 12

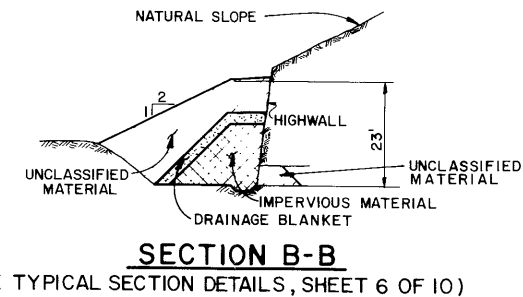
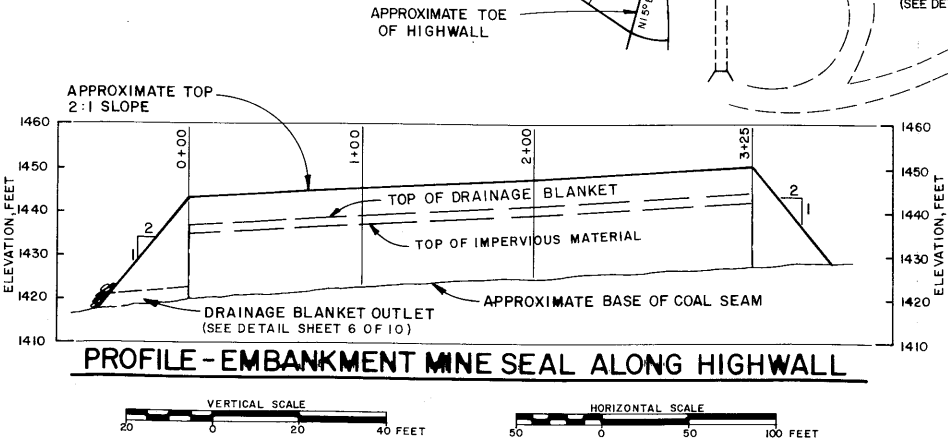
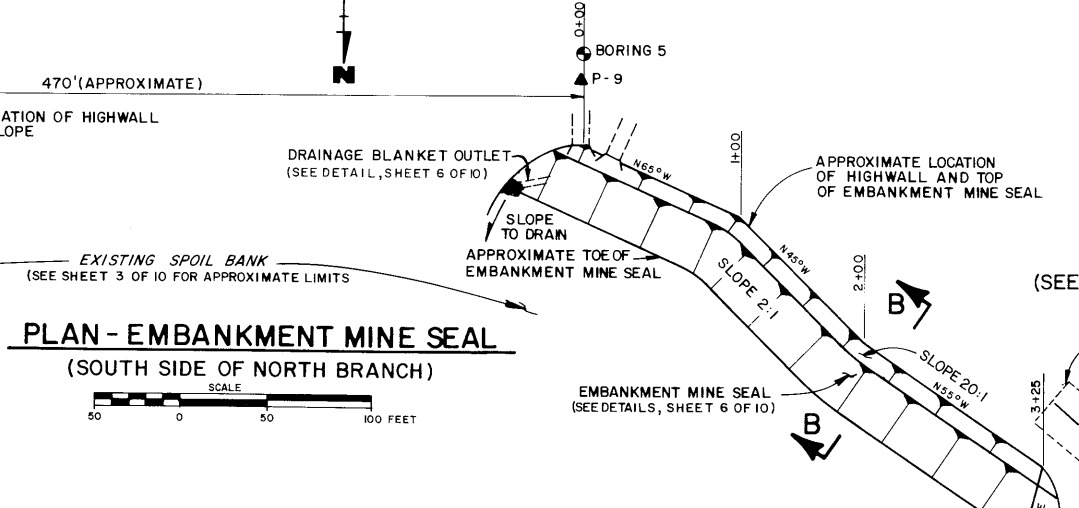
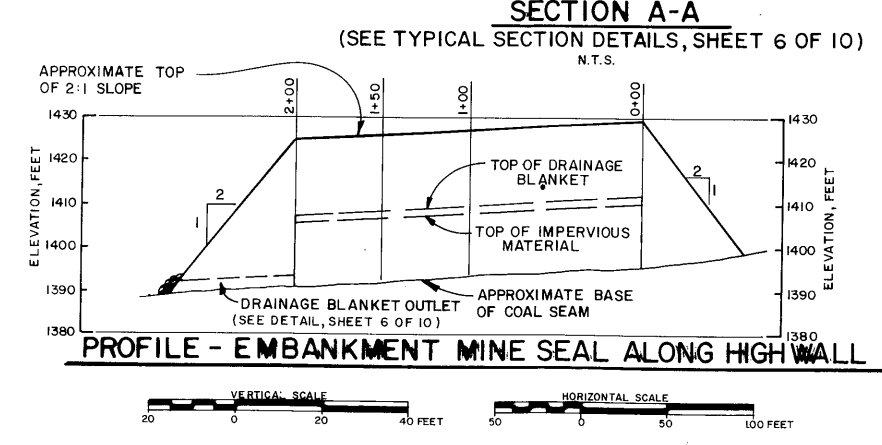
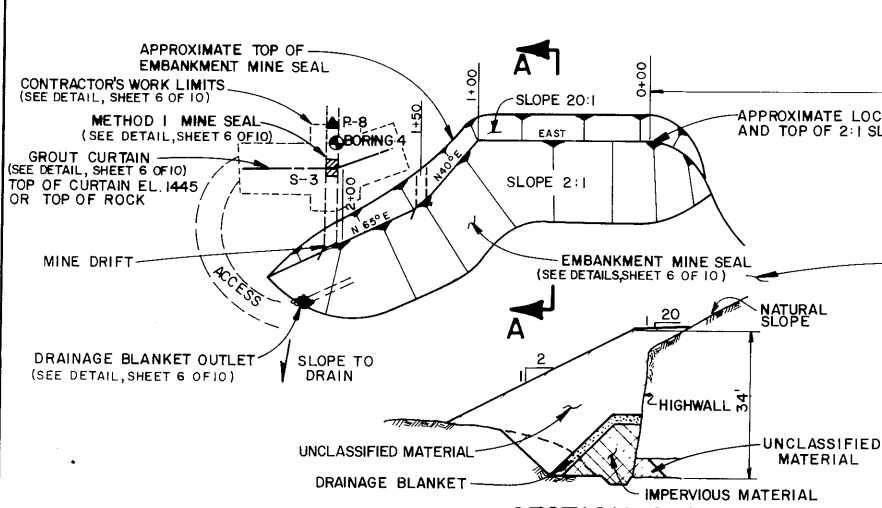
| TABLE I | |
|-------------------------|---------------|
| EMBANKMENT SEAL STATION | DIMENSION "A" |
| 19+22 | 23.0' |
| 18+00 | 26.0' |
| 16+00 | 30.0' |
| 14+00 | 33.5' |
| 12+00 | 37.0' |
| 10+00 | 41.0' |
| 8+00 | 45.0' |
| 6+00 | 49.0' |
| 4+18 | 53.0' |



LEGEND

- N-1 MINE SEAL
- B-1 BORING
- P-1 PIEZOMETER
- GROUT CURTAIN
- MINE DRIFT

NOTE:
EXACT LIMITS OF CONTRACTOR'S WORK AREA AND ACCESS WILL BE ESTABLISHED IN THE FIELD BY THE ENGINEER AT THE BEGINNING OF CONSTRUCTION.



NOTE:
LOCATION OF DEEP MINE SEALING WORK IS SHOWN ON SHEET 3 OF 10.

| NO. | DATE | REVISION | APPR. |
|-----|------|----------|-------|
| | | | |
| | | | |
| | | | |
| | | | |

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
OFFICE OF RESOURCES MANAGEMENT

CONTRACT NO. SL138-3-1011

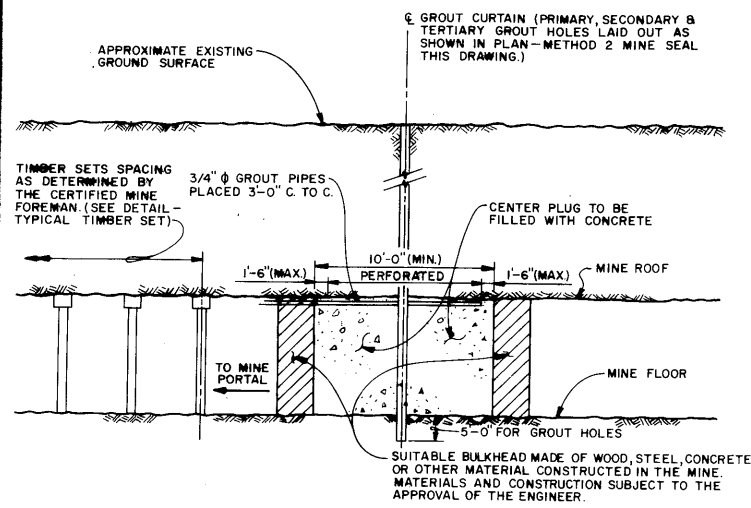
DEEP MINE SEALING
CUCUMBER RUN WATERSHED
OHIOPILE STATE PARK

E. D'APPOLONIA CONSULTING ENGINEERS, INC.
10 Duff Road
Pittsburgh, Pennsylvania

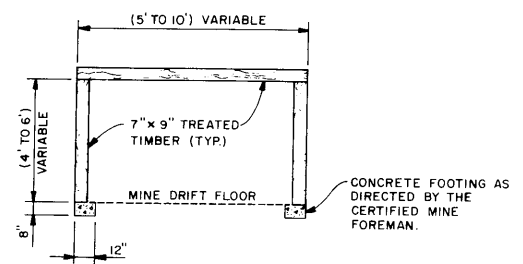
**PLANS
SEALING NORTH BRANCH
MINE COMPLEX**

| | | |
|-------------------|-------------------|--------------------------|
| DRAWN BY dam | DATE 2-20-75 | DRAWING NO. 69-144-E9 |
| CHECKED BY JLC | SCALE AS SHOWN | Sheet 5 of 10 |

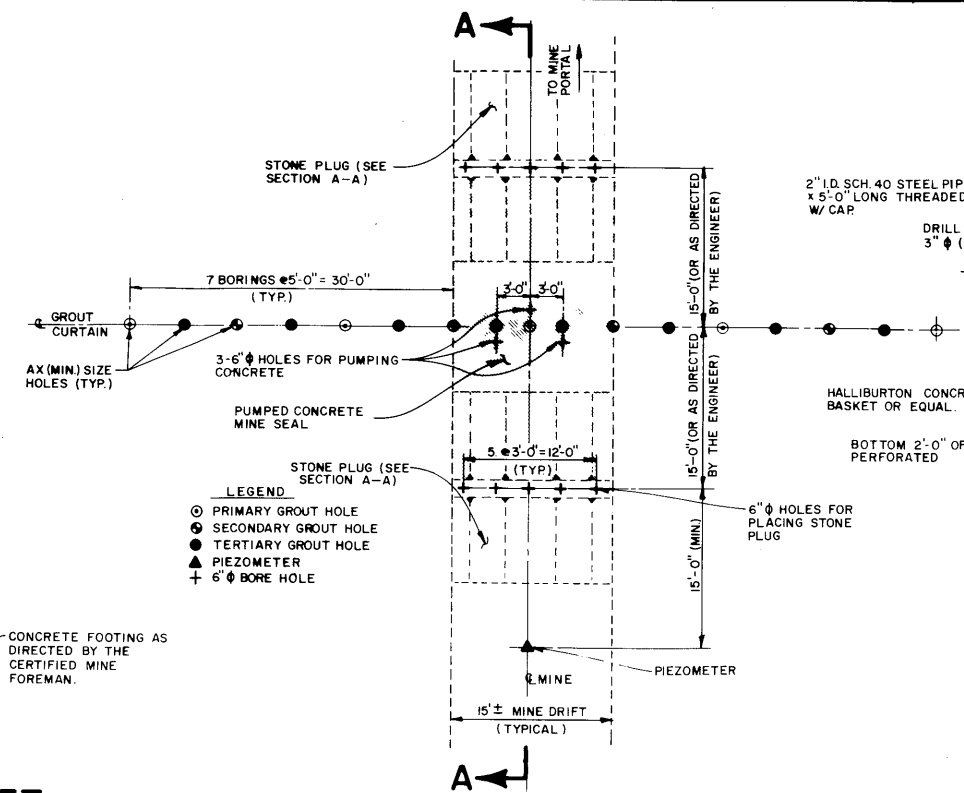
FIGURE 13



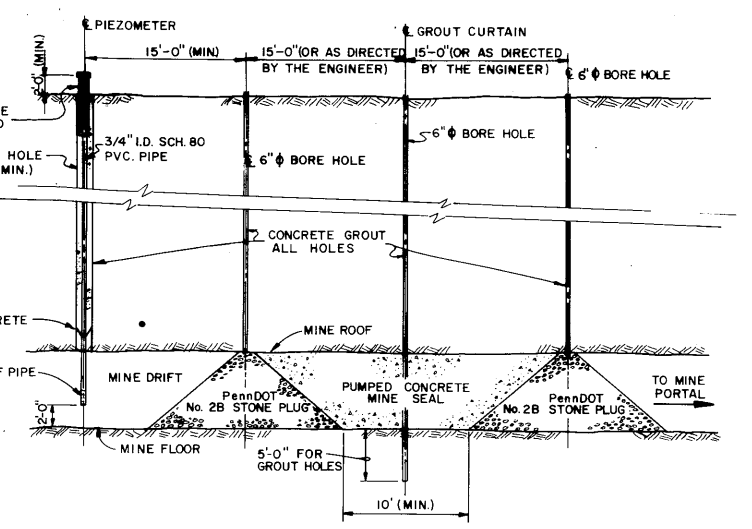
DETAIL-METHOD 1 MINE SEAL
N.T.S.



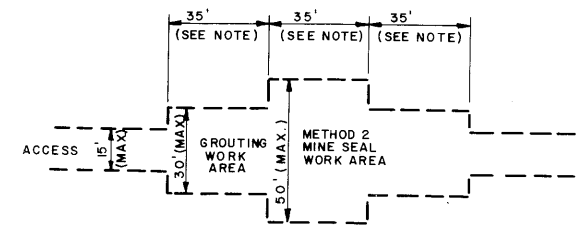
DETAIL-TYPICAL TIMBER SET
N.T.S.



PLAN-METHOD 2 MINE SEAL
N.T.S.

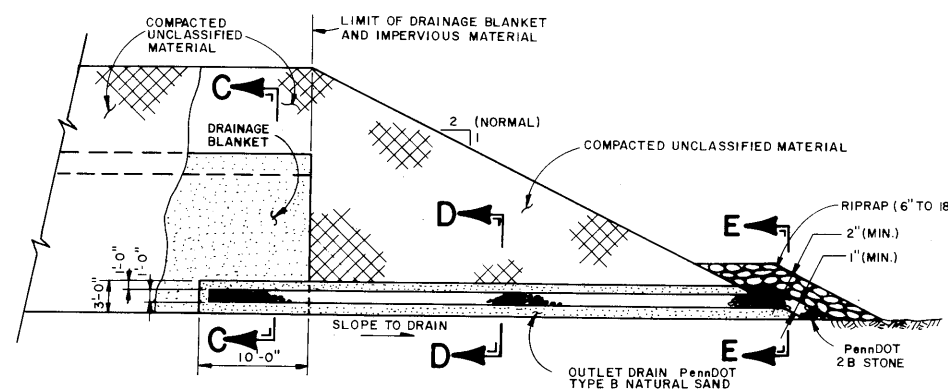


SECTION A-A
N.T.S.

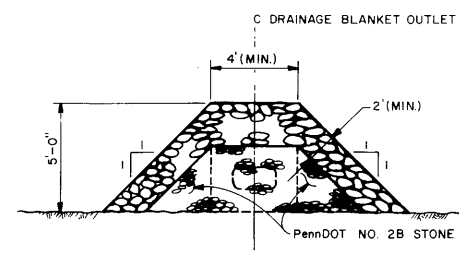


DETAIL-ACCESS AND WORK LIMITS
N.T.S.

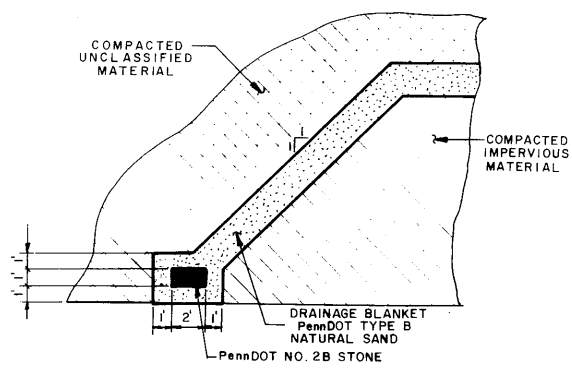
NOTE: LENGTH OF WORK AREAS MAY VARY AS DIRECTED BY THE ENGINEER.



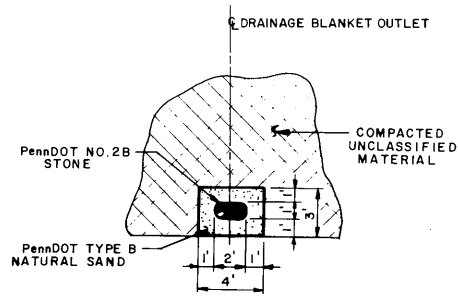
DETAIL - DRAINAGE BLANKET OUTLET
N.T.S.



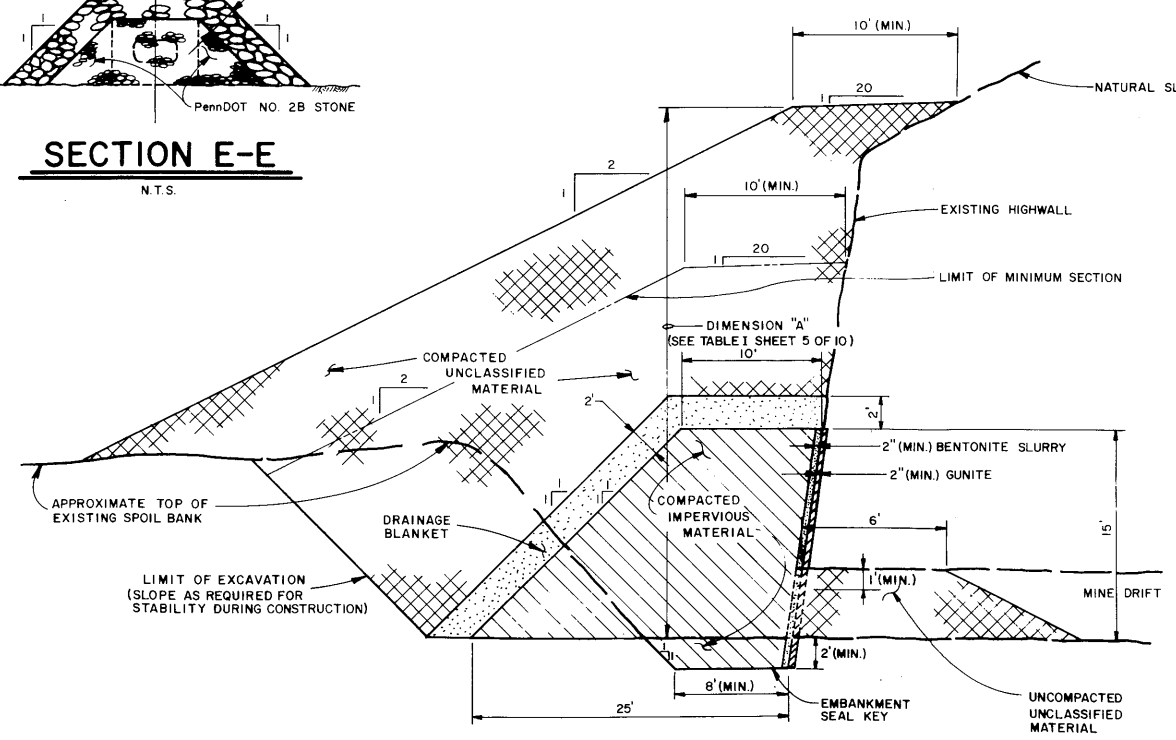
SECTION E-E
N.T.S.



SECTION C-C
N.T.S.



SECTION D-D
N.T.S.



TYPICAL SECTION DETAILS - EMBANKMENT MINE SEAL
N.T.S.

| NO. | DATE | REVISION | APPR. |
|-----|------|----------|-------|
| | | | |
| | | | |
| | | | |

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
OFFICE OF RESOURCES MANAGEMENT
CONTRACT NO. SL138-3-1011
DEEP MINE SEALING
CUCUMBER RUN WATERSHED
OHIOPILE STATE PARK

E. D'APPOLONIA CONSULTING ENGINEERS, INC.
10 Duff Road
Pittsburgh, Pennsylvania
CONSTRUCTION DETAILS OF
DEEP MINE SEALING
DRAWN BY: J.G.S./dm DATE: 2-21-75 DRAWING NO: 69-144-E10
CHECKED BY: SCALE: AS SHOWN Sheet 6 of 10

DATE BEGAN 4-15-71
DATE FINISHED 4-15-71

BORING NO. 1
GROUND SURFACE EL. 1420

| ELEV. FEET | DEPTH FEET | SAMPLE TYPE | DESCRIPTION | U.S.C.S. | PENETRATION RESISTANCE BLOWS PER FOOT | REMARKS |
|------------|------------|-------------|--|----------|---------------------------------------|---------|
| 1420 | 0 | | | | | |
| | 5 | | LOOSE DARK BROWN ORGANIC SANDY SILT | ol | | |
| | 10 | | MEDIUM DENSE TAN SANDY SILT | m1 | | |
| 1410 | 15 | | VERY LOOSE TO MEDIUM DENSE BROWN SILT AND ROCK FRAGMENTS - TRACE OF SAND | m1 | | |
| 1400 | 20 | | MEDIUM HARD VERY BROKEN BLACK COAL | | 80/0 | |
| | 25 | | MEDIUM HARD VERY BROKEN TO MASSIVE GRAY CLAYSTONE | | | |
| 1390 | 30 | | | | | |
| 1389 | 31.0 | | | | | |

NOTE: PIEZOMETER INSTALLED AT COMPLETION TIP EL. 1404.0

DATE BEGAN 4-19-71
DATE FINISHED 4-19-71

BORING NO. 2
GROUND SURFACE EL. 1465

| ELEV. FEET | DEPTH FEET | SAMPLE TYPE | DESCRIPTION | U.S.C.S. | PENETRATION RESISTANCE BLOWS PER FOOT | REMARKS |
|------------|------------|-------------|--|----------|---------------------------------------|---------|
| 1465 | 0 | | | | | |
| | 5 | | MEDIUM DENSE WHITE TO TAN SILTY SAND AND BOULDERS | sw-sm | | |
| 1455 | 10 | | HARD VERY BROKEN TO SLIGHTLY BROKEN GRAY FINE SANDSTONE - SOME INTERBEDDED SHALE | | | |
| 1445 | 20 | | MEDIUM HARD VERY BROKEN GRAY AND BLACK SILTSTONE AND SHALE | | | |
| | 25 | | HARD BROKEN GRAY SANDSTONE | | | |
| 1438 | 30 | | MEDIUM HARD TO HARD VERY BROKEN TO MASSIVE BLACK TO DARK GRAY SILTY SHALE | | | |
| | 35 | | | | | |
| 1425 | 40 | | VOID | | | |
| | 45 | | MEDIUM HARD VERY BROKEN BLACK CARBONACEOUS SHALE | | | |
| 1415 | 50.0 | | SOFT VERY BROKEN TO SLIGHTLY BROKEN GRAY CLAYSTONE | | | |
| | 55.0 | | BOTTOM OF BORING | | | |

DATE BEGAN 4-12-71
DATE FINISHED 4-12-71

BORING NO. 4
GROUND SURFACE EL. 1430

| ELEV. FEET | DEPTH FEET | SAMPLE TYPE | DESCRIPTION | U.S.C.S. | PENETRATION RESISTANCE BLOWS PER FOOT | REMARKS |
|------------|------------|-------------|---|----------|---------------------------------------|---------|
| 1430 | 0 | | | | | |
| | 5 | | LOOSE DARK BROWN SANDY ORGANIC SILT | ol | | |
| | 10 | | MEDIUM DENSE TAN SANDY SILT | m1 | | |
| 1420 | 15 | | DENSE GRAY SILT AND ROCK FRAGMENTS | m1 | | |
| | 20 | | HARD VERY BROKEN GRAY SILTSTONE | | | |
| 1410 | 25 | | MEDIUM HARD BROKEN BLACK CARBONACEOUS SHALE | | | |
| | 30 | | MEDIUM HARD TO HARD VERY BROKEN TO BROKEN GRAY SILTSTONE AND SANDSTONE | | | |
| 1400 | 35 | | MEDIUM HARD TO HARD VERY BROKEN TO MASSIVE DARK GRAY TO BLACK SILTY SHALE | | | |
| | 40 | | MEDIUM HARD VERY BROKEN BLACK COAL | | | |
| 1390 | 45 | | MEDIUM HARD BROKEN TO MASSIVE GRAY CLAYSTONE | | | |
| | 50.0 | | HARD GRAY SANDSTONE - SOME CLAYSTONE LENSES | | | |
| 1380 | 50.0 | | BOTTOM OF BORING | | | |

DATE BEGAN 4-14-71
DATE FINISHED 4-14-71

BORING NO. 5
GROUND SURFACE EL. 1475

| ELEV. FEET | DEPTH FEET | SAMPLE TYPE | DESCRIPTION | U.S.C.S. | PENETRATION RESISTANCE BLOWS PER FOOT | REMARKS |
|------------|------------|-------------|--|----------|---------------------------------------|---------|
| 1475 | 0 | | | | | |
| | 5 | | LOOSE DARK BROWN SANDY ORGANIC SILT | ol | | |
| 1470 | 10 | | MEDIUM DENSE TAN SANDY SILT AND ROCK FRAGMENTS | m1 | | |
| | 15 | | HARD SLIGHTLY BROKEN TAN SANDSTONE | | | |
| 1460 | 20 | | MEDIUM HARD VERY BROKEN BROWN SILTSTONE | | | |
| | 25 | | HARD VERY BROKEN BLACK SHALE | | | |
| 1450 | 30 | | MEDIUM HARD BROKEN GRAY CLAYSTONE | | | |
| | 35 | | HARD BROKEN TO MASSIVE GRAY SANDSTONE | | | |
| | 40 | | HARD SLIGHTLY BROKEN GRAY SILTSTONE | | | |
| 1440 | 45 | | MEDIUM HARD VERY BROKEN BLACK CARBONACEOUS SHALE | | | |
| | 50 | | HARD BROKEN TO MASSIVE GRAY SILTSTONE AND SANDSTONE | | | |
| 1430 | 55 | | HARD BROKEN TO MASSIVE DARK GRAY TO BLACK SILTY SHALE | | | |
| | 60 | | | | | |
| 1420 | 65 | | MEDIUM HARD VERY BROKEN BLACK COAL | | | |
| | 70 | | MEDIUM HARD VERY BROKEN TO BROKEN BLACK SHALE AND COAL | | | |
| 1414 | 75 | | MEDIUM HARD VERY BROKEN TO BROKEN GRAY CLAYSTONE | | | |

DATE BEGAN 4-8-71
DATE FINISHED 4-8-71

BORING NO. 6
GROUND SURFACE EL. 1465

| ELEV. FEET | DEPTH FEET | SAMPLE TYPE | DESCRIPTION | U.S.C.S. | PENETRATION RESISTANCE BLOWS PER FOOT | REMARKS |
|------------|------------|-------------|--|----------|---------------------------------------|---------|
| 1465 | 0 | | | | | |
| | 5 | | VERY DENSE TAN FINE TO MEDIUM SILTY SAND AND ROCK FRAGMENTS | sm | | |
| 1460 | 10 | | HARD VERY BROKEN TO BROKEN LIGHT GRAY SANDSTONE | | | |
| | 15 | | MEDIUM HARD VERY BROKEN TAN TO GRAY SILTSTONE | | | |
| 1450 | 20 | | MEDIUM HARD VERY BROKEN BLACK CARBONACEOUS SHALE | | | |
| | 25 | | MEDIUM HARD TO HARD VERY BROKEN TO BROKEN GRAY SILTSTONE AND SANDSTONE | | | |
| 1440 | 30 | | SOFT TO HARD BROKEN TO MASSIVE GRAY SILTY SHALE | | | |
| | 35 | | BROKEN BLACK COAL | | | |
| 1430 | 40 | | MEDIUM HARD VERY BROKEN TO BROKEN GRAY CLAYEY SHALE | | | |
| | 45 | | SOFT TO MEDIUM HARD BROKEN TO MASSIVE GRAY CLAYSTONE | | | |
| 1422 | 50.0 | | | | | |

DATE BEGAN 4-1-71
DATE FINISHED 4-6-71

BORING NO. 7
GROUND SURFACE EL. 1425

| ELEV. FEET | DEPTH FEET | SAMPLE TYPE | DESCRIPTION | U.S.C.S. | PENETRATION RESISTANCE BLOWS PER FOOT | REMARKS |
|------------|------------|-------------|---|----------|---------------------------------------|---------|
| 1425 | 0 | | | | | |
| | 5 | | VERY LOOSE BLACK GRAY TO BROWN CLAYEY SILT AND ROCK FRAGMENTS | m1 | | |
| 1420 | 10 | | MEDIUM HARD DARK GRAY WEATHERED CLAYEY SHALE | | | |
| | 15 | | HARD BROKEN TO SLIGHTLY BROKEN GRAY CLAYEY SILTSTONE | | | |
| 1410 | 20 | | HARD BROKEN TO MASSIVE GRAY CLAYEY SHALE | | | |
| | 25 | | HARD TO VERY HARD VERY BROKEN TO MASSIVE CLAYEY SILTSTONE - TRACE OF SANDSTONE SEAMS | | | |
| 1400 | 30 | | HARD BROKEN GRAY CLAYEY SILTSTONE | | | |
| | 35 | | MEDIUM HARD TO HARD VERY BROKEN GRAY TO BLACK CARBONACEOUS SILTY SHALE COAL AND SANDSTONE | | | |
| 1390 | 40 | | HARD BROKEN GRAY SILTSTONE - TRACE OF SANDSTONE SEAMS | | | |
| | 45 | | HARD MASSIVE DARK GRAY SILTY SHALE | | | |
| 1380 | 50 | | MEDIUM HARD TO HARD MASSIVE DARK GRAY CLAYEY SHALE | | | |
| | 55 | | MEDIUM HARD MASSIVE BLACK COAL | | | |
| 1370 | 60 | | MEDIUM HARD BROKEN TO SLIGHTLY BROKEN LIGHT GRAY SILTY CLAYSTONE | | | |
| | 65 | | MEDIUM HARD BROKEN TO SLIGHTLY BROKEN LIGHT GRAY CLAYSTONE | | | |
| 1369 | 70 | | HARD MASSIVE LIGHT GRAY SILTSTONE | | | |

NOTE:
THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SOIL CONDITIONS AND WATER LEVELS AT OTHER LOCATIONS MAY DIFFER FROM CONDITIONS OCCURRING AT THESE BORING LOCATIONS. ALSO THE PASSAGE OF TIME MAY RESULT IN A CHANGE IN THE CONDITIONS AT THESE BORING LOCATIONS.

NOTE:
1. FOR GENERAL NOTES AND LEGEND SEE DWG. 69-144-E5
2. BORING 3 AND 9 WERE DELETED
3. FOR PLAN AND LOCATION OF BORINGS SEE DWG. 69-144-B2

FIGURE 8

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES

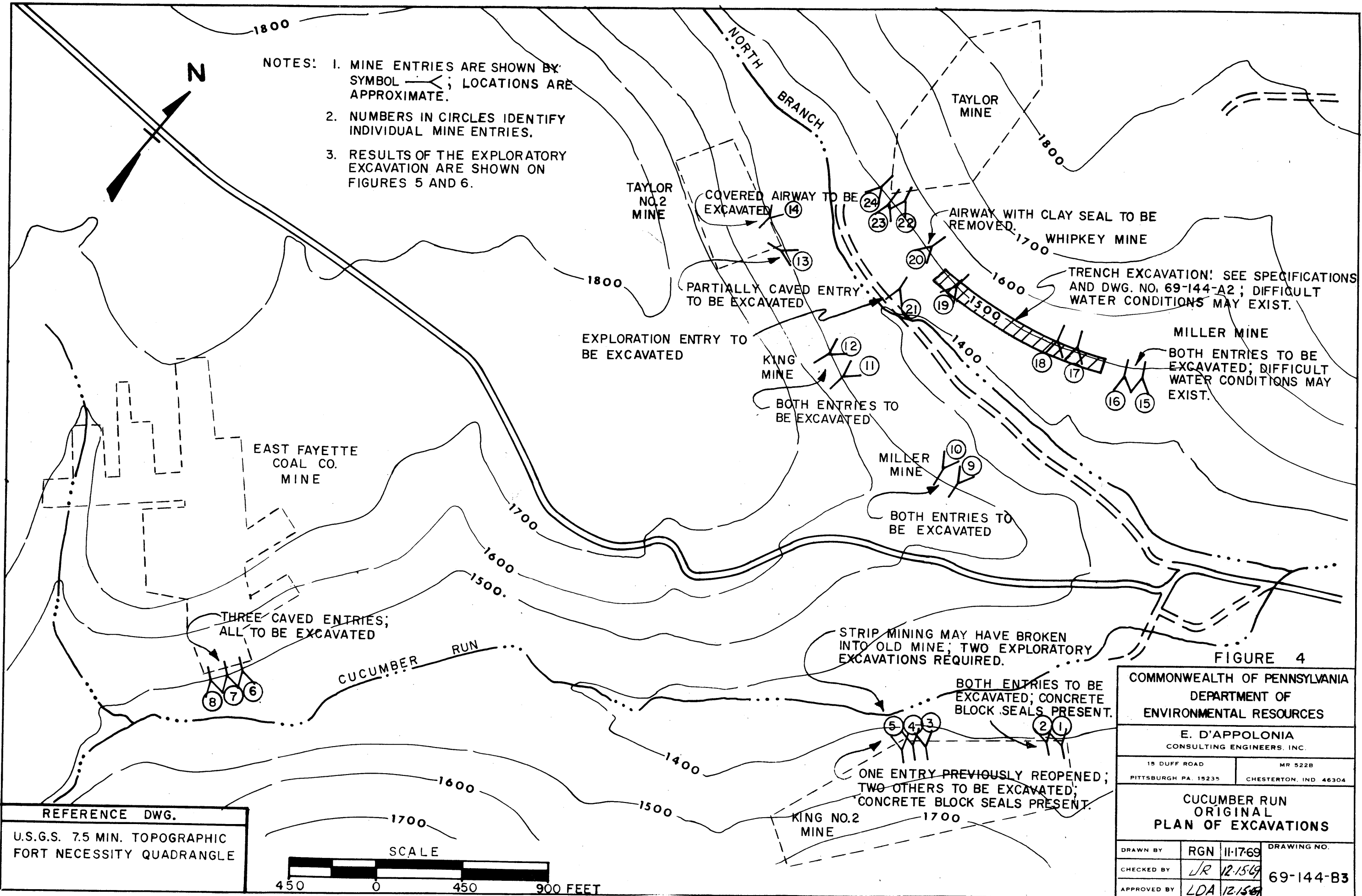
E. D'APPOLONIA
CONSULTING ENGINEERS, INC.
15 DUFF ROAD MR 5228
PITTSBURGH, PA. 15285 CHESTERTON, IND. 46804

CUCUMBER RUN
SUBSURFACE INVESTIGATION
BORING LOGS 1, 2, 4, 5, 6, AND 7

DRAWN BY G. J. A. 9-11-71 DRAWING NO.
CHECKED BY LITTLE 10-7-71 **69-144-E4**
APPROVED BY

REFERENCE DRAWINGS

REVISION
DESCRIPTION




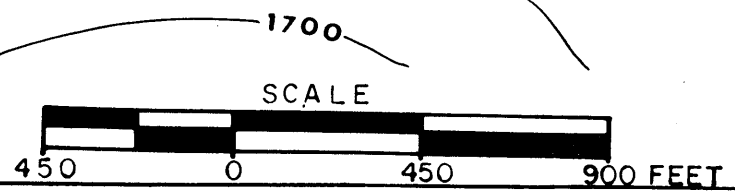
- NOTES:
1. MINE ENTRIES ARE SHOWN BY SYMBOL ; LOCATIONS ARE APPROXIMATE.
 2. NUMBERS IN CIRCLES IDENTIFY INDIVIDUAL MINE ENTRIES.
 3. RESULTS OF THE EXPLORATORY EXCAVATION ARE SHOWN ON FIGURES 5 AND 6.

FIGURE 4

REFERENCE DWG.
 U.S.G.S. 7.5 MIN. TOPOGRAPHIC
 FORT NECESSITY QUADRANGLE



| | | |
|--|----------------------------------|-------------|
| COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES | | |
| E. D'APPOLONIA CONSULTING ENGINEERS, INC. | | |
| 15 DUFF ROAD PITTSBURGH PA. 15235 | MR 522B CHESTERTON, IND 46304 | |
| CUCUMBER RUN ORIGINAL PLAN OF EXCAVATIONS | | |
| DRAWN BY | RGN 11-17-69 | DRAWING NO. |
| CHECKED BY | JR 12-15-69 | 69-144-B3 |
| APPROVED BY | LDA 12-15-69 | |

69-144-E2

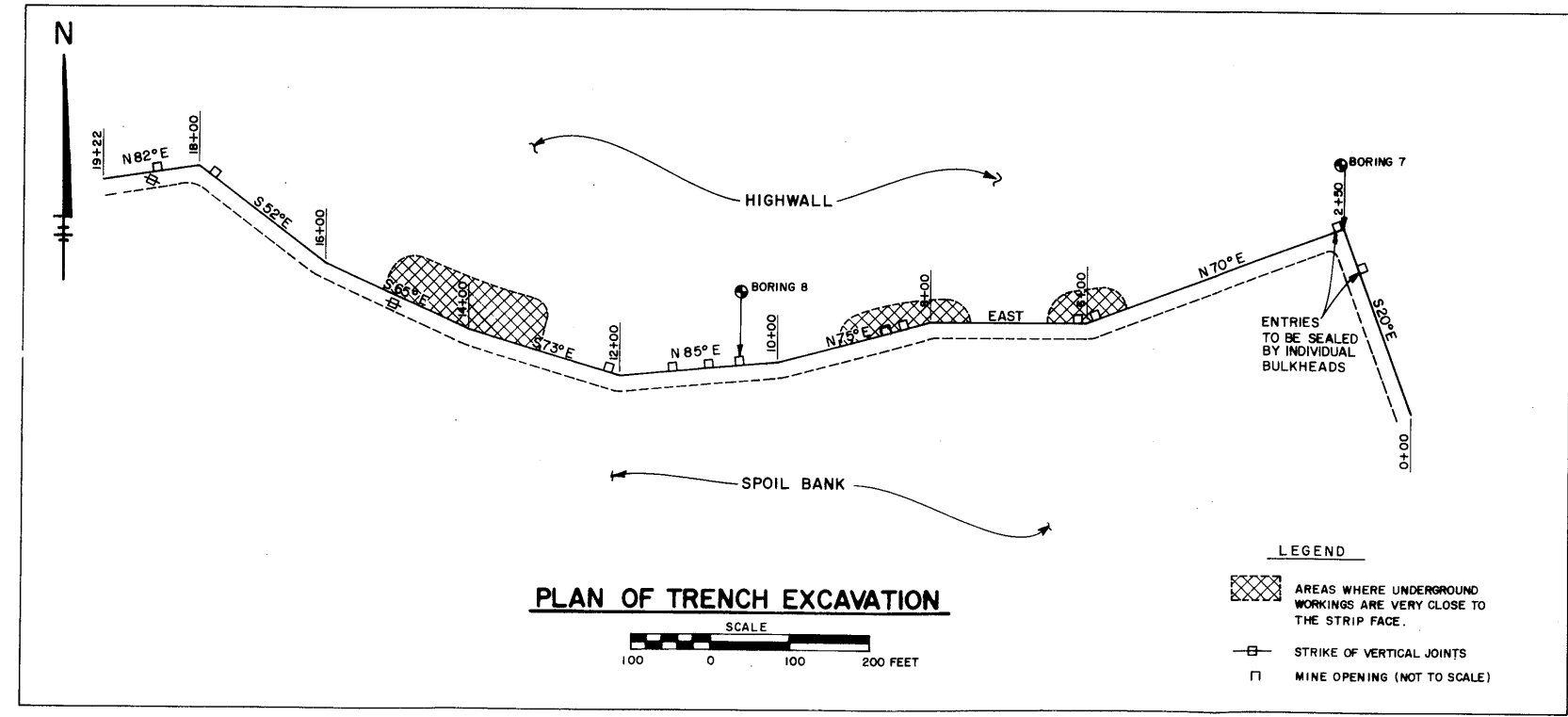
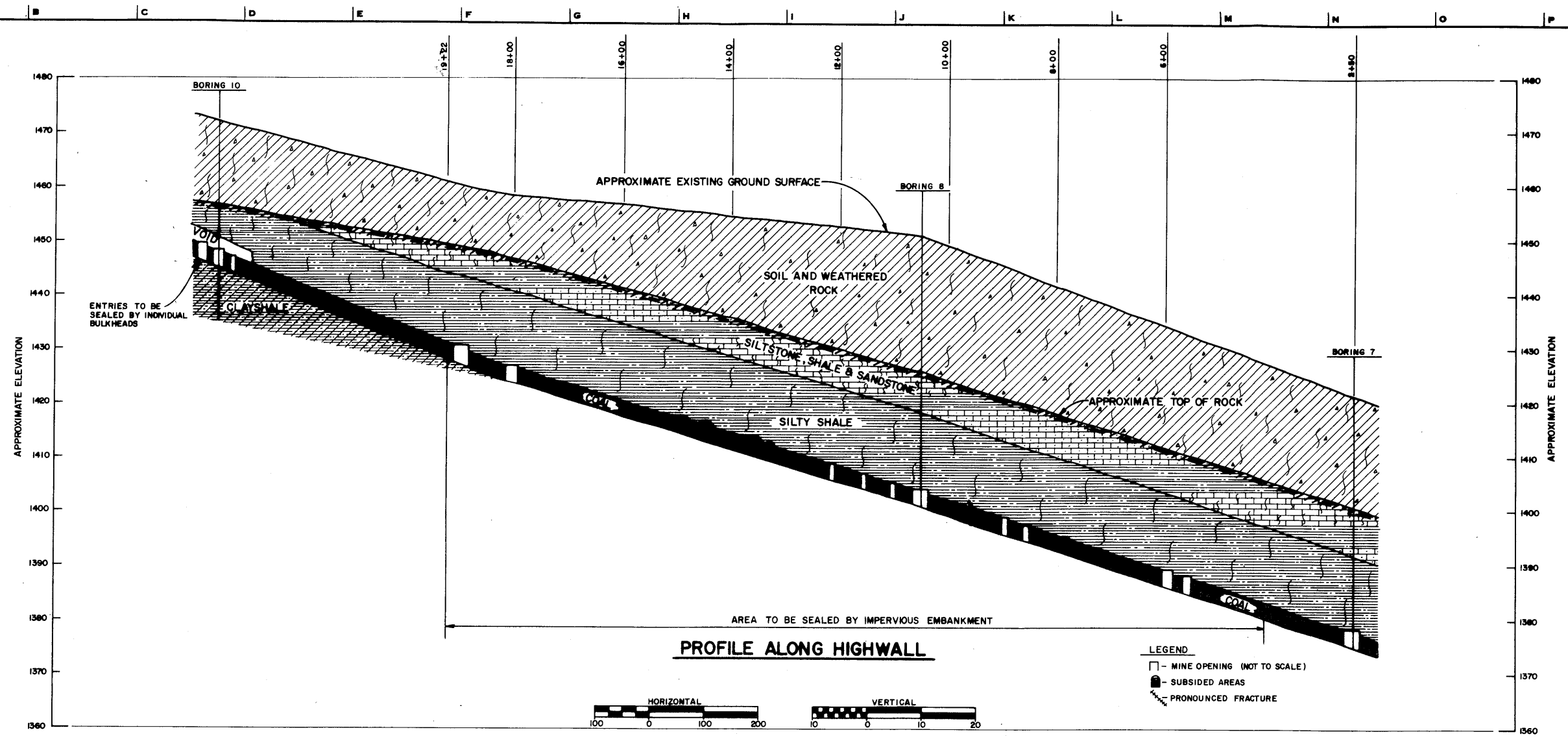


FIGURE 5

| | | | |
|---|--------|------------------------|-------------|
| COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES | | | |
| E. D'APPOLONIA CONSULTING ENGINEERS, INC. | | | |
| 15 DUFF ROAD | | MR 522B | |
| PITTSBURGH, PA. 15235 | | CHESTERTON, IND. 46304 | |
| CUCUMBER RUN MINE CONDITIONS EXPOSED BY EXPLORATORY EXCAVATION AND PROPOSED SEALING METHODS NORTH SIDE OF NORTH BRANCH | | | |
| DRAWN BY | cjb | 6-30-71 | DRAWING NO. |
| CHECKED BY | BOBACK | 4-15-72 | 69-144-E2 |
| APPROVED BY | | | |

| REVISION | DESCRIPTION |
|----------|-------------|
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| | |
| | |

REFERENCE DRAWINGS

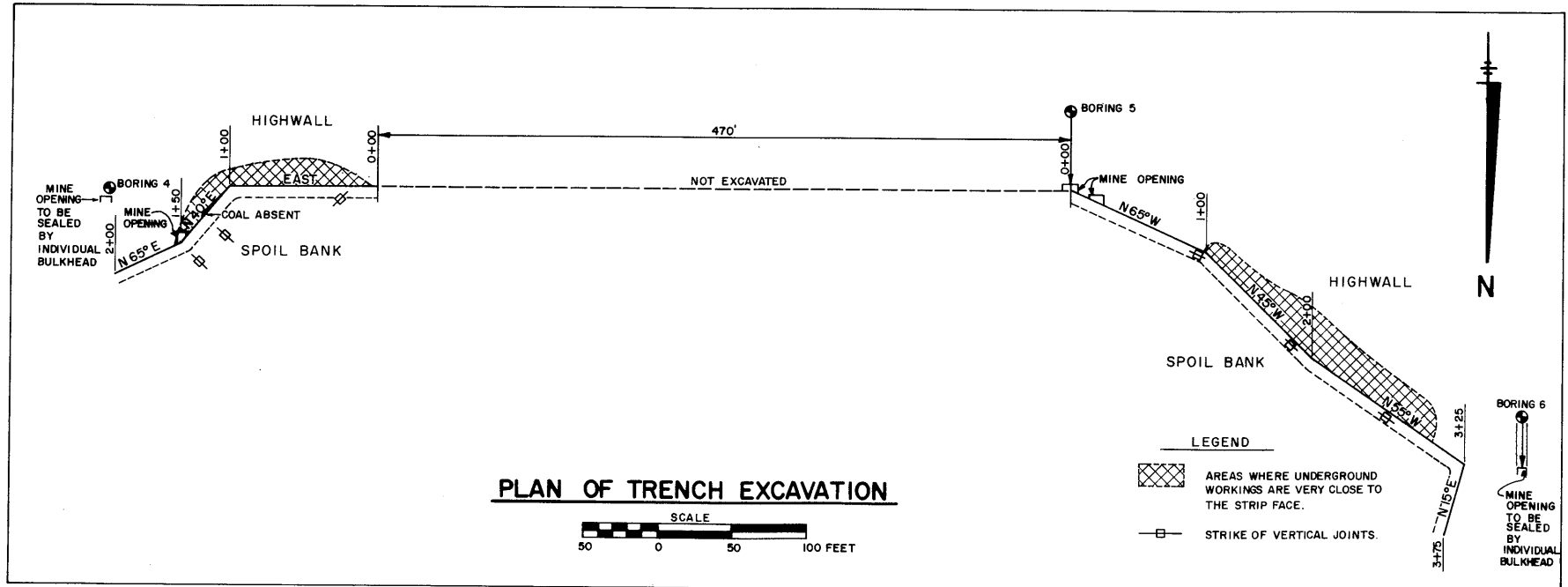
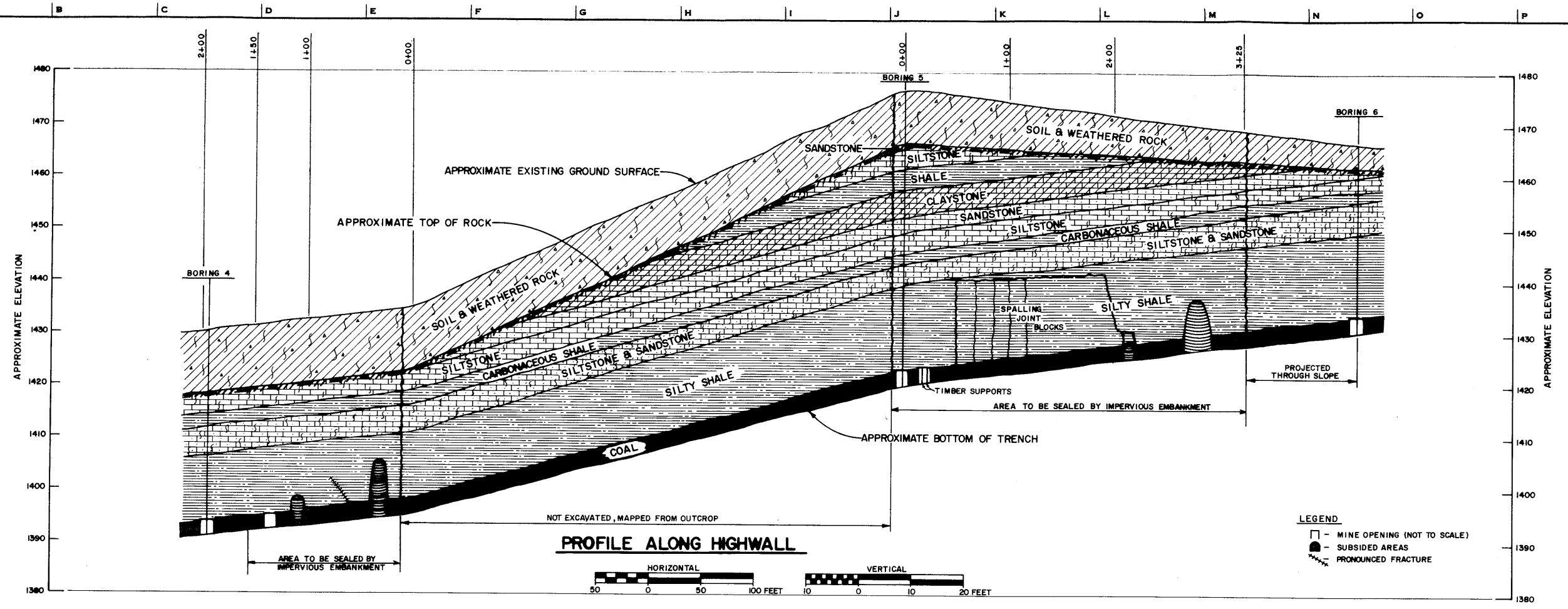



FIGURE 6

| | |
|--|-----------------------------------|
| COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES | |
| E. D'APPOLONIA CONSULTING ENGINEERS, INC. | |
| 15 DUFF ROAD PITTSBURGH, PA. 15235 | MR 5228 CHESTERTON, IND. 46304 |
| CUCUMBER RUN MINE CONDITIONS EXPOSED BY EXPLORATORY EXCAVATIONS AND PROPOSED SEALING METHODS SOUTH SIDE OF NORTH BRANCH | |
| DRAWN BY cjd | 7-6-71 |
| CHECKED BY BOJACK | 8-15-71 |
| APPROVED BY | |
| DRAWING NO. 69-144-E3 | |

| REVISION | DESCRIPTION |
|----------|-------------|
| | |

- NOTES: 1. MINE ENTRIES ARE SHOWN BY SYMBOL ; LOCATIONS ARE APPROXIMATE:
 2. NUMBERS IN CIRCLES IDENTIFY INDIVIDUAL MINE ENTRIES.
 3. BORINGS ARE NUMBERED FOR IDENTIFICATION.

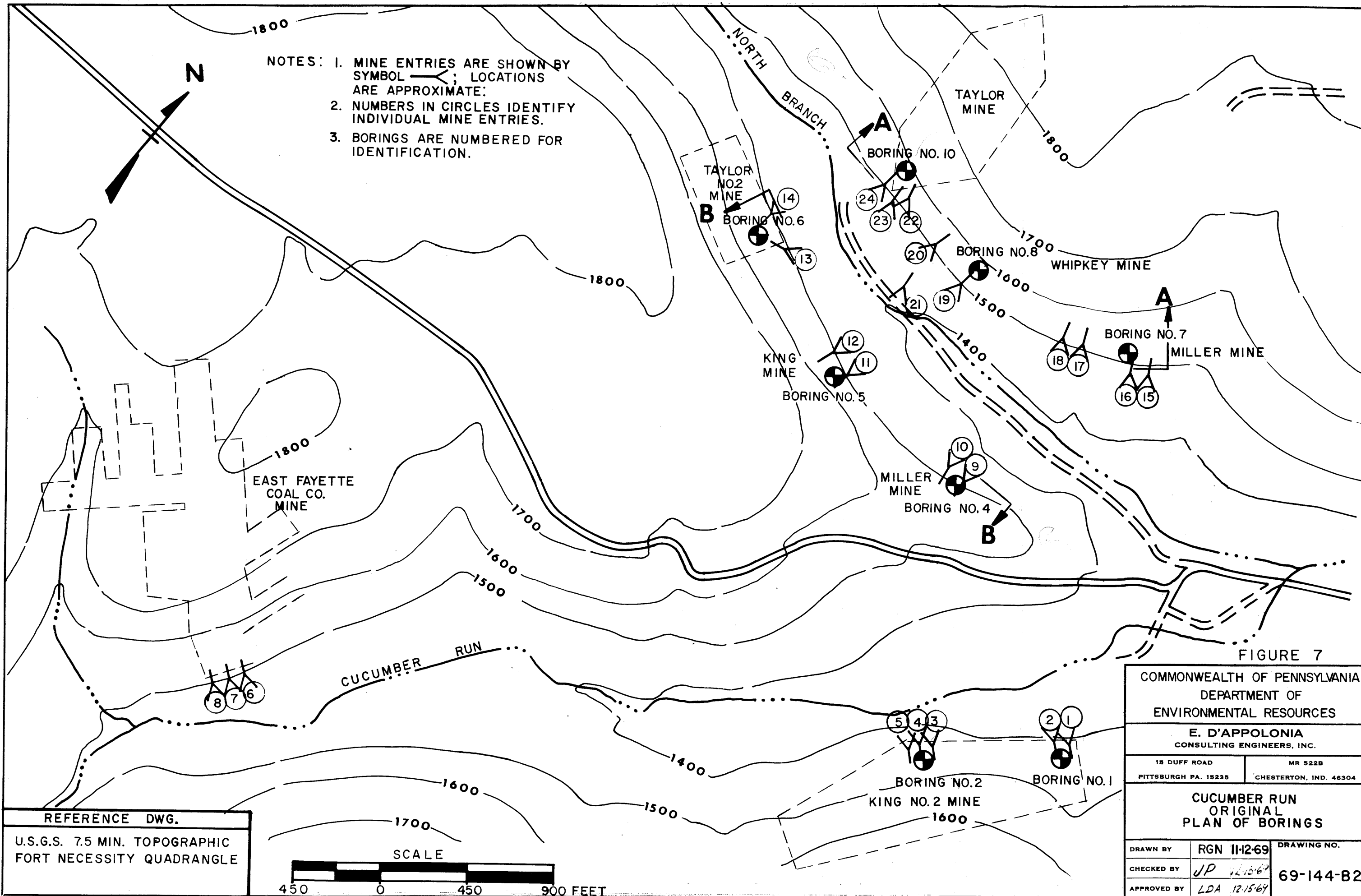


FIGURE 7

COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF
 ENVIRONMENTAL RESOURCES

E. D'APPOLONIA
 CONSULTING ENGINEERS, INC.

15 DUFF ROAD MR 522B
 PITTSBURGH PA. 15235 CHESTERTON, IND. 46304

CUCUMBER RUN
 ORIGINAL
 PLAN OF BORINGS

| | | |
|-------------|--------------|-------------|
| DRAWN BY | RGN 11-2-69 | DRAWING NO. |
| CHECKED BY | JP 12-15-69 | 69-144-B2 |
| APPROVED BY | LDA 12-15-69 | |

REFERENCE DWG.
 U.S.G.S. 7.5 MIN. TOPOGRAPHIC
 FORT NECESSITY QUADRANGLE

