

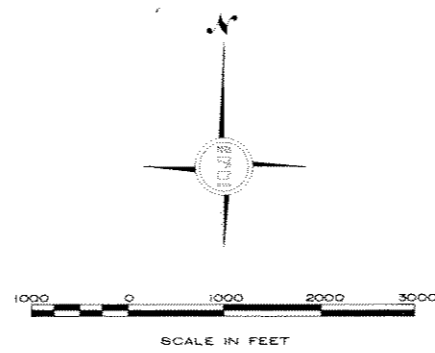


MATCH SHEET 3

LEGEND

- |                           |  |
|---------------------------|--|
| DEEP MINES (AREA MINED)   | STRIP MINE AREA  |
| KITTANNING BEAM           | SAMPLING STATION   |
| FREEPORT BEAM             | DIAMOND DRILL HOLE   |
| <b>OUTCROPS</b>           | MINE OPENING (DRY)   |
| UPPER FREEPORT (E) BEAM   | MINE OPENING (DRAINING)  |
| LOWER FREEPORT (D) BEAM   | WATERSHED PERIMETER (EXTERIOR)                                   |
| LOWER KITTANNING (B) BEAM | WATERSHED PERIMETER (INTERIOR)                                   |
| COAL REFUSE AREA (NEW)    | COAL CONTOUR LOWER KITTANNING BEAM                               |
| COAL REFUSE AREA (OLD)    | COAL CONTOUR LOWER KITTANNING BEAM (COAL MISSING DUE TO EROSION) |

BASE MAP PREPARED FROM USC 8 GS QUADRANGLES AND UPDATED FROM USDA 1967 AERIAL PHOTOGRAPHY.



INDEX TO SHEETS

		1		
	2	3	4	
5	6	7	8	
9	10	11		
12	13			



















**OPERATION SCARLIFT**  
**TWO LICK CREEK**  
**MINE DRAINAGE POLLUTION**  
**ABATEMENT PROJECT**  
 INDIANA COUNTY, PENNSYLVANIA

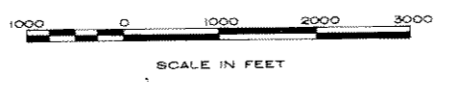
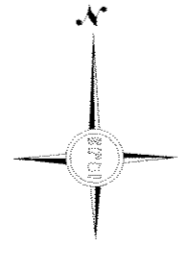
PREPARED FOR  
 PENNSYLVANIA DEPARTMENT OF MINES  
 AND MINERAL INDUSTRIES  
 MARCH, 1970

PREPARED BY  
 L. ROBERT KIMBALL  
 CONSULTING ENGINEERS  
 EBENSBURG, PENNSYLVANIA



LEGEND

- |   |                           |   |  |
|---|---------------------------|---|--|
|  | DEEP MINES (AREA MINED)   |  | STRIP MINE AREA  |
|  | KITTANNING SEAM           |  | SAMPLING STATION   |
|  | FREEPORT SEAM             |  | DIAMOND DRILL HOLE   |
|  | OUTCROPS                  |  | MINE OPENING (DRY)   |
|  | UPPER FREEPORT (E) SEAM   |  | MINE OPENING (DRAINING)  |
|  | LOWER FREEPORT (D) SEAM   |  | WATERSHED PERIMETER (EXTERIOR)                                 |
|  | LOWER KITTANNING (B) SEAM |  | WATERSHED PERIMETER (INTERIOR)                                 |
|  | COAL REFUSE AREA (NEW)    |  | COAL CONTOUR UPPER FREEPORT SEAM                               |
|  | COAL REFUSE AREA (OLD)    |  | COAL CONTOUR UPPER FREEPORT SEAM (COAL MISSING DUE TO EROSION) |



INDEX TO SHEETS

		11		
	2	3	4	
5	6	7	8	
9	10	11		
12	13			

BASE MAP PREPARED FROM USC & GS QUADRANGLES AND UPDATED FROM USDA 1967 AERIAL PHOTOGRAPHY.

OPERATION SCARLIFT  
TWO LICK CREEK  
MINE DRAINAGE POLLUTION  
ABATEMENT PROJECT  
INDIANA COUNTY, PENNSYLVANIA

PREPARED FOR  
PENNSYLVANIA DEPARTMENT OF MINES  
AND MINERAL INDUSTRIES

MARCH, 1970

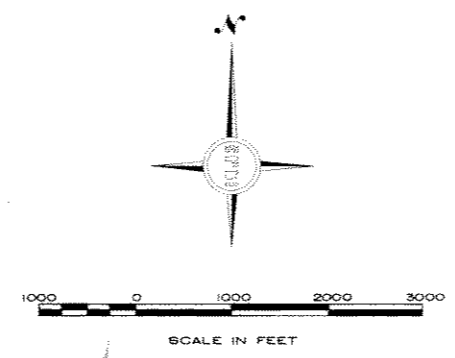
PREPARED BY  
L. ROBERT KIMBALL  
CONSULTING ENGINEERS  
EBENSBURG, PENNSYLVANIA





BASE MAP PREPARED FROM USC & GS QUADRANGLES AND UPDATED FROM USDA 1967 AERIAL PHOTOGRAPHY.

- LEGEND**
- DEEP MINES (AREA MINED)
  - KITTANNING SEAM
  - FREEPORT SEAM
  - OUTCROPS
  - UPPER FREEPORT (E) SEAM
  - LOWER FREEPORT (D) SEAM
  - LOWER KITTANNING (B) SEAM
  - COAL REFUSE AREA (NEW)
  - COAL REFUSE AREA (OLD)
  - STRIP MINE AREA
  - SAMPLING STATION
  - DIAMOND DRILL HOLE
  - MINE OPENING (DRY)
  - MINE OPENING (DRAINING)
  - WATERSHED PERIMETER (EXTERIOR)
  - WATERSHED PERIMETER (INTERIOR)
  - COAL CONTOUR UPPER FREEPORT SEAM
  - COAL CONTOUR UPPER FREEPORT SEAM (COAL MISSING DUE TO EROSION)



INDEX TO SHEETS

		1		
	2	3	4	
5	6	7	8	
	9	10	11	
	12	13		



















**OPERATION SCARLIFT**  
**TWO LICK CREEK**  
**MINE DRAINAGE POLLUTION**  
**ABATEMENT PROJECT**  
 INDIANA COUNTY, PENNSYLVANIA

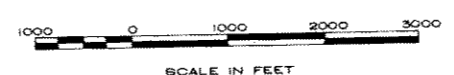
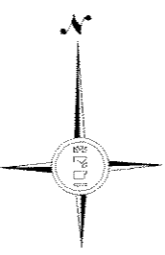
PREPARED FOR  
 PENNSYLVANIA DEPARTMENT OF MINES  
 AND MINERAL INDUSTRIES  
 MARCH, 1970  
 PREPARED BY  
 L. ROBERT KIMBALL  
 CONSULTING ENGINEERS  
 EBENSBURG, PENNSYLVANIA





LEGEND

- |   |                           |   |   |
|---|---------------------------|---|---|
|  | DEEP MINES (AREA MINED)   |  | STRIP MINE AREA   |
|  | KITTANNING BEAM           |  | SAMPLING STATION  |
|  | FREEPORT BEAM             |  | DIAMOND DRILL HOLE  |
|  | OUTCROPS                  |  | MINE OPENING (DRY)  |
|  | UPPER FREEPORT (E) BEAM   |  | MINE OPENING (DRAINING)   |
|  | LOWER FREEPORT (D) BEAM   |  | WATERSHED PERIMETER (EXTERIOR)                                    |
|  | LOWER KITTANNING (B) BEAM |  | WATERSHED PERIMETER (INTERIOR)                                    |
|  | COAL REFUGE AREA (NW)     |  | COAL CONTOUR UPPER FREEPORT BEAM                                  |
|  | COAL REFUGE AREA (OL)     |  | COAL CONTOUR UPPER FREEPORT BEAM<br>(COAL MISSING DUE TO EROSION) |



INDEX TO SHEETS

		1		
	2	3	4	
5	6	7	8	
9	10	11		
12	13			

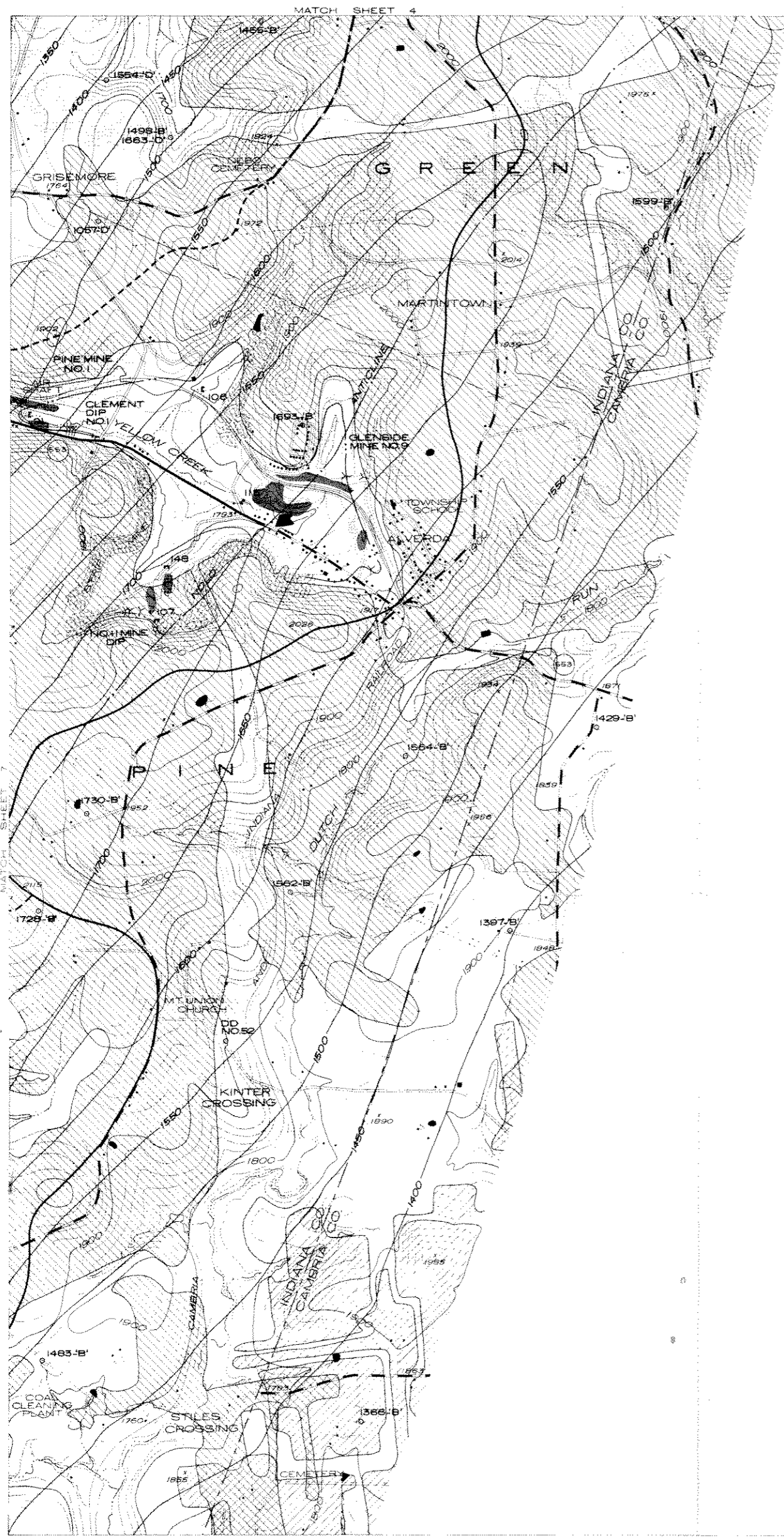
**OPERATION SCARLIFT**  
**TWO LICK CREEK**  
**MINE DRAINAGE POLLUTION**  
**ABATEMENT PROJECT**  
 INDIANA COUNTY, PENNSYLVANIA

PREPARED FOR  
 PENNSYLVANIA DEPARTMENT OF MINES  
 AND MINERAL INDUSTRIES

MARCH, 1970

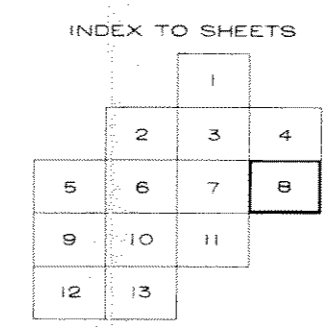
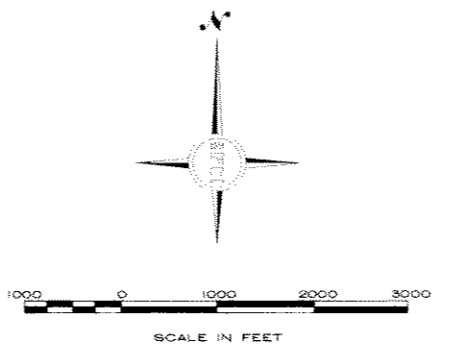
PREPARED BY  
 L. ROBERT KIMBALL  
 CONSULTING ENGINEERS  
 EBENSBURG, PENNSYLVANIA

BASE MAP PREPARED FROM USC & GS  
 QUADRANGLES AND UPDATED FROM  
 USDA 1967 AERIAL PHOTOGRAPHY.



BASE MAP PREPARED FROM USC & GS QUADRANGLES AND UPDATED FROM USDA 1967 AERIAL PHOTOGRAPHY.

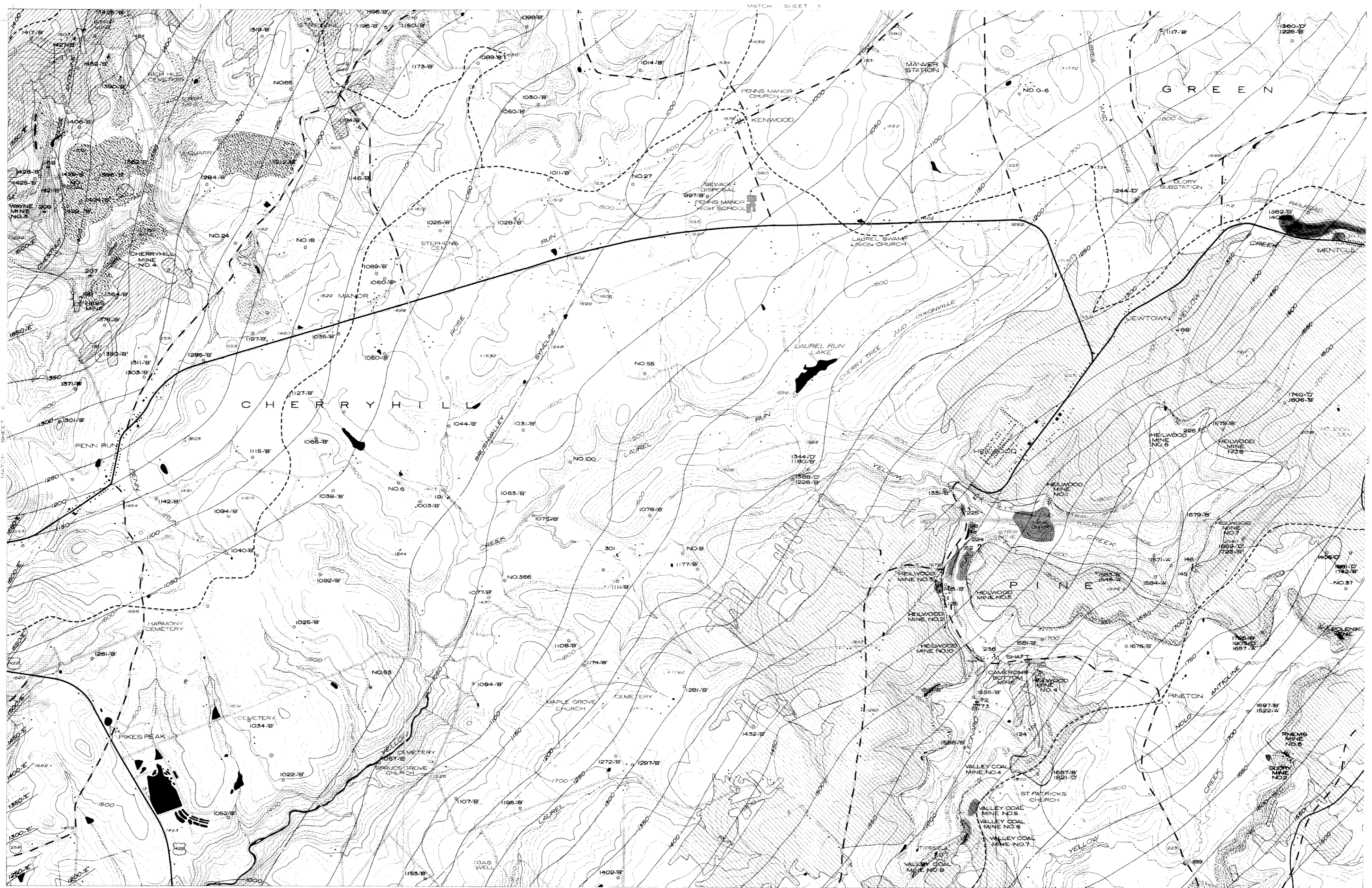
- LEGEND**
- DEEP MINES (AREA MINED)
  - KITTANNING BEAM
  - FREEMPORT BEAM
  - OUTCROPS
  - UPPER FREEMPORT (E) BEAM
  - LOWER FREEMPORT (D) BEAM
  - LOWER KITTANNING (B) BEAM
  - COAL REFUSE AREA (NEW)
  - COAL REFUSE AREA (OLD)
  - STRIP MINE AREA
  - SAMPLING STATION
  - DIAMOND DRILL HOLE
  - MINE OPENING (DRY)
  - MINE OPENING (DRAINING)
  - WATERSHED PERIMETER (EXTERIOR)
  - WATERSHED PERIMETER (INTERIOR)
  - COAL CONTOUR LOWER KITTANNING BEAM
  - COAL CONTOUR LOWER KITTANNING BEAM (COAL MISSING DUE TO EROSION)



**OPERATION SCARLIFT**  
**TWO LICK CREEK**  
**MINE DRAINAGE POLLUTION**  
**ABATEMENT PROJECT**  
 INDIANA COUNTY, PENNSYLVANIA

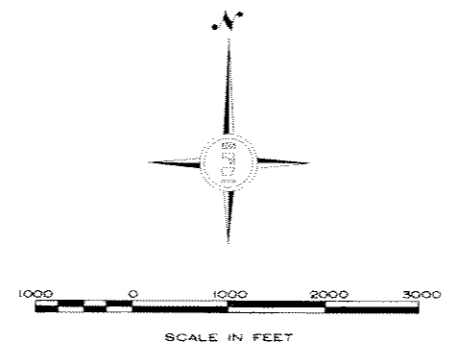
PREPARED FOR  
 PENNSYLVANIA DEPARTMENT OF MINES  
 AND MINERAL INDUSTRIES  
 MARCH, 1970  
 PREPARED BY  
 L. ROBERT KIMBALL  
 CONSULTING ENGINEERS  
 EBENSBURG, PENNSYLVANIA





BASE MAP PREPARED FROM USC & GS QUADRANGLES AND UPDATED FROM USDA 1967 AERIAL PHOTOGRAPHY

- LEGEND**
- DEEP MINES (AREA MINED)
  - KITTANNING BEAM
  - FREEPORT BEAM
  - OUTCROPS
  - UPPER FREEPORT (E) BEAM
  - LOWER FREEPORT (D) BEAM
  - LOWER KITTANNING (B) BEAM
  - COAL REFUSE AREA (NEW)
  - COAL REFUSE AREA (OLD)
  - STRIP MINE AREA
  - SAMPLING STATION
  - DIAMOND DRILL HOLE
  - MINE OPENING (DRY)
  - MINE OPENING (DRAINING)
  - WATERSHED PERIMETER (EXTERIOR)
  - WATERSHED PERIMETER (INTERIOR)
  - COAL CONTOUR LOWER KITTANNING BEAM
  - COAL CONTOUR LOWER KITTANNING BEAM (COAL MISSING DUE TO EROSION)



INDEX TO SHEETS

	1		
	2	3	4
5	6	7	8
9	10	11	
12	13		

**OPERATION SCARLIFT**  
**TWO LICK CREEK**  
**MINE DRAINAGE POLLUTION**  
**ABATEMENT PROJECT**  
 INDIANA COUNTY, PENNSYLVANIA

PREPARED FOR  
 PENNSYLVANIA DEPARTMENT OF MINES  
 AND MINERAL INDUSTRIES

MARCH, 1970

PREPARED BY  
 L. ROBERT KIMBALL  
 CONSULTING ENGINEERS  
 EBENSBURG, PENNSYLVANIA