

APPENDIX D

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APPENDIX D – DETAILED TOPOGRAPHY
OPERATION SCARLIFT
TOBY CREEK SL-132

MAPPING PROCEDURE

The procedure used to determine the relative locations of the mines and strip mines was as follows:

Aerial photogrammetry at a scale of 1 inch equals 200 feet was compiled for all strip mined areas and was also used to locate all visible mine openings. Mine maps, obtained from local mining companies were reproduced at the same scale so that they could be superimposed upon the maps of the surface topography. Mine headings visible on the topographic maps were used to properly orient the mine maps. It should be noted that the maps of Areas Number 1 to Number 8, as included in this report, were photo-reduced. The scale of the reduced prints is approximately 1 inch equals 550 feet. The results led to the conclusions that much of the strip mining in the Middle Kittanning seam was, as supposed, directly above the old deep mine workings in the Lower Kittanning Seam. In a number of locations it was also evident that the strip mining operations had broken into the deep mine workings. The ramifications of these findings were quite significant to decisions regarding abatement measures. Where the situation existed on the low side of the mining system it complicated the problem of installing simple hydraulic seals and flooding the mine. In fact, when the extent of this problem was fully appreciated, the decision was made not to attempt to flood the mine. This decision was made after weighing the risk of a sudden breakout and considering the consequences of such a breakout. The use of a few low-head seals was not ruled out, however, where they could be used to divert flows to other locations, to have all the discharge exit from one heading.



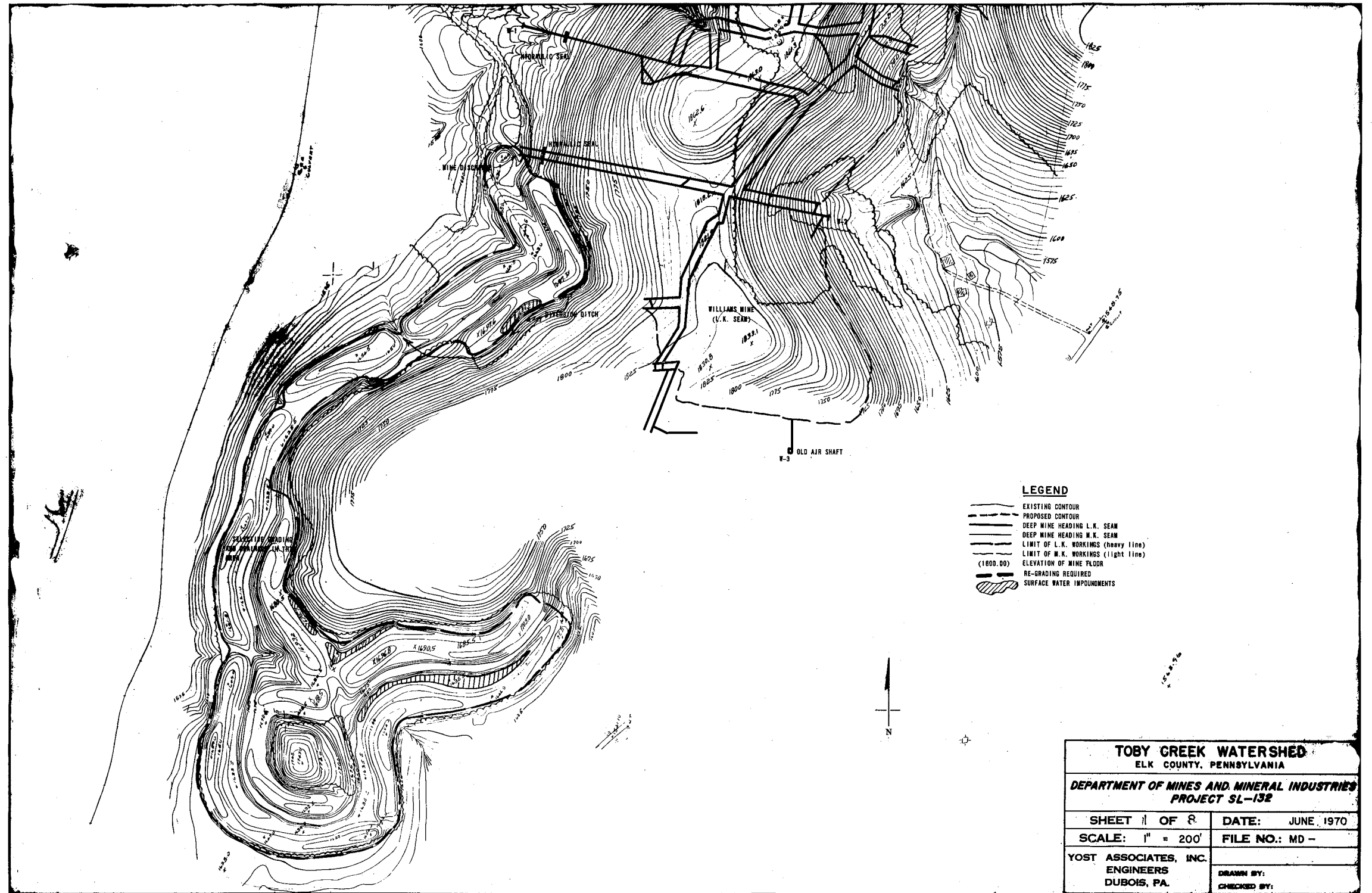
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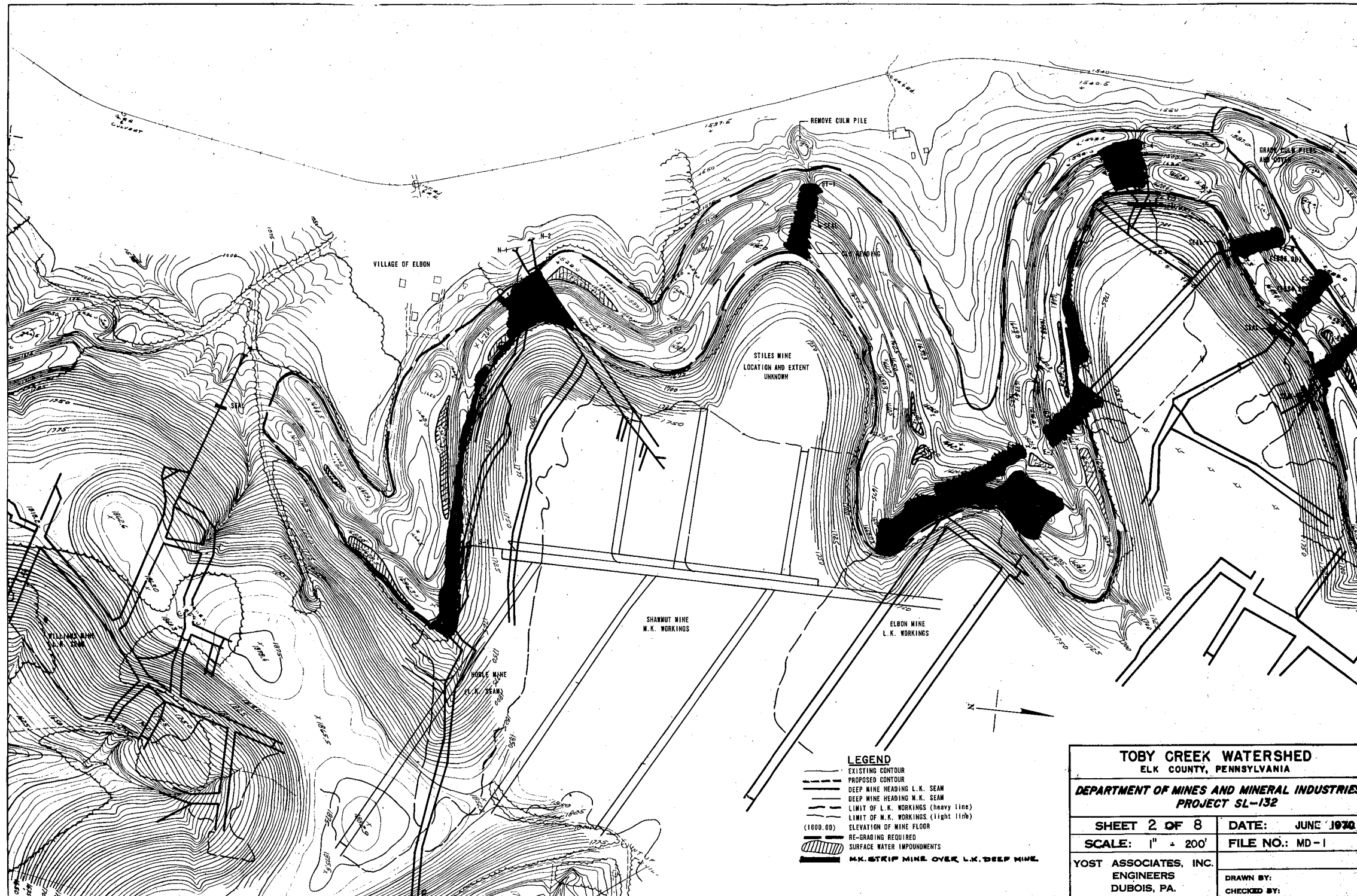
AREA
NUMBER 1

1



TOBY CREEK WATERSHED	
ELK COUNTY, PENNSYLVANIA	
Date Oct., 1971	COMMONWEALTH OF PENNSYLVANIA
Scale 1" = 2000'	DEPARTMENT OF MINES and MINERAL INDUSTRIES
Drawn by: cmk	Mine Drainage Project SL-132
Dwg. No. D2	
Yost Associates, Inc Engineers DuBois, Pa.	INDEX MAP





VILLAGE OF ELBON

REMOVE CULM PILE

STILES MINE
LOCATION AND EXTENT
UNKNOWN

SHANMUT MINE
M.K. WORKINGS

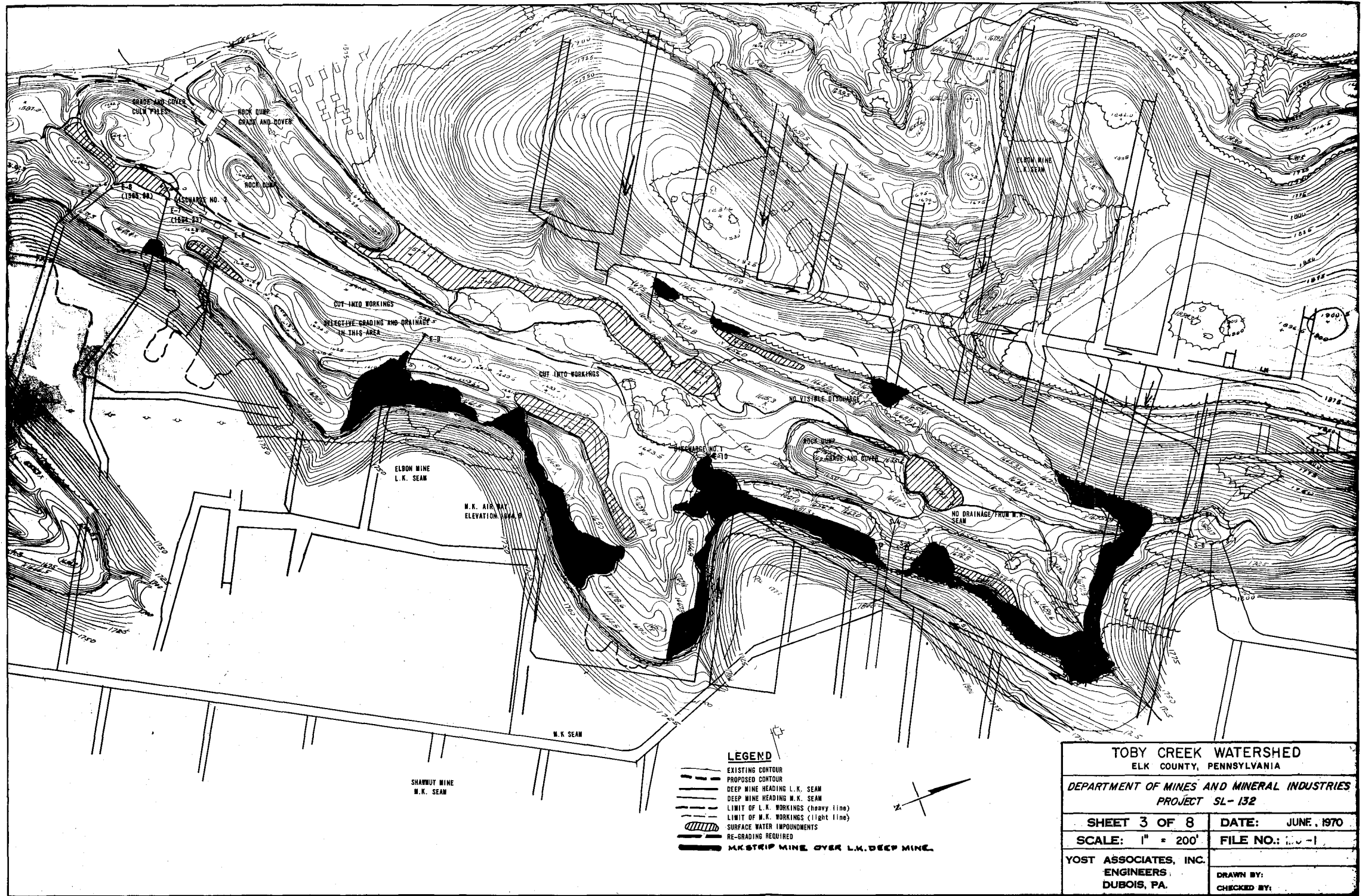
ELBON MINE
L.K. WORKINGS

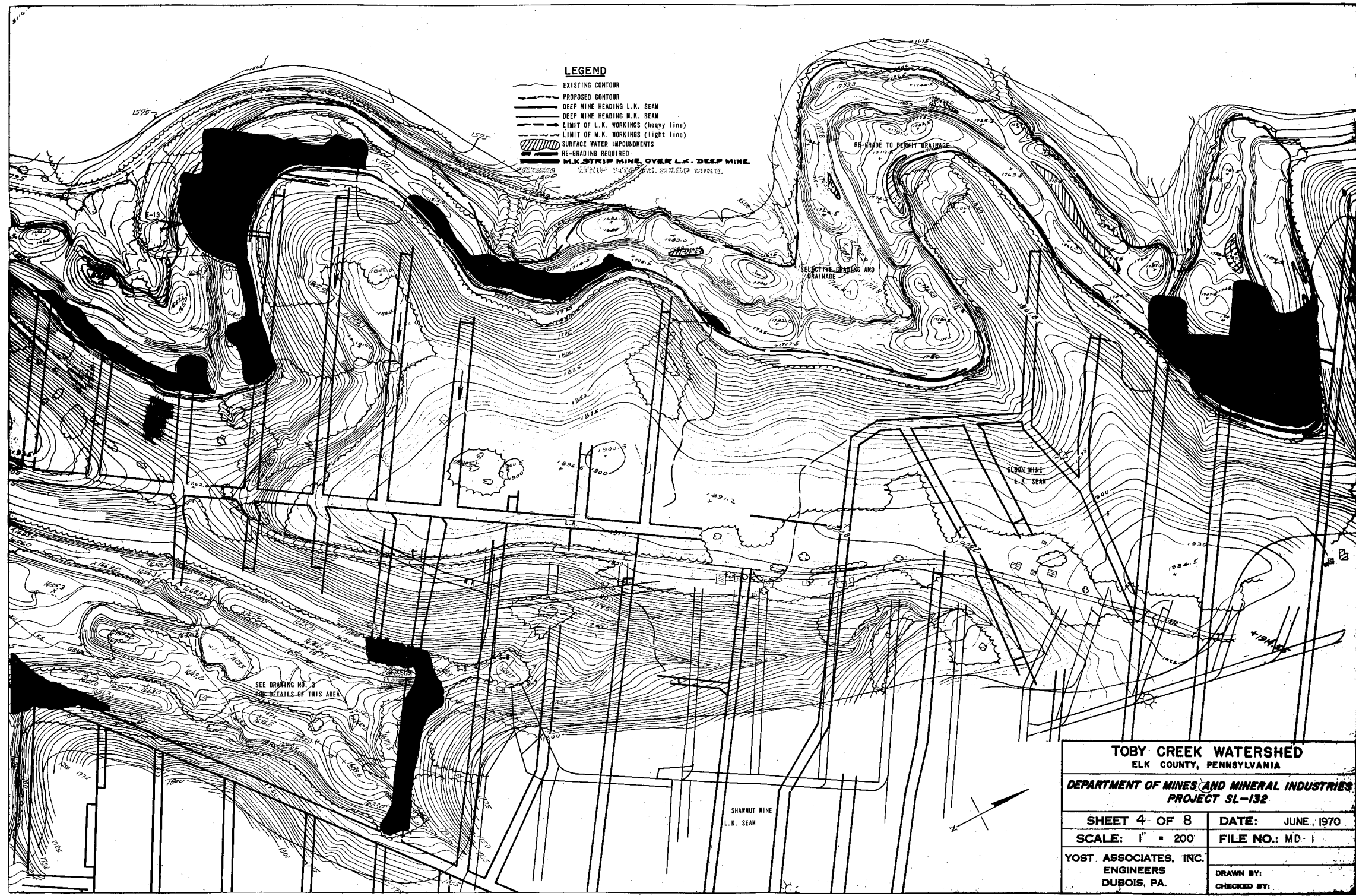
HOBLE MINE
L.K. SEAM

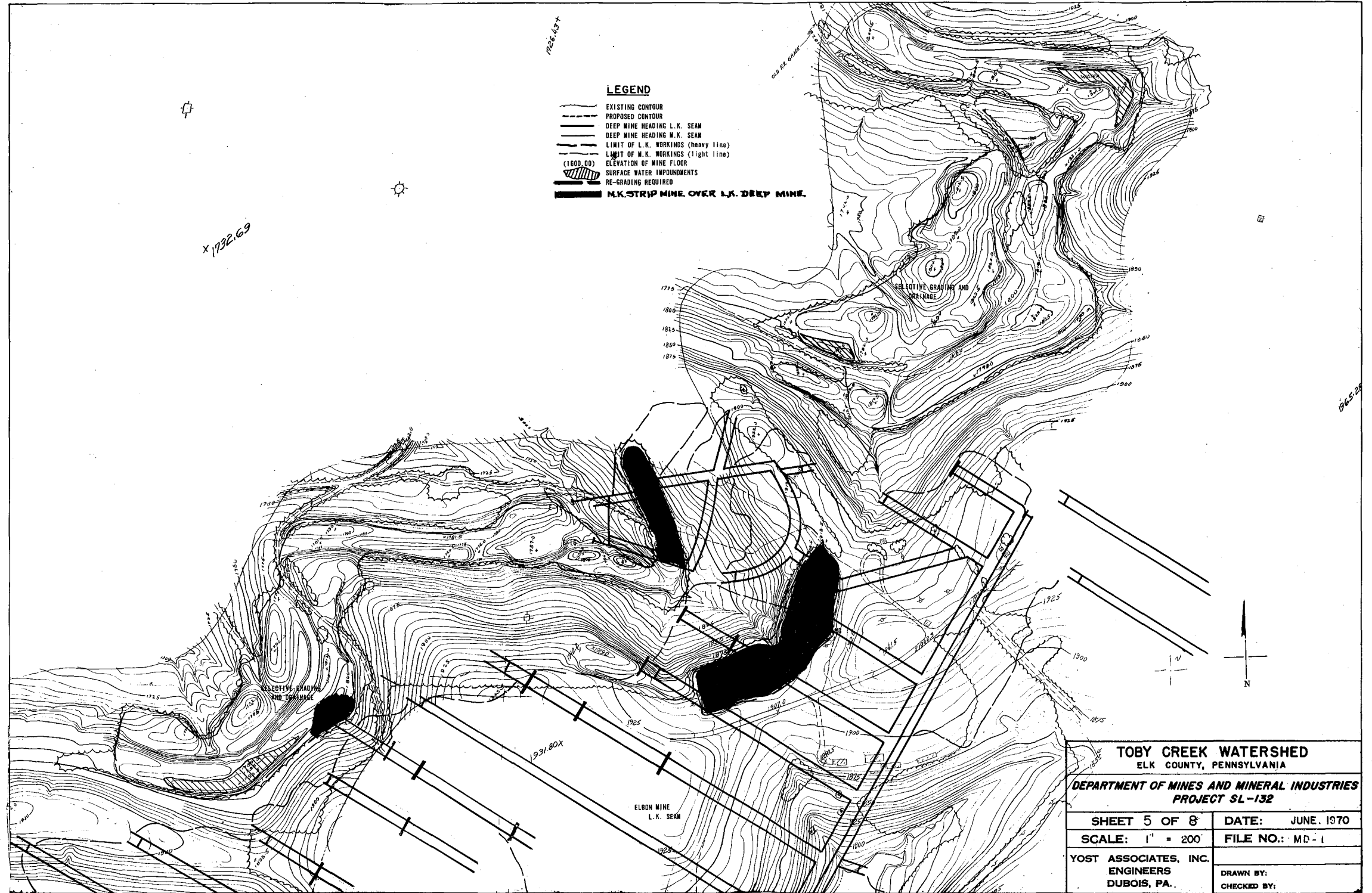
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- EXISTING CONTOUR
- - - PROPOSED CONTOUR
- DEEP MINE HEADING L.K. SEAM
- DEEP MINE HEADING M.K. SEAM
- LIMIT OF L.K. WORKINGS (heavy line)
- LIMIT OF M.K. WORKINGS (light line)
- (1000.00) ELEVATION OF MINE FLOOR
- ▨ RE-GRADING REQUIRED
- ▨ SURFACE WATER IMPOUNDMENTS
- ▨ M.K. STRIP MINE OVER L.K. DEEP MINE

TOBY CREEK WATERSHED ELK COUNTY, PENNSYLVANIA	
DEPARTMENT OF MINES AND MINERAL INDUSTRIES PROJECT SL-132	
SHEET 2 OF 8	DATE: JUNE 1970
SCALE: 1" = 200'	FILE NO.: MD-1
YOST ASSOCIATES, INC. ENGINEERS DUBOIS, PA.	
DRAWN BY: CHECKED BY:	

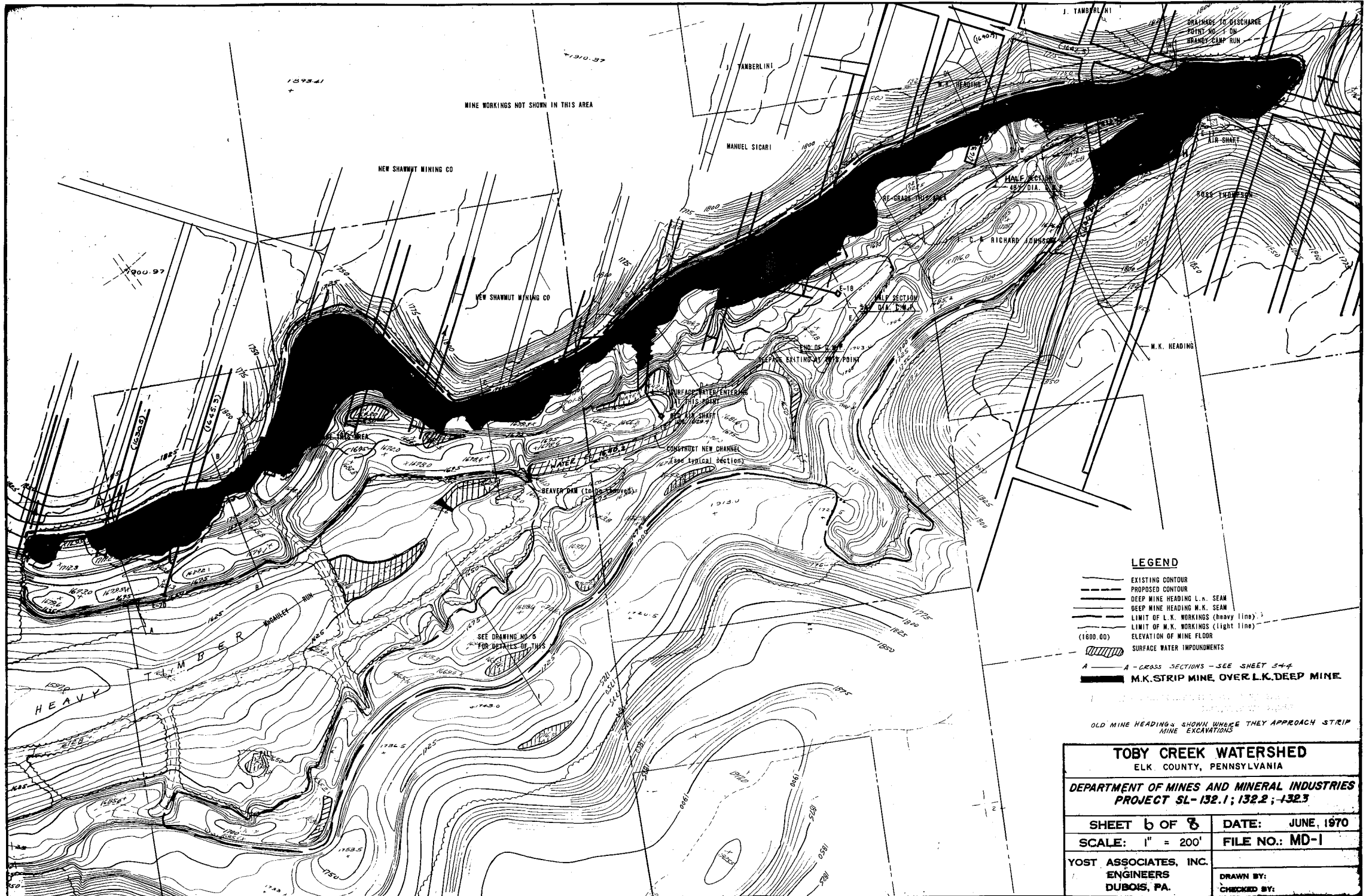






- LEGEND**
- EXISTING CONTOUR
 - - - PROPOSED CONTOUR
 - DEEP MINE HEADING L.K. SEAM
 - DEEP MINE HEADING M.K. SEAM
 - LIMIT OF L.K. WORKINGS (heavy line)
 - LIMIT OF M.K. WORKINGS (light line)
 - (1800.00) ELEVATION OF MINE FLOOR
 - ▨ SURFACE WATER IMPOUNDMENTS
 - ▨ RE-GRADING REQUIRED
 - ▨ M.K. STRIP MINE OVER L.K. DEEP MINE.

TOBY CREEK WATERSHED ELK COUNTY, PENNSYLVANIA	
DEPARTMENT OF MINES AND MINERAL INDUSTRIES PROJECT SL-132	
SHEET 5 OF 8	DATE: JUNE, 1970
SCALE: 1" = 200'	FILE NO.: MD-1
YOST ASSOCIATES, INC. ENGINEERS DUBOIS, PA.	DRAWN BY: CHECKED BY:



WINE WORKINGS NOT SHOWN IN THIS AREA

NEW SHAMUT MINING CO

NEW SHAMUT MINING CO

J. TAMBERLINI

MANUEL SICARI

HALF SECTION

RICHARD JOHNSON

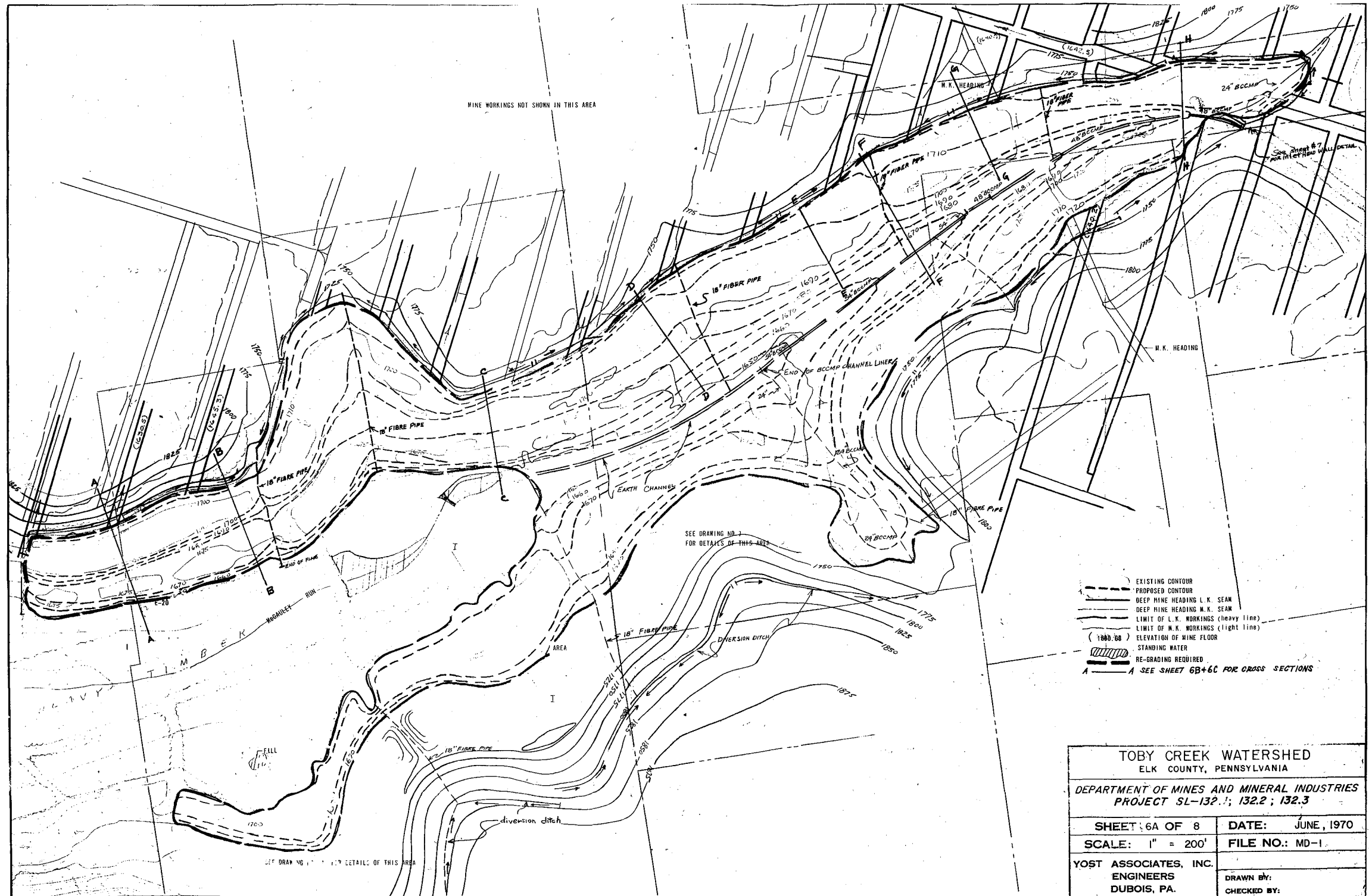
M.K. HEADING

LEGEND

- EXISTING CONTOUR
- - - PROPOSED CONTOUR
- DEEP MINE HEADING L.K. SEAM
- DEEP MINE HEADING M.K. SEAM
- LIMIT OF L.K. WORKINGS (heavy line)
- LIMIT OF M.K. WORKINGS (light line)
- (1600.00) ELEVATION OF MINE FLOOR
- ▨ SURFACE WATER IMPOUNDMENTS
- A — A — CROSS SECTIONS — SEE SHEET 544
- █ M.K. STRIP MINE OVER L.K. DEEP MINE

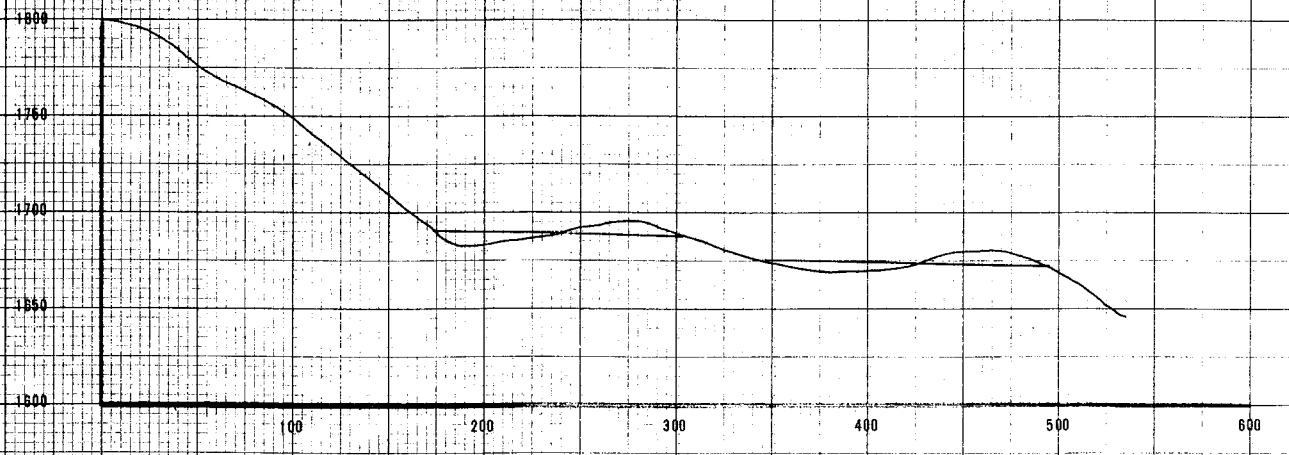
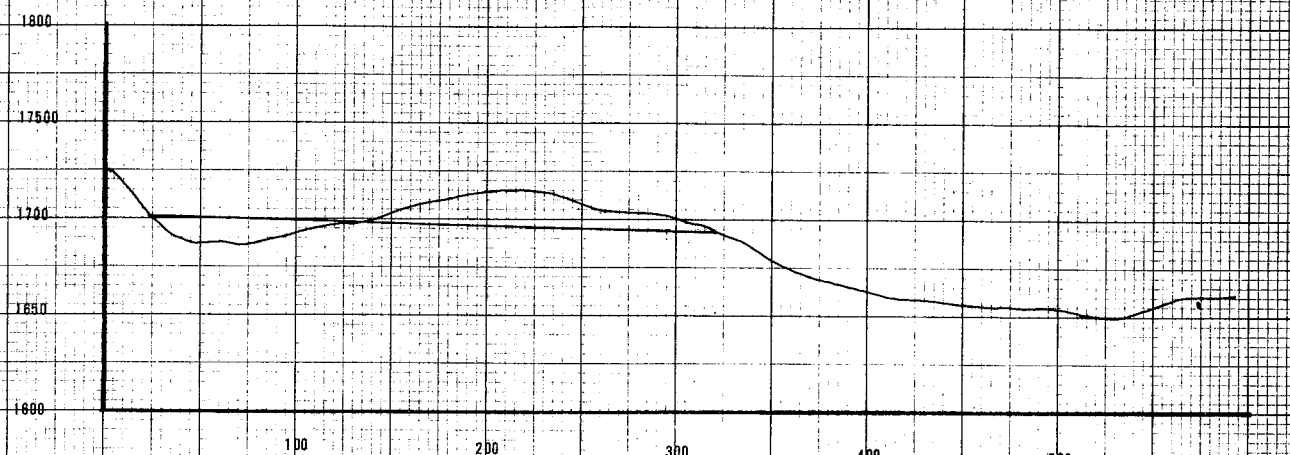
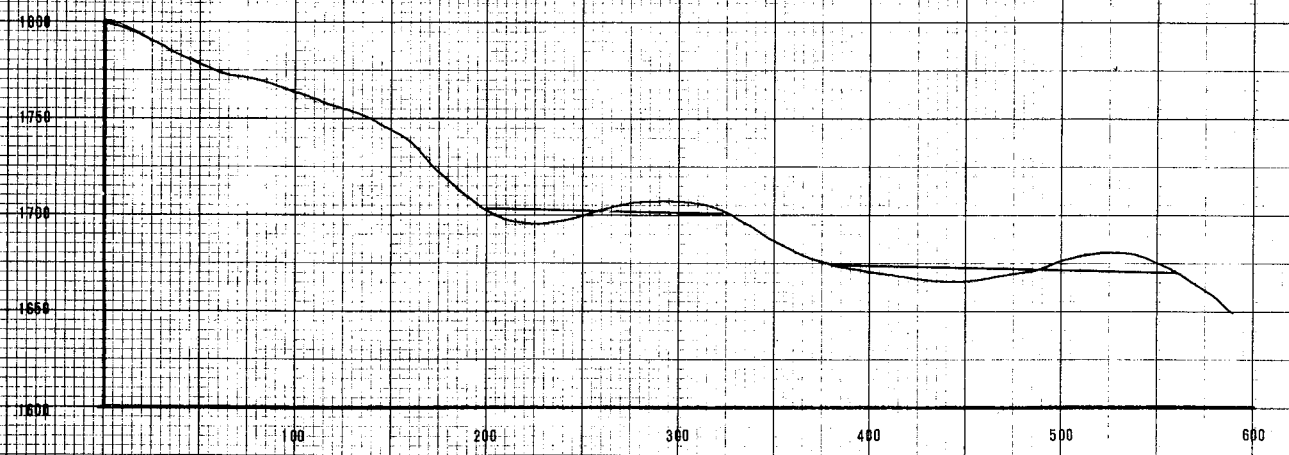
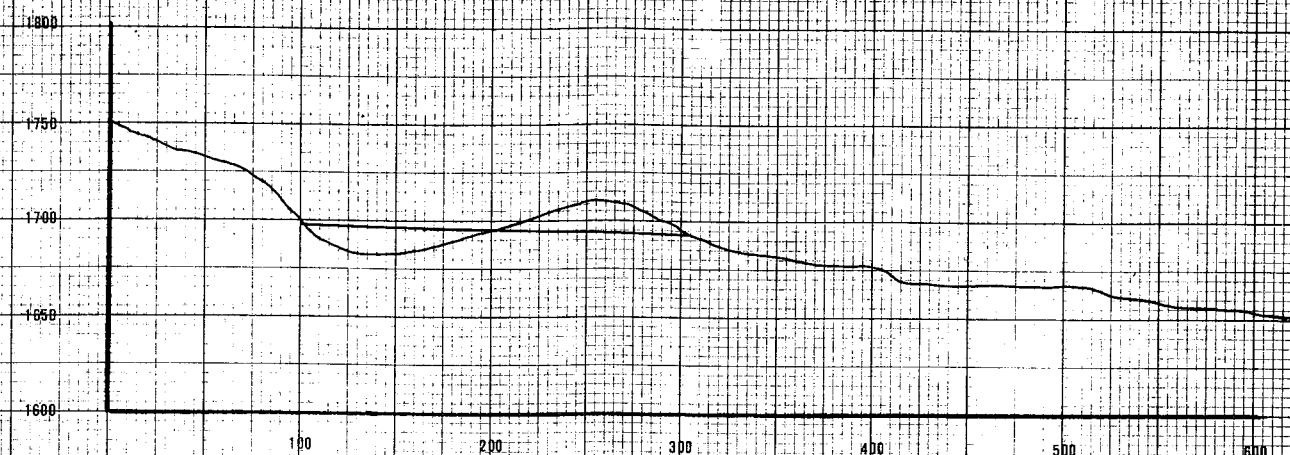
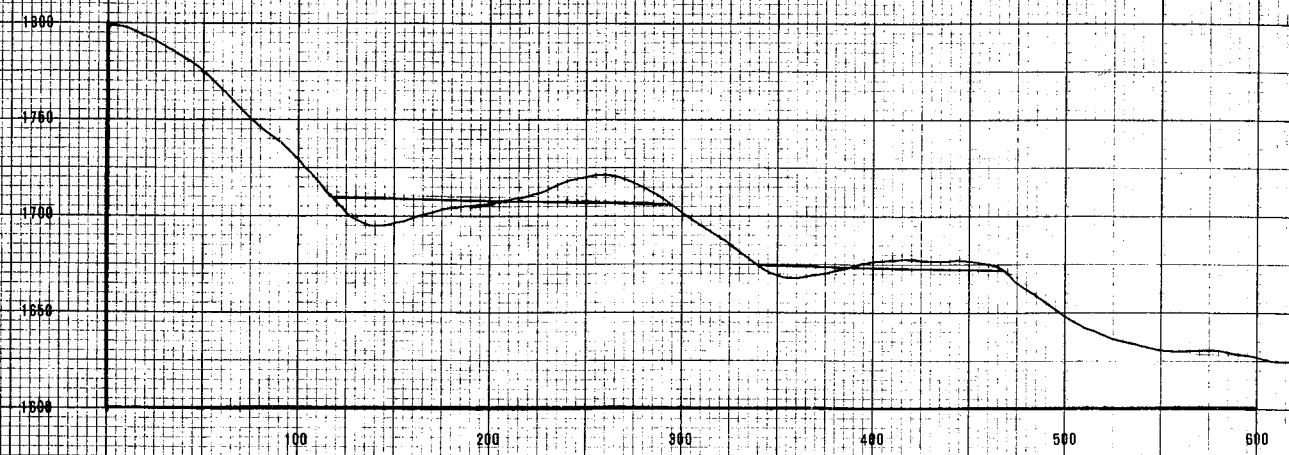
OLD MINE HEADINGS SHOWN WHERE THEY APPROACH STRIP MINE EXCAVATIONS

TOBY CREEK WATERSHED ELK COUNTY, PENNSYLVANIA	
DEPARTMENT OF MINES AND MINERAL INDUSTRIES PROJECT SL-132.1; 132.2; 132.3	
SHEET 6 OF 8	DATE: JUNE, 1970
SCALE: 1" = 200'	FILE NO.: MD-1
YOST ASSOCIATES, INC. ENGINEERS DUBOIS, PA.	DRAWN BY: CHECKED BY:

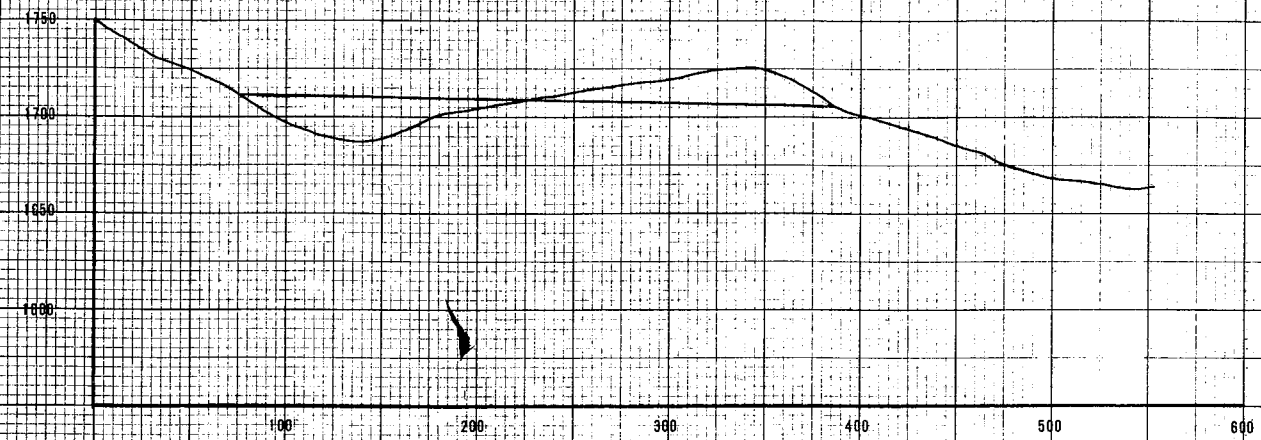


- EXISTING CONTOUR
- - - PROPOSED CONTOUR
- DEEP MINE HEADINGS L. K. SEAN
- DEEP MINE HEADINGS M. K. SEAN
- LIMIT OF L. K. WORKINGS (heavy line)
- LIMIT OF M. K. WORKINGS (light line)
- (1880.00) ELEVATION OF MINE FLOOR
- STANDING WATER
- RE-GRADING REQUIRED
- A --- A SEE SHEET 6B+6C FOR CROSS SECTIONS

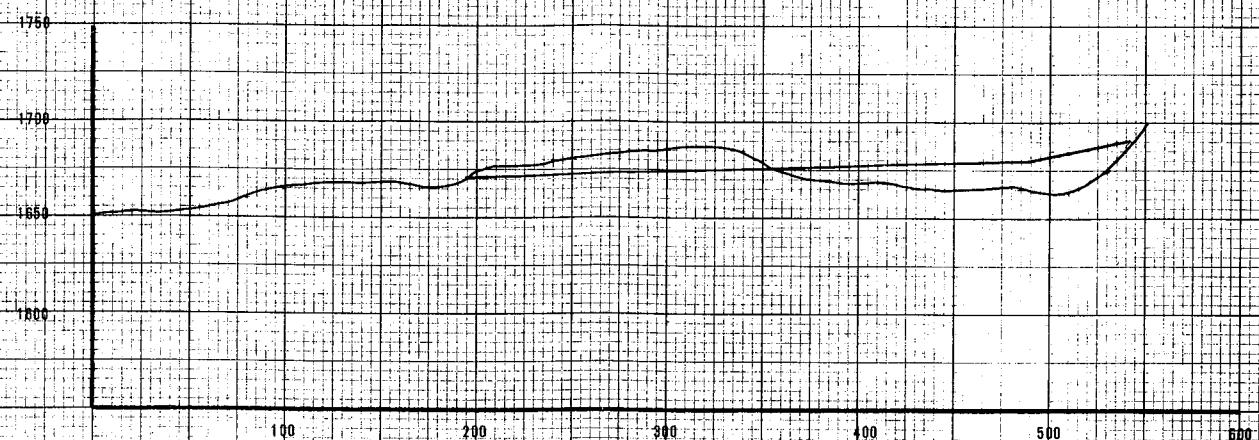
TOBY CREEK WATERSHED ELK COUNTY, PENNSYLVANIA	
DEPARTMENT OF MINES AND MINERAL INDUSTRIES PROJECT SL-132.1; 132.2; 132.3	
SHEET: 6A OF 8	DATE: JUNE, 1970
SCALE: 1" = 200'	FILE NO.: MD-1
YOST ASSOCIATES, INC. ENGINEERS DUBOIS, PA.	DRAWN BY: CHECKED BY:



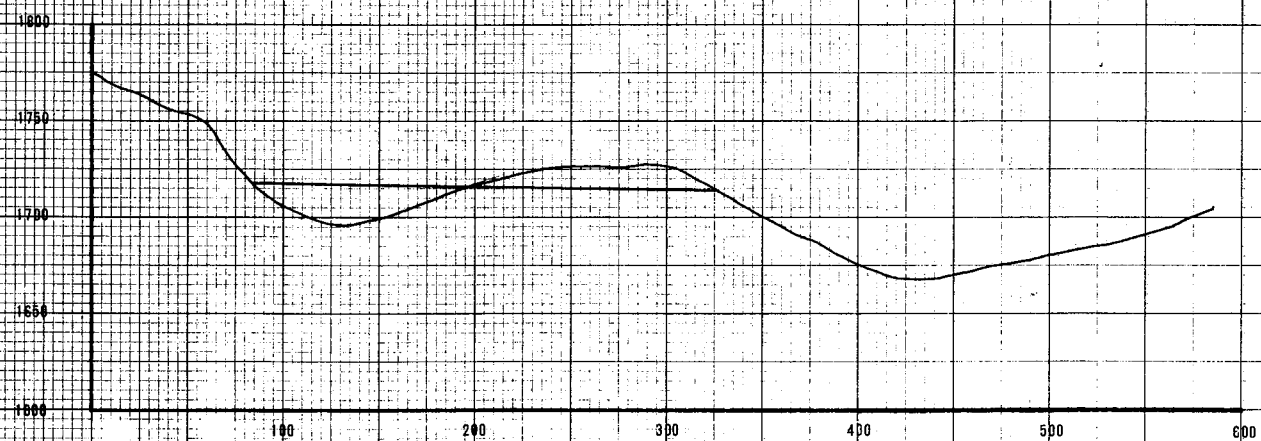
TOBY CREEK WATERSHED ELK COUNTY, PENNSYLVANIA	
DEPARTMENT OF MINES AND MINERAL INDUSTRIES PROJECT SL-132.1 ; 132.2 ; 132.3	
SHEET 6B OF 8	DATE: JUNE, 1970
SCALE: HORZ. 1" = 50' VERT 1" = 50'	FILE NO.: MD-1
YOST ASSOCIATES, INC. ENGINEERS DUBOIS, PA.	DRAWN BY: CHECKED BY:



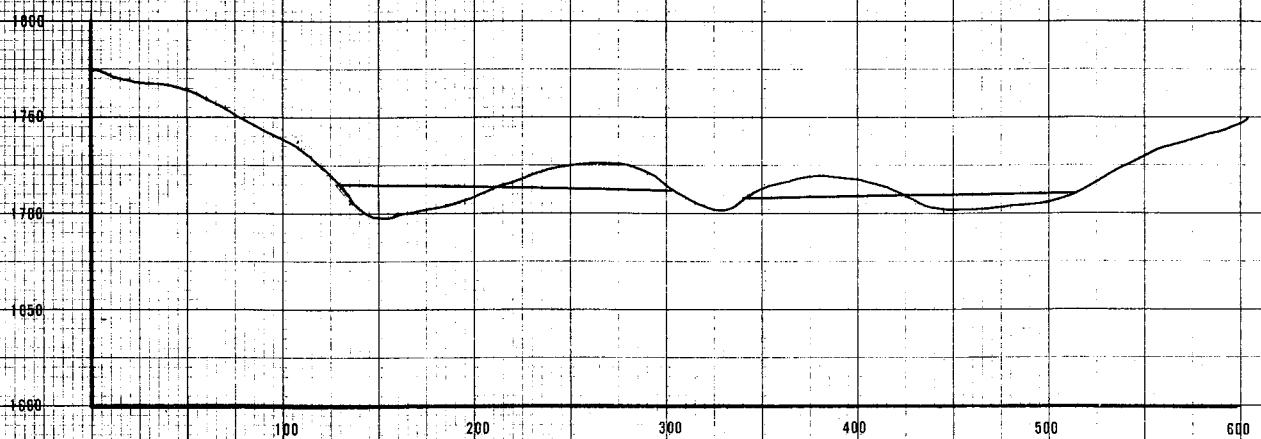
SECTION F-F



SECTION I-I

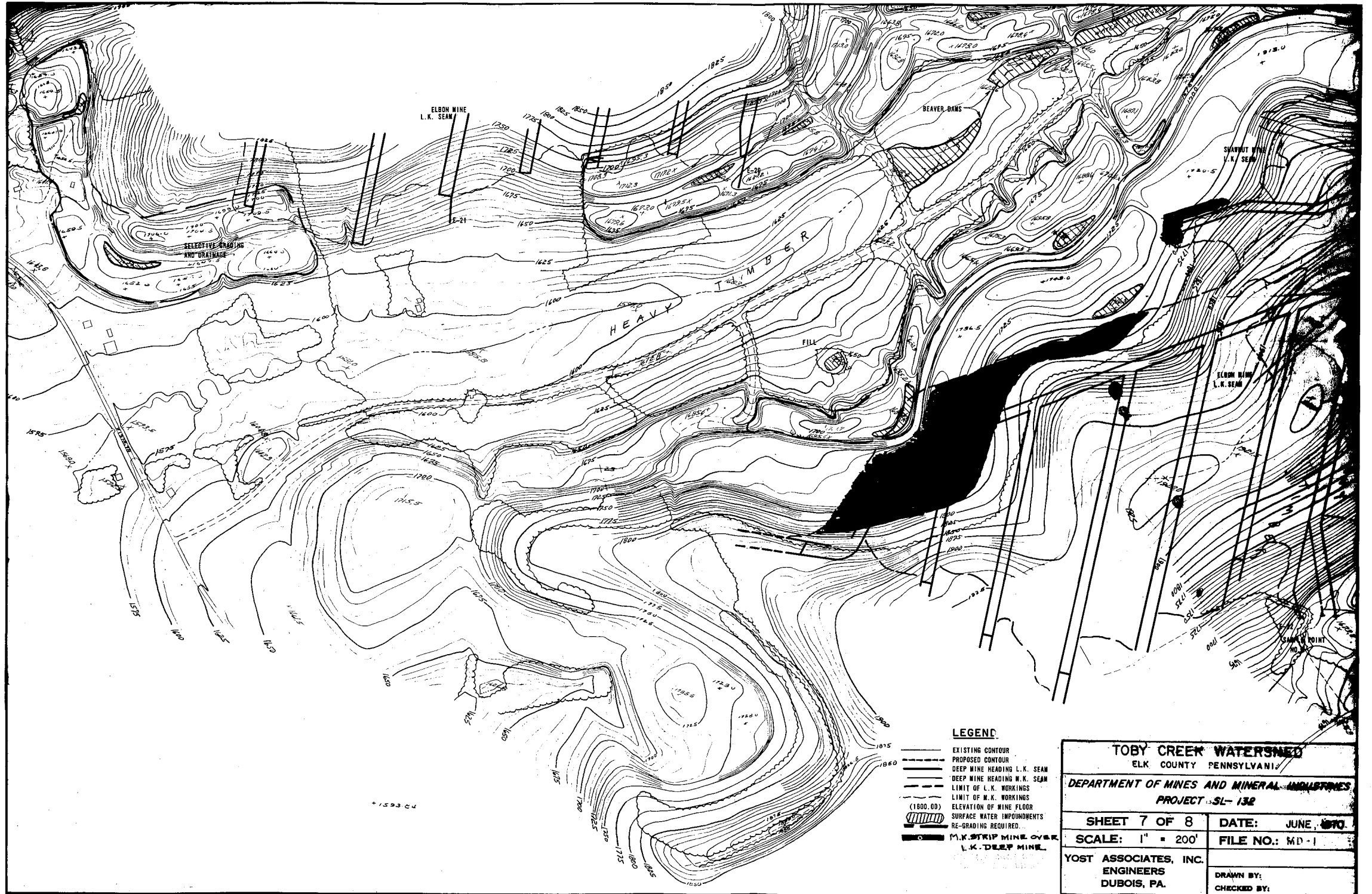


SECTION G-G



SECTION H-H

TOBY CREEK WATERSHED ELK COUNTY, PENNSYLVANIA	
DEPARTMENT OF MINES AND MINERAL INDUSTRIES PROJECT SL-132.1; 132.2; 132.3	
SHEET 6C OF 8	DATE: JUNE, 1970
SCALE:	FILE NO.: MD-1
YOST ASSOCIATES, INC. ENGINEERS DUBOIS, PA.	DRAWN BY: CHECKED BY:



1593 C4

LEGEND

- EXISTING CONTOUR
- - - PROPOSED CONTOUR
- DEEP MINE HEADING L.K. SEAM
- DEEP MINE HEADING W.K. SEAM
- LIMIT OF L.K. WORKINGS
- LIMIT OF W.K. WORKINGS
- (1000.00) ELEVATION OF MINE FLOOR
- ▨ SURFACE WATER IMPOUNDMENTS
- ▨ RE-GRADING REQUIRED
- M.K. STRIP MINE OVER L.K. DEEP MINE

TOBY CREEK WATERSHED ELK COUNTY PENNSYLVANIA	
DEPARTMENT OF MINES AND MINERAL INDUSTRIES PROJECT SL-132	
SHEET 7 OF 8	DATE: JUNE, 1970
SCALE: 1" = 200'	FILE NO.: MD-1
YOST ASSOCIATES, INC. ENGINEERS DUBOIS, PA.	
DRAWN BY:	CHECKED BY:

