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5.0 Evaluation of Premining Characteristics

5.1 Sources of Information

This study included searches for information regarding premining topography for both the mined and unmined sections of Robinson Fork. Agencies contacted regarding historical information included the following:

- U.S. Department of Agriculture NRCS
- USBM – Mine Map Repository
- DEP - Office of Surface Mining
- U.S. Fish and Wildlife Service
- Pennsylvania Geological Survey
- Pennsylvania Game Commission
- Local Watershed Groups
- Local Residents

In addition to the above agencies, various independent reports, books, and public government documents, and private research papers were reviewed for historical information. A complete list of these documents is provided in the bibliography that follows Chapter 10.0.

In general, there is an overall lack of detailed information regarding pre-mining stream characteristics for Robinson Fork. Other streams evaluated during the preliminary field inspection phase may have possessed more detailed historical information; however, those streams were associated with features that may have biased study results and were therefore eliminated from consideration. The selection criterion for Robinson Fork and justification for eliminating other streams is presented in Chapter 1.0.

5.2 Premining Geomorphology

Premining topography, other than USGS quadrangle maps, was only available for the mined portion of the study area. The topographic map, generated in 1993, was part of the underground mining permit for another section of the Enlow Fork Mine (refer to attached figure). The scale of the topographic map prepared for the permit did not allow a detailed evaluation of the morphology of Robinson Fork to be performed. Information on channel width or overall stream morphology could not be discerned from this topographic map. Comparison of the 1993 topographic map with the current and historic USGS quadrangle maps did not indicate changes in land surface or stream morphology.

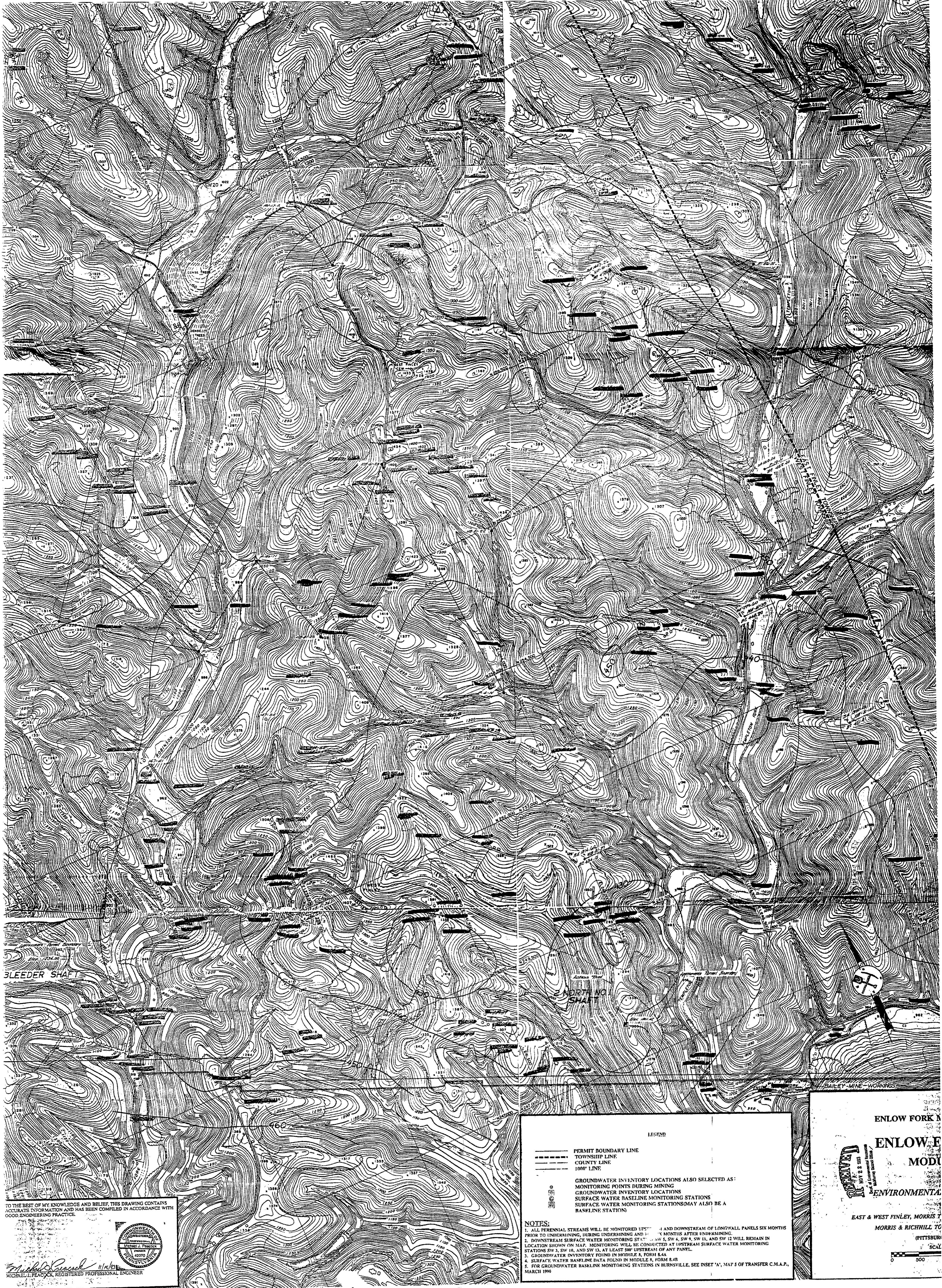
In a similar manner, aerial photographs were reviewed from 1984 for the pre-mining section of the study area. Like the 1993 topographic map prepared for the Enlow Fork Mine permit, the aerial photographs did not allow a detailed analysis of the study area stream morphology to be conducted.

5.3 Premining Hydrology and Surface Water Quality

The files at the DEP's District Mining Office (McMurry, Pennsylvania) contained historical monitoring of the mined section of Robinson Fork. The Consolidation Coal Company collected the historical stream monitoring data as part of the 1984 mine permit. Two stationary stream monitoring locations located on Robinson Fork upgradient and downgradient of the proposed mining operations were used for data collection. In addition, a third mobile location was used to monitor points along the stream, between the two stationary points. These data are discussed and compared with postmining data collected as part of this study in Chapter 7.0. The historical data is summarized in a table contained in Chapter 7.0.

5.4 Premining Riparian Vegetation, Wetlands, In-Stream Macroinvertebrates, and Fish

Copies of benthic macroinvertebrate studies previously conducted along Robinson Fork were available from governmental and private sources. These studies included work performed by Cooper (1975), Stoudt (1993), and investigations conducted by the DEP in September 2000 as part of the DEP Unassessed Waters Protocol. Aerial photography was also available from the USDA Farm Service Agency for wetlands delineation purposes.



TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS DRAWING CONTAINS ACCURATE INFORMATION AND HAS BEEN COMPILED IN ACCORDANCE WITH GOOD ENGINEERING PRACTICE.



Michael J. Peacock
MICHAEL J. PEACOCK, REGISTERED PROFESSIONAL ENGINEER

LEGEND

- - - - - PERMIT BOUNDARY LINE
 - - - - - TOWNSHIP LINE
 - - - - - COUNTY LINE
 - - - - - 1000' LINE

○ GROUNDWATER INVENTORY LOCATIONS ALSO SELECTED AS MONITORING POINTS DURING MINING
 ○ GROUNDWATER INVENTORY LOCATIONS
 ○ SURFACE WATER BASELINE MONITORING STATIONS
 ○ SURFACE WATER MONITORING STATIONS (MAY ALSO BE A BASELINE STATION)

NOTES:

1. ALL PERENNIAL STREAMS WILL BE MONITORED UPSTREAM AND DOWNSTREAM OF LONGWALL PANELS SIX MONTHS PRIOR TO UNDERMINING, DURING UNDERMINING AND 30 MONTHS AFTER UNDERMINING.
2. DOWNSTREAM SURFACE WATER MONITORING STATIONS SW 5, SW 6, SW 9, SW 11, AND SW 12 WILL REMAIN IN LOCATION SHOWN ON MAP. MONITORING WILL BE CONDUCTED AT UPSTREAM SURFACE WATER MONITORING STATIONS SW 1, SW 10, AND SW 13 AT LEAST 50' UPSTREAM OF ANY PANEL.
3. GROUNDWATER INVENTORY FOUND IN MODULE 8, FORM 8.4A
4. SURFACE WATER BASELINE DATA FOUND IN MODULE 8, FORM 8.4B
5. FOR GROUNDWATER BASELINE MONITORING STATIONS IN HURNSVILLE, SEE INSET 'A', MAP 5 OF TRANSFER C.M.A.P., MARCH 1996

ENLOW FORK M

ENLOW ENVIRONMENTAL

MODU

ENVIRONMENTAL

EAST & WEST FINLEY, MORRIS T

MORRIS & RICHHILL TO

(PITTSBURG)

SCALE

0 500