

HAYES HIGHWALL

Submitted by:

**Charles J. Miller, Assistant Director
Office Abandoned Mine Lands & Reclamation
Division of Land Restoration
West Virginia Department of Environmental
Protection**

Project Name and Location:

**Hayes Highwall – Approximately two miles north of Kingwood in
Preston County, West Virginia**

Name, Title Organization, Address, Phone Numbers and E-Mail:

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Project Start and Completion Date:

December 22, 2003 – April 22, 2004

Construction Costs and Funding Sources:

**West Virginia AML Program
Total Project Cost -----\$425,696.60**

Contractor:

**Green Mountain Company
4 Port Amherst Drive
Charleston, WV 25306**

Consultant:

**Triad Engineering, Inc.
P.O. Box 889
Morgantown, WV 26505**

West Virginia Department of Environmental Protection Staff:

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Submission Date:

March 10, 2005

Hayes Highwall

I. Background and Project Need

On property just north of Kingwood, West Virginia, existed a 700 foot long highwall, up to 40 feet in height, two water filled pits totaling over two acres and several acres of mine spoil. The water filled pits and highwall were within six feet of a county road, creating a hazardous situation for local residents and travelers. One family lived within 300 feet of the highwall.

This site was created and abandoned by Dougherty Coal Company in 1960. The impoundments were made by Dougherty casting strip mine spoil in a ridge like fashion, trapping runoff. Spoil ridge out slopes contributed to excessive sedimentation of local streams.

II. Reclamation Plan

In May 2000, the design work to resolve the safety and environmental issues at Hayes Highwall was undertaken. By May 2001, a plan had been generated and was given careful review by WVDEP-AML staff. After funding issues had been finalized, the project was released for bid in September, 2003. The Contractor began work on December 22, 2003.

The water filled pits were the first items to be addressed. They were dewatered using a pump to move water to a protected stream channel. The pits were then filled using the mine spoil ridges. The highwall was backfilled with the remainder of the mine spoil, creating a slope no greater than 4:1. Over one-half mile of sediment control was used to keep freshly graded spoil out of local streams. Once final grade was achieved, more than 2,800 feet of rock channels were installed to provide a stable drainage system for the newly revegetated 20 acre site. An existing pond was also upgraded to collect surface runoff, providing the landowner with a water source for his cattle.

The Contractor completed all work by April 22, 2004. The cost for the project was \$425,696.60.

III. Reclamation Benefits

The successful completion of the Hayes Highwall Project eliminated a public safety hazard for local residents and other users of County Road 52/8. Environmental benefits are noted in greatly reduced stream sedimentation. The landowner now possesses 20 acres of productive hayland rather than mine spoil that was of no use for anything. Aesthetics wise, the final product is rewarding for everyone.

Attached are six (6) before and after photographs. These pictures visually demonstrate the project's success.

Photo #1:

Water filled pit between base of highwall and spoil bank. Water was ten feet deep at the deepest end.

Photo # 2:

Rock channel installed in area of water filled pit. Highwall had been within six feet of the county road (on right).

Photo #3:

Mine spoil consisting of coal refuse and mixed overburden was very erodable. Stream sedimentation and partial filling of the landowner's pond resulted from this eroded site.

Photo #4:

Good vegetative cover prevents erosion as well as providing hay for the landowner's cattle.

Photo # 5:

Spoil bank sloping into water filled pit (center of picture). Top of highwall runs parallel to county road.

Photo # 6 & COVER PHOTO:

Reclaimed site showing rock channel (lower left) where water filled pit previously existed. Highwall has been backfilled and regarded to 4:1 or gentler slope.