



pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Office of Active and Abandoned Mine Operations

ORVISTON

Abandoned Mine Reclamation Project

Contract No. OSM 14(0883)101.1

Bureau of Abandoned Mine Reclamation

400 Market Street, 5th Floor

Harrisburg, PA 17101-2301

**DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF ACTIVE AND ABANDONED MINE OPERATIONS
BUREAU OF ABANDONED MINE RECLAMATION**

**ORVISTON
ABANDONED MINE RECLAMATION PROJECT
CONTRACT NO. OSM 14(0883)101.1**

FACT SHEET 1 OF 2

Location: Located within Sproul State Forest, off Kato and Orviston Road, approximately 1.2 miles west of the town of Orviston and State Route 1016, in Curtin Township, Centre County. (Latitude 41° 06' 24", Longitude -77° 46' 12"); Snow Shoe SE Quadrangle Map; Central West Branch Susquehanna River basin.

Official Start Date: 07/23/2010

Official Completion Date: 07/11/2011

Contractor: Morgan's Excavating

Property Owners: PA DCNR Bureau of Forestry

Project Cost: \$195,156.05

Project Area: 14.4 acres

Mined By: Unknown – circa 1950.

Purpose: To eliminate a public health and safety hazard by excavating, backfilling, and grading abandoned mine lands in Curtin Township, Centre County.

Description: Reclamation included eliminating highwalls, backfilling pits, installing subsurface drains, re-grading spoil material, installing earthen berms and windrow wildlife habitats, re-vegetating portions of the site with grasses and legumes, and planting 3,800 tree seedlings. The subsurface drain collects a 2 to 10 gpm AMD discharge, supposedly emanating from a collapsed drift entry at the base of the highwall, and routs it under the backfill to the toe of the reclaimed slope. This is the Bureau of Abandoned Mine Reclamation's (BAMR) first project constructed using a reclamation method known as the Appalachian Regional Reforestation Initiative (ARRI) to encourage successful reforestation. The ARRI is a coalition of groups with the main objective of restoring forests on surface mines and promoting the planting of high-value hardwood trees on coal-mined lands in the

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FACT SHEET 2 OF 2

Appalachian region. The ARRI promotes the use of the Forestry Reclamation Approach (FRA) for this type of reclamation. The FRA enhances tree growth by creating a suitable rooting medium that is no less than 4 feet deep and is comprised of topsoil, weathered sandstone, or the best material available. Material is loosely graded in order to avoid compaction. Two types of trees are recommended; one for soil stability and wildlife, and one with high commercial value. FRA goals include increasing tree growth and survival rates and expediting forest habitat establishment through natural succession. This information was obtained from Office of Surface Mines' (OSM) website: <http://arri.osmre.gov>. The 3,800 specified trees were furnished by suppliers approved by the DEP. Tree seedlings had 4-inch to 6-inch minimum height requirements depending on the species and included Northern Red Oak, White Oak, Red Pine, Eastern White Pine, Sweet Birch, Quaking Aspen, Red Maple, and American Chestnut. Six available top of the line back-cross American Chestnut trees (approximately 3-feet tall) were provided by the OSM's David Hamilton, and planted by the Department of Conservation and Natural Resources (DCNR), Bureau of Forestry in a protective fenced enclosure. The Contractor was required to plant tree seedlings as soon as the ground was workable in the spring after April 15, and terminate no later than May 15. Douglas D'Amore, the Sproul District 10 Forester, was very pleased with the results and said that he would like to see more of this type of reclamation on DCNR property.

Funding:

The project will be financed through a Federal Abandoned Mine Land Grant funded by the coal industry via fees paid on each ton of coal mined.

Project Management:

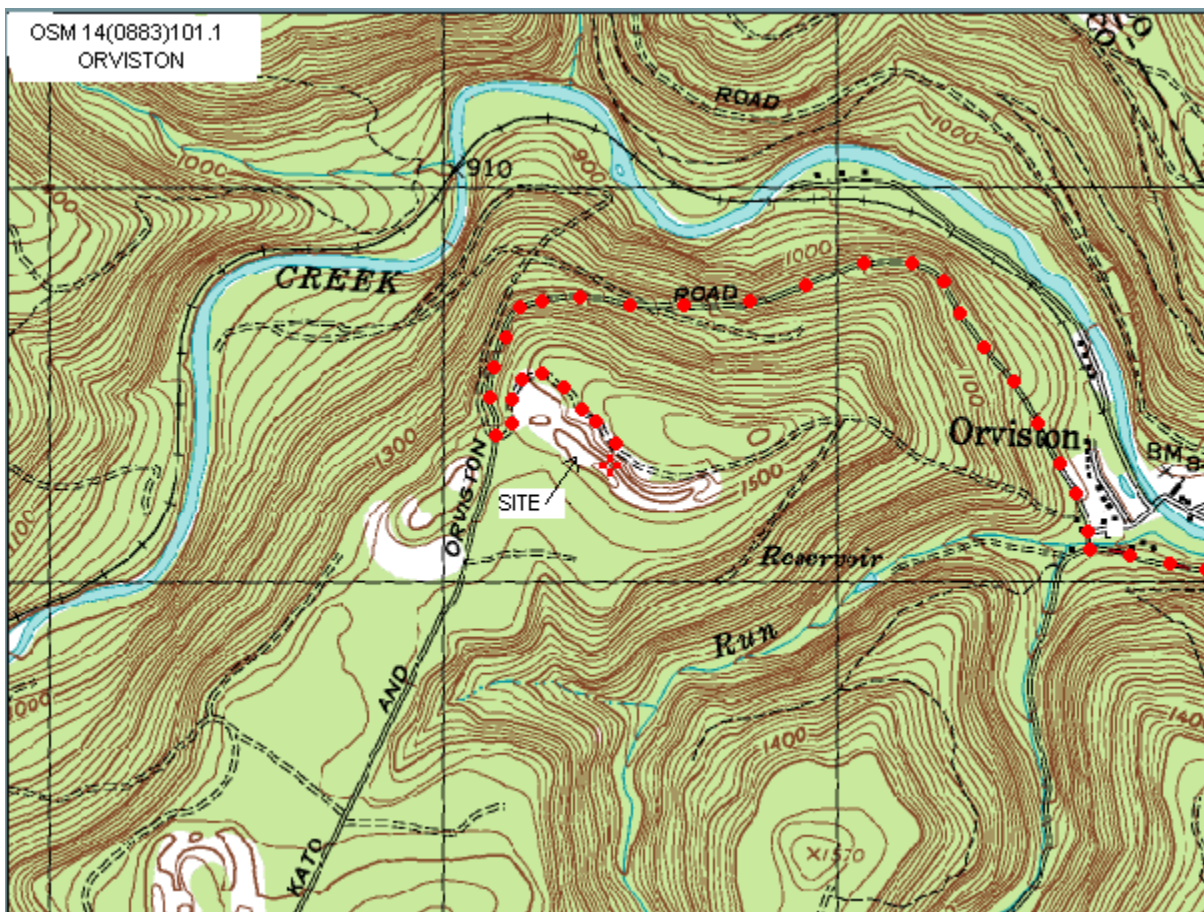
Bureau of Abandoned Mine Reclamation
Division of Project Design
Harrisburg Office
(Contact: David J. Fromell, PE / dfromell@pa.gov / 717.783.5646)

(IMAGES FOLLOW)

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LOCATION QUADRANGLE MAP



SNOWSHOE SE USGS QUADRANGLE MAP

(site is approximately 10 miles northwest of the town of Beech Creek and State Route 150)

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SITE PHOTOS 1 OF 3



PRE-RECLAMATION
(forestry road runs along the top of highwall)

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SITE PHOTOS 2 OF 3



IMMEDIATELY AFTER RECLAMATION

(Top photo – uncompacted piles; Bottom photo - American Chestnuts protected by deer fencing)

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SITE PHOTOS 3 OF 3



ONE YEAR AFTER AARI/FRA TREE PLANTING

(Left photo - pine tree behind designer, Dan Helfrich; Right photo - oak tree at end of shadow)