



# Twentymile Mine, Sage Creek Portal Water Management



***SmartDitch provides effective stormwater run-off protection for mine entrance.***

**LOCATION:**

*Routt County, Colorado*

**PRODUCT:**

*SmartDitch™*

**PROJECT PARTNERS:**

*Owner/Consultant*

*Peabody Energy*

*Contractor*

*Bower Brothers*

The Twentymile Mine in Routt County, Colorado is one of the largest underground mines in the United States. The Sage Creek portal is a new extension to the mine that provides access to an additional 105 million tons of coal.

## Challenge

The rough terrain, which consisted of steep slopes with rocky soils and minimal ground cover, made the mine site area susceptible to flash flooding. Peabody Energy was looking for a cost effective, reliable drainage solution to divert the stormwater run-off away from the mine entrance.

## Solution

Nilex, in partnership with our distributor Wagner Rents, recommended the SmartDitch system, a lightweight, plastic ditch liner that is virtually maintenance free and easy to install on difficult terrain such as steep, rocky slopes with limited vehicular access. Costing considerably less than rock or a concrete lined channel, SmartDitch will not degrade with exposure to sunlight or chemicals normally found in soil. Once installed, the system is completely sealed and will not allow seepage to erode the soil beneath it, increasing the stability of the channel system.

# Twentymile Mine, Sage Creek Portal Water Management

## Installation

The project involved the installation of two, roughly parallel, 1,500 foot SmartDitch channels facing the entrance to the underground mine. SmartDitch requires minimal ground preparation to achieve the rough shape of the preformed sections and was laid into the excavated channels and secured to the ground with earth anchors. Each section was secured together with self tapping screws while foam rubber strips were used to seal overlapping sections to form one cohesive, water tight channel. The system comes complete with all of the installation hardware.

Due to the SmartDitch system's ease of installation, lightweight channels and minimal excavation requirements, a crew of only three was able to meet the project deadline. Nilex provided on-site installation support.



## Results

Shortly after the installation was completed, the area experienced a heavy rainfall, with nearly five inches (13 cm) of rain over the course of a few hours. The SmartDitch system performed with no failures and had no significant accumulation of sediment within the channels.

The SmartDitch system provided the client with a rapid, reliable and cost effective solution for stormwater run-off.

## The Nilex Advantage

Nilex is committed to unearthing better results. Whether it's for a civil, resource or environmental project, we offer the latest engineered and technically superior materials and techniques to save our customers time and money, and minimize the need to move or remove earth, and reduce the need for granular materials.

With over 35 years experience, a long-standing commitment to the environment and highly qualified staff, Nilex delivers the products and technologies that give clients an economic advantage with environmental benefit.

