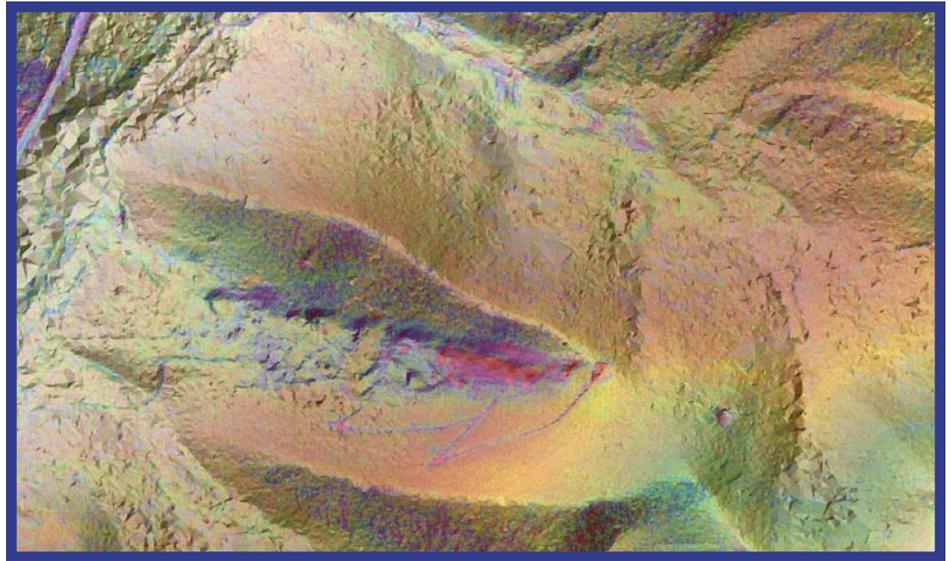




## TIPS

Technical Innovation  
and Professional  
Services



LiDAR Imagery for the South Canyon, CO area. Imagery is being used by the CO-DNR to quantify level of subsidence resulting from underground coal seam fire activity.

# TIPS Remote Sensing Program

The Technology Innovation and Professional Services (TIPS) remote sensing program continues to expand and improve support to OSM offices, states, and tribes. A primary goal of the TIPS remote sensing program is to provide users with the necessary tools to use remote sensing technologies to support Titles IV and V of the Surface Mining Control and Reclamation Act (SMCRA).

Specific ongoing remote sensing support includes acquisition of satellite imagery, QuickBird satellite high resolution aerial photography and light detection and ranging (LiDAR) data for Indian land mines throughout the western U.S. Imagery, aerial photography and LiDAR data are used to monitor overall mine site activities and to quantify topographic changes to ensure terrain is consistent with the approximate original contours.

Prototypical investigations are being conducted in partnership with the states of Virginia and Tennessee to explore the use of high resolution satellite imagery for inventory of new and existing abandoned mine land (AML) sites, and to evaluate stream quality and acid mine drainage trends as well as to classify post mining vegetation communities and associated land use.

The purpose of these prototype projects are to demonstrate the direct application of the science of remote sensing and image processing and analysis as a tool to support the restoration of eligible lands and waters that have been mined and abandoned or left inadequately restored.

Two new courses are being offered, Image Analysis for ArcGIS and Stereo Analyst for ArcGIS. The intent of these new courses is to provide straightforward, user friendly tools for specialists on the ground to readily use remote sensing as part of their daily business.

## Remote Sensing

### Support

- Conducting prototypical investigations in partnership with other OSM offices, states, tribes and other federal agencies
- Distribute image processing and related Geographic Information System (GIS) software to offices for on site processing and analysis
- Provide formal remote sensing training, on site workshops and advanced, vendor sponsored image processing training
- Provide general remote sensing technical support and technology transfer
- Provide technical expertise for special project applications as requested.

### Help

- Inventory, monitor and assess active mine site activity
- Quantify topographic changes
- Verify revegetation success for expedited bond release.

### Contact

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