

## Revolutionary new safety tool – the Work Area Monitor (WAM)

GroundProbe - a market leading Australian technology company - recently launched a new and innovative solution to improve the management of risk in open-cut mining and civil and infrastructure projects. The Work Area Monitor (WAM) uses fast-scanning radar coupled with a high-resolution camera to measure sub millimetre movement trends and sound alarms to warn workers of ground movement or rock falls. The WAM is a major step forward in protecting work crews engaged in potentially risky working environments.

## Protecting passengers on the million dollar highway

In June 2012 GroundProbe, Yeh and Associates, and the Colorado Department of Transportation (CDOT) initiated a monitoring program to support a rock slope stabilization project on the Million Dollar Highway in Colorado.

The chosen solution to mitigate safety risks for the project was the GroundProbe WAM. The potential benefits of the WAM were reviewed by Yeh and Associates who decided to recommend deployment of the system to CDOT as a dynamic new tool to address the stability of rock slopes during construction. Yeh and Associates Inc. is a full service geotechnical engineering firm based in Denver Colorado.

The WAM was deployed to scan potentially unstable rock slopes where speciality rock fall contractor - Midwest Rockfall - were working to drill and inject polyurethane resin and post tensioned bolts to stabilize specific areas. This took place along a number of sections of Route 550, also known as The Million Dollar Highway, which had caused concern for the safety of road users.

Route 550 runs from New Mexico to Colorado in the western United States. The two-lane highway cuts north passing through the San Juan Mountains, the Uncompahgre Gorge, and summits at Red Mountain Pass. Sections of the route offer spellbinding views, hazardous passages: characterized by overhanging rock from steep cliffs, a lack of guardrails, and narrow lanes. The climb into Red Mountain Pass is made by negotiating hairpin turns while gaining elevation as the route is cut—directly into the mountainsides.

## Reducing safety risks

The WAM deployment opens up a range of opportunities for the mitigation of safety risk across a wide range of civil and infrastructure projects. The systems ease of use and the real-time information it provides has generated significant interest across a number of industry sectors. The WAM was initially designed for, and is already being used in open cut mining projects to monitor slope





deformation in work areas. Ben Arndt P.E., Senior Design Engineer and Associate from Yeh and Associates who was responsible for specifying the WAM for the Red Mountain Pass project, commented that:

*“The WAM was used as a real-time monitoring tool to evaluate changes in the rock slope during the stabilization project. Data obtained from the WAM was used to modify the rock bolt installation procedure, stabilize the slope, and to further safeguard workers. The data was extremely valuable in showing that sections of the rock slope were less stable when drilling anchors.”*

## About GroundProbe

Since 2001, GroundProbe has been redefining safety and productivity, mainly in the mining industry. Through an unwavering commitment to safety, dedicated industry focus and pioneering technology, GroundProbe developed the world’s first slope stability radar; a system to monitor and warn of ground movement in open pit mines. Today, GroundProbe provides high value information to help customers to better manage risk. With a range of slope monitoring solutions built on the successful detection of over five hundred wall failures, GroundProbe’s products, services and people enable customers to make confident decisions about mine safety and ongoing production.

GroundProbe operates in over 20 countries, serving all major mining companies through local offices across Australia, the Americas, Africa and Asia. More information about GroundProbe can be found at [www.groundprobe.com](http://www.groundprobe.com).

For more information on GroundProbe, the SSR or the WAM please contact:-

Sean Foley - Marketing Specialist  
Head Office – Australia  
Phone: +61 (0)7 3010 8983  
Email: [sean.foley@groundprobe.com](mailto:sean.foley@groundprobe.com)

John Metzger –Pre-Sales Representative  
North American Office - Tucson  
Phone: +1 520 393 8287  
Email: [john.metzger@groundprobe.com](mailto:john.metzger@groundprobe.com)

