

## Digital mapping at Round Mountain

Maptek™ Vulcan™ software helps improve field mapping at the Round Mountain gold mine in Nevada.

The Kinross Gold Corporation mine at Round Mountain has produced more than 12 million ounces of gold since 1906, through 60 years of underground mining and then as an open pit.

Kinross wanted to implement digital mapping to speed up the field mapping process, and to improve efficiency in order to provide real time response to mining issues.

Site staff had a lot of experience with Maptek™ Vulcan™ as well as Trimble and AutoCad. However, they had limited GIS software access, with little to no in-house experience and a limited budget.

Kinross wanted timely implementation of an easy to use solution that required minimum survey support.

Requirements included high accuracy and precision, simple coordinate conversion to the irregular mine grid, the ability to map remote structures, and straightforward import into Vulcan.

A proof of concept system for rapid digital mapping was built, integrating the Trimble Geo7X handheld data collector with Vulcan software.

Trimble field data was exported to Vulcan, where it was viewed and manipulated using tools in the Vulcan geotechnical module.

A Trimble user interface was constructed in two days. Building a data dictionary and setting up the coordinate conversion process ensured that the relevant information could be collected for export to Vulcan.

Existing data was validated and converted. Designing the Vulcan geotechnical database and loading it with legacy data took an additional day. Once the codes and structures were set up, the process was streamlined.

Geologists field testing the system found it intuitive and easy to use. Comprehensive forms for entering field data led to collection of more structured observations, and less information was lost.

Being able to view all the existing data and using an iterative process to add new data allowed a better map to be built. The time taken to input data in the field is balanced by less data entry in the office.



'The new system gives us the potential to save \$15,000 on labour per year.'

Projected benefits from converting to digital mapping are appreciable, primarily due to the more efficient workflow. Labour costs are decreased, and further intangible savings and increased safety are realised from having on-time information.

*Thanks to Kristine Alvarez, Senior Geologist  
Kinross Gold Corporation - Round Mountain*

