Gaining control over potential instability

The first Maptek™ Sentry monitoring system implemented in Peru will be used for managing geotechnical risk at a large iron ore mine.

Implementation of the first Maptek™ Sentry system in Peru was carried out over three days in November 2017. The Shougang Hierro Perú S.A.A. iron ore mine is in the Ica region of Peru about 520 km south of the capital, Lima. The deposit covers approximately 150 km^2.

Slope monitoring

The Geotechnical Department at Shougang needed to implement a slope monitoring system for its different active pits. This would give them greater control over the areas that show signs of instability, which could put operations at risk.

Geotechnical Engineer, John Garcia commented that the Maptek solution had been chosen as the pioneering monitoring system because of the flexibility demonstrated by Sentry and its capabilities compared with other slope control systems.

Benefits that influenced the decision to adopt Sentry included being able to generate queries from different areas, providing knowledge of the full history of potential instabilities in sectors where geotechnical information was not available.

In addition, the ease of installing the system at different locations, the expectation of being able to use the I-Site XR3 laser scanner for other survey applications and the support offered by Maptek made Sentry a definite winner for Shougang.

> Sentry has the potential to become the standard for slope monitoring at mines.

Maptek sees an opportunity to establish the Sentry monitoring system as an indispensable tool for use by mines to manage risk associated with geomechanical and geotechnical issues.

With that in mind, an agreement has been reached with Shougang to use this implementation as a pilot demonstration plan and case study for Peru, Chile and Brazil.

Implementation

Sentry implementation at Shougang consisted of several stages, from delivery of equipment and accessory requirements for optimal installation of the system, through to completion of the training.

Day 1 of the implementation required Shougang to provide accreditation passes, a safety induction, the equipment checklist and installation of the Sentry system at the monitoring point.

On the second day, Maptek gave a Sentry presentation to Shougang personnel, and assisted in setting up the areas of interest, the Wi-Fi network connection for remote monitoring, and a test run definition of alert parameters.

Day 3 included checking remote access, theoretical training for Shougang personnel, practice using the Sentry System, and wrap-up of the implementation.

Notwithstanding the initial training, Shougang has been encouraged to access Maptek technical support for the definition of alert parameters, under a two-month plan included in the contract.

Thanks to
John García, Geotechnical Engineer
Shougang Hierro Perú S.A.A.