THE USE OF NONEL REEFMASTER ASSEMBLIES

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ABSTRACT

The paper describes the use of the Nonel millisecond delay blasting system in narrow, deep, tabular ore bodies and briefly describes the standard stoping method as used on Harmony Gold Mine and compares this with the new Nonel short panel system.

The introduction of the Nonel system has made it possible to increase face ad ances substantially by utilizing short panels and by using the actual blast to irtually clean the stope at blasting time, i.e. the energy of the explosi es is used to hea e the blasted rock into the scraper gully. In order to achie e this, the mining method had to be altered drastically.

This new re ised method makes it possible to achie e a theoretical ad ance of 1 metre per blast where the face is irtually ready for re-drilling immediately after the blast. It takes full ad antage of millisecond delay sequential blasting achie ed by the use of Nonel.

The method made it necessary to re ise stope support in the area being mined. The method was de eloped o er the past 12 months and is now being phased into the mine as a standard mining system. In experimental stopes face ad ances of up to 20 metres per month ha e been achie ed.

The use of Nonel assemblies eliminates scraping operations in the working faces. Face scrapers ha e a tendency to rip our footwall waste diluting the gold bearing reef, i.e. the use of the system reduces stope width and impro es mill grade.

The method makes it possible to blast waste and reef separately where the waste is used for support and entilation control walls, thus entilation conditions in the working places are also impro ed. 16,000 m~2 were mined on the system during the month of May 1989 and significant cost sa ings are e ident.