

The Development and Implementation of Efficient Wall Control Blast Designs

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Abstract

One of the key factors that controls the overall profitability of surface operations is the required volume of excavated material. If the overall angle of final walls can be maximized the amount of material excavated will be reduced. However, as the slope angle becomes steeper the wall's factor of safety decreases. As a result, the development and implementation of efficient wall control blast designs becomes critical to achieving stable walls. Many site specific conditions should be taken into account when defining the methods that will be used to lessen blast induced wall damage. This paper will discuss the steps needed to properly evaluate the site and develop efficient designs. Four variations of wall control blast designs will be evaluated in terms of cost and performance. In addition, the paper will include the quality controls needed to successfully implement and refine the blast design.