

BLASTCAD Three Dimensional Underground Blast Design Software

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ABSTRACT

*In 1990 the Noranda Technology Centre commenced a project to develop an interactive three-dimensional blast design system using a commercial computer-aided drafting and design package (CADD). The objective was to alleviate the blast engineer from the tedious and time consuming blast layout and design functions normally done by hand. This would allow more time for optimizing blast designs through assessing multiple options. Since several blast design software "tools" already existed at Noranda, the need arose to integrate all the applications into one overall system that shared one common database. The result is **BLASTCAD**.*

This paper presents the practical use of BLASTCAD to design underground production blasts. It describes the overall design approach, from cutting section views from a 3-dimensional orebody model, to the automatic generation of the blasters instruction sheet. All of the design steps are presented and include an empirical blast calculator (BCALC), powder factor distribution analysis (CPFCAD), delay scatter analysis, blasthole deviation plotting (DEVCAD), blast breakage simulator (BBLAST), and cost analysis software (BCOST).