

"BLAST CASTING IN A SENSITIVE ENVIRONMENT"

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ABSTRACT

The authors describe the development of an overburden blast casting program in the upper seam of coal at a 2-seam surface mining operation on property adjacent to an active operating underground coal mine. Control of vibration is essential.

The authors explain how the blast casting program, while permitting tight control of vibration, made it possible to reduce operating hours of the stripping machine on the upper seam from 3 shifts per day, 7 days a week, to 2 shifts, 5 days, with an average of 60% overburden cast without the use of equipment. The underlying technical changes are also discussed. These include increased shot size, heavier powder factor, sequential millisecond delay initiation, and the use of high-energy explosives.