



## NARROW-VEIN MINING

### THE CHALLENGE

Extracting ore from narrow veins presents a unique set of challenges for the Canadian mining industry. Special mining methods, equipment and automation are required in order for operators to perform their work in a safe and cost-efficient manner. Canadian mining companies have willingly shared information to learn what other narrow-vein mine operators are doing in order to ultimately improve their own operations.

### NRCAN CAN HELP

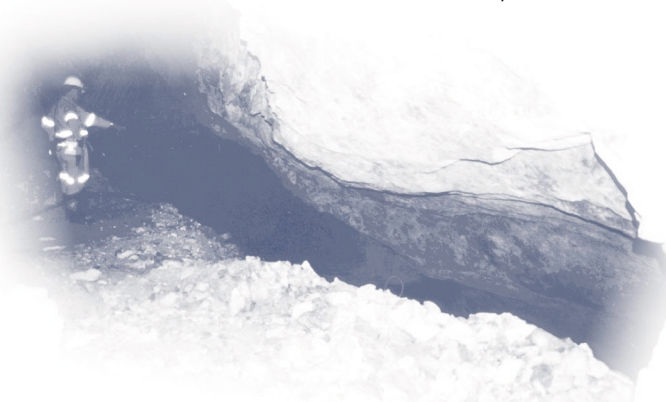
CANMET-MMSL has established a three-year research and development project which includes 42 Canadian and international mine-site visits with a cross-section of personnel at each mine site. The objectives are to determine what methods and equipment are used in narrow-vein mining and how these are interfaced, to identify areas with ongoing needs for mechanization and automation, and to discuss new mining equipment concepts. Project findings are being made available on the NRCan web site, allowing free accessibility to the information and encouraging exchanges between interested parties.

### OUR EXPERTISE

CANMET-MMSL has developed a range of expertise through R&D activities:

- **Mining methods**
  - Evaluation of current mining methods
  - Techno-economic evaluation methods and models
  - Development of innovative mining methods
  - Mining sequence
- **Equipment and systems**
  - Economic evaluation of new mining equipment concepts
  - New power systems development
  - Non-explosive rock fragmentation techniques

*Narrow vein stope*



## SUCCESSFUL PARTNERSHIPS

The Narrow Vein Mining Project represents a successful partnership with the Canadian mining industry:

- During the course of the project, CANMET-MMSL will visit 22 Canadian mines as well as 20 mines in the United States, Australia, South Africa and Chile. Each operation will be surveyed for techniques and equipment used in exploiting narrow vein deposits. Discussions with mining engineers, the miners themselves and management, will focus on companies' mining methods and the reasons why they use them, problems that they have and solutions that they have developed internally.
- CANMET-MMSL is establishing a web site which will make available the results and ideas for new methods, mining sequences, mining equipment, non-explosive rock breaking and innovative systems. This web site will comprise a searchable database of current mining methods and equipment. Each mine visited by CANMET-MMSL will have its own page on this web site.
- CANMET-MMSL is organizing an international symposium on narrow-vein mining for October 2001 in Val d'Or, Quebec. This will provide a forum for mining companies, manufacturers and CANMET-MMSL personnel to discuss results from the project, and to exchange information on problems, developments and solutions in narrow-vein mining.



*Development of automatic scraper at  
CANMET-MMSL Experimental Mine*

## CONTACT US

**CANMET-MMSL's** goal is to help find sound, science-based solutions to operational challenges.

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