



CANMET MINING AND MINERAL SCIENCES LABORATORIES

THE CHALLENGE

Improving mining methods and productivity, minimizing costs associated with processing and environmental issues, enhancing workplace health and safety, finding solutions to mine waste disposal, complying with regulatory requirements. These are some of the challenges facing the Canadian mining and minerals industry.

NRCAN CAN HELP

CANMET-MMSL are federal government research laboratories within Natural Resources Canada. CANMET-MMSL conducts research on the economic, safe and environmentally responsible recovery and use of Canada's mineral and metal resources. CANMET-MMSL provides technical support to assist in government policy and regulatory initiatives. CANMET-MMSL has an international reputation for technical excellence in mining and metallurgical-processing research, augmented by recognized leadership in developing technical solutions that reduce the environmental liabilities facing the minerals industry.

CANMET-MMSL is proud to play a key role in fostering innovative technologies. One of our strengths is our ability to take an integrated approach to problems, combining expertise in two or more scientific disciplines in order to address a particular operational or environmental problem.

Whenever possible, CANMET-MMSL works in partnership with industry, provincial and territorial governments, universities and other research institutes. We perform R&D on contract with individual companies and organize consortia with multiple partners. Current activities are focussed in three principal directions to promote sustainable development:

- Finding technically-sound, cost-effective solutions to environmental problems
- Improving industry competitiveness through enhanced productivity
- Improving health and safety in the mining environment

OUR EXPERTISE

CANMET-MMSL has established teams of experts in the following fields:

- Mine automation and mechanization
- Mine air quality and ventilation
- Ground control
- Metallurgical processing
- Applied mineralogy
- Mining effluent technologies
- Mine waste management
- Metals behaviour in the environment
- Certified Reference Materials
- Proficiency testing of mineral analysis laboratories



FACILITIES

CANMET Mining and Mineral Sciences Laboratories have facilities in four locations:

- **The Booth Street Complex**, in Ottawa, Ontario, houses the metallurgical processing, mineralogy and environment groups as well as the analytical laboratories. An extensive array of equipment is in use including laboratory, mini-plant and pilot scale equipment. All the necessary support facilities for assaying and characterization are located here.
- **The Bells Corners Complex**, in Nepean, Ontario, is the location for the rock mechanics testing group. Our unique testing capabilities include a 18,000 kN Rock Mechanics Test System, the largest in Canada, equipped with a triaxial chamber capable of generating confining pressures of 40 MPa and accepting up to 25.4 cm diameter test specimens. The newly upgraded Diesel Engine Certification facilities, used to certify engines to CSA specifications, are also located here.
- **The Sudbury Laboratory**, Sudbury, Ontario, opened in 1994 in an industrial park in the heart of the Sudbury Basin's mining activity. It houses a center of expertise on mine ventilation automation research. The research program aims to control airborne diesel pollutants and other toxic substances, and includes the development of gas and particulate sampling and analysis technologies. This location also houses our facilities for engineered backfill systems and microseismic systems technologies.
- **The Experimental Mine** in Val d'Or, Quebec, was established by CANMET-MMSL in 1991 in response to a request by the Canadian mining industry for increased emphasis on applied research. The former Beacon gold mine is now open as an underground hard rock facility providing an industrial scale facility for underground testing and evaluation without disrupting production. With over 2,500 metres of drifts, raises, secondary openings, a shrinkage stope, an access ramp and five underground levels, the Experimental Mine offers a range of testing opportunities and services to the mining industry and equipment manufacturers. Experienced personnel, mining equipment and surface facilities assist companies, universities and colleges in conducting mining R&D projects, workshops, training and testing.

CANMET-MMSL is proud to have achieved ISO 9002 quality system registration in December 2000. The Analytical Services Group and the Canadian Certified Reference Materials Project of MMSL have been registered to ISO 9002 since March 1997.

CONTACT US

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

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