



# Minerals and Metals Sector *Update*

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## U.S. Department of Energy Presents Award of Excellence to CANMET-MTL Team

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The research contributions of the CANMET Materials Technology Laboratory (CANMET-MTL) to the five-year, \$10 million Structural Cast Magnesium Development (SCMD) project was recently acknowledged by the U.S. Department of Energy (USDOE). Joe Carpenter, Technology Manager, Office of Advanced Automotive Technologies, USDOE, expressed his deep satisfaction with the outcomes of the project at the final SCMD Review meeting in Southfield, Michigan. The project, which involved 34 participants from industry, academic institutions, and government research organizations, developed technologies and manufacturing processes that led to the redesign of an aluminum engine cradle into a magnesium engine cradle. The cradle met the required vehicle performance specifications with a 35% weight savings. Among other accomplishments, the CANMET-MTL team developed new techniques for determining bolt load retention and mitigation of corrosion issues, as well as new methods to evaluate magnesium castings and processes. A special certificate from the USDOE was also awarded to CANMET-MTL for its overall contribution to the success of the SCMD project.

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## CANMET-MMSL Scientist Elected as Chair of the IMA's Commission on Applied Mineralogy

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Dr. Dogan Paktunc of CANMET-MMSL was elected Chairman of the International Mineralogical Association's Commission on Applied Mineralogy. The International Mineralogical Association (IMA) was established in 1958 as a non-profit organization with the mission to further international cooperation in the mineralogical sciences and to promote wider awareness among international groups that it is the sole international organization promoting mineralogy.

The Commission on Applied Mineralogy is involved in a wide range of mineralogical practices of direct interest to governments, industry and academic science. Its goals are to arrange conferences,

symposia and short courses devoted to applied mineralogy, to serve as a liaison body to other organizations active in the field, and to encourage interaction between applied mineralogists.

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## Imperial Oil Extends Monitoring Contract With CANMET-MMSL

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CANMET-MMSL developed a methodology to detect well failures and fluid leakage using seismic monitoring techniques in collaboration with Imperial Oil Ltd. (IOL) scientists. The success of this methodology led the company to adopt seismic monitoring for the detection of such failures, promoting environmentally friendly extraction of oil. IOL has signed an amendment requesting a five-year extension to the monitoring contract with CANMET-MMSL, adding potential cost-recovery revenues of \$1.2 million to the \$1.5 million in revenues to date.

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## BRGM and the Université de Limoges in France Collaborate

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CANMET-MMSL has initiated a collaboration with the Bureau de Recherches Géologiques et Minières (BRGM) and the Université de Limoges in France. The purpose of this collaboration is to evaluate, at the watershed scale, the contribution of soils and sediments to water contamination in a gold mining basin characterized by naturally elevated arsenic concentrations. The goal of the study is to define the most important soil and sediment properties that affect the arsenic contamination of waters. These parameters could then be integrated into an evaluation grid to predict the quality of soils, similar to the "Système d'Évaluation de la Qualité des Eaux" already existing in France (SEQ-Eau, 2006).

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