SOCIETY NEWS

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Mineralogical Association of Canada

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ANNOUNCING THE MAC FOUNDATION SCHOLARSHIP WINNERS

For the first time this year, two MAC Foundation Scholarships were awarded, one to an MSc student and one to a PhD student. Congratulations to these exceptional students!



GUILLAUME LESAGE graduated from Laval University in 2008 with a BSc in geology. As part of his bachelor's degree, he did an undergraduate project in Tibet under the supervision of Dr. Réjean Hébert. There, he studied the geochemistry of Miocene intrusions in the Yarlung Zangbo suture zone. While studying at Laval University, he was president of the INRS-Laval SEG student chapter. After graduating, he worked as an exploration geologist in Timmins, Ontario, looking for nickel in the peridotites and komatiites of the Abitibi greenstone belt. Guillaume started his MSc at the

University of Alberta in the fall of 2008 under the supervision of Dr. Jeremy Richards. His research focuses on a gold deposit located near the Buriticá community, about 75 km northwest of Medellín (Colombia) and about 5 km west of the Romeral fault system. The objectives are to determine (1) the age of mineralization, its paragenesis, and the source and temperature of the mineralizing fluid; (2) the age and geochemistry of intrusive and volcanic rocks found within the study area; and (3) the age of potassic and phyllic alterations. The aim of this analytical work is to build a model explaining the formation of the Buriticá gold deposit. Required knowledge includes the age and geochemistry of the fresh rocks and the alterations associated with the mineralized veins; the source, salinity, pressure, and temperature of the mineralizing fluid; the paragenetic sequence in the veins; and the crosscutting relationships between lithologies. This study is important for understanding the metallogenic evolution leading to the formation of the Buriticá gold deposit. The results will be used to build a framework for mineral exploration applicable to the entire Romeral suture zone.



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KATIE SMART completed her BSc (honors) in geology at the University of Alberta in 2004, receiving the APEGGA Gold Medal in Geology and a Dean's Silver Medal in Science upon graduation. After taking some time off to travel, Katie worked in the oil and gas industry in Calgary until the summer of 2006. She then returned to the University of Alberta to begin an MSc project with

Drs. Tom Chacko and Larry Heaman on eclogite xenoliths from the Jericho kimberlite. In 2007, after a very successful mine visit and sample acquisition, Katie transferred into the PhD program. Katie's PhD research focuses on the petrological, geochemical, and isotopic characteristics of eclogite xenoliths from three kimberlites located in the northern Slave Craton, including a spectacular diamond-rich suite from the Jericho kimberlite. Eclogite xenoliths, commonly found in kimberlites worldwide and often a host of diamonds, provide information on the evolution of the mantle in which the diamonds resided before being entrained in kimberlite. To study the xenoliths, Katie uses novel in situ techniques to determine Sr and Pb isotope and trace element compositions, as well as conventional and laser-fluorination stable oxygen isotope analyses. Of particular importance to Katie's research, the suite of extremely diamond-rich eclogite xenoliths have geochemical and isotope compositions unlike those of any other diamondiferous eclogite suite worldwide. Katie recently published an article on the origin of these xenoliths and is currently working on why these unusual eclogites are so diamond rich and on how the diamonds formed. To address these problems, she will investigate the content and aggregation state of nitrogen impurities in the diamonds, as well as the carbon isotope composition.

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