

**Sedimentary-Hosted Stratiform Copper and Related Mineralization – SEG**  
**Sponsored Short Course**

**MINISTRANTE:** Alexander C. Brown – Ecole Polytechnique de Montreal, Canadá

**IDIOMA:** Inglês

**DATA:** 24 e 25 de maio de 2012

**LOCAL:** Parque Metalúrgico de Ouro Preto, MG

**CARGA HORÁRIA:** 16 horas (2 dias)

**NÚMERO DE VAGAS:** 25

**Conteúdo:** The short course is based on the belief that, to find such ores, it is vital to understand where and why they occur. If one wants to find elephants, then go to those special environments where elephants live and understand why elephants live there. To know where SSCs or related ore-types occur, one needs to know what they look like and what special conditions are needed to form such ores. The more we understand environments hosting SSCs, the better our chances of locating new deposits. The principal topics to be discussed are: 1) Economic importance of sediment-hosted stratiform copper deposits; 2) Deposit-scale characteristics; 3) Basin-scale characteristics; 4) Early and modern genetic explanations: depositional models (early diagenetic overprinting), low-temperature transport of copper, sources of copper; 5) Basin-scale models (current concepts): early-diagenetic interpretations, late-diagenetic/orogenic interpretations, 6) Metalotects for SSCs: intracontinental rifts, post-2.4 Ga in age, low paleolatitudes, coastal marine (or lacustrine) sediments (carbonaceous shallow-water carbonates, black shales-siltstones-sandstone). Related deposit types: 1) Volcanic-affiliated redbed-type copper (prior and new interpretations); 2) Redbed-type copper; 3) Sandstone lead-zinc; 4) Sandstone U-V; 5) MVT lead-zinc; 6) Sediment-hosted IOGCs.

**Perfil do Ministrante:** Alex Brown obtained his B.Sc. degree in Geology from the Univ. of Western Ontario (1962), and his M.S. and Ph.D. degrees from the University of Michigan (1965, 1968). He was awarded a NATO-National Research Council of Canada Post-doctoral Fellowship to study with Professor Paul Bartholomé at the University of Liège, Belgium (1968-1970). During his graduate and post-doctoral research, he was privileged to be involved in defining new diagenetic models for sediment-hosted stratiform copper (SSC) deposits. From 1970 until retirement in 2004, Alex was a professor at l'École Polytechnique de Montréal (Université de Montréal) where he taught and supervised research in Ore Deposits Geology-Metallogeny, with graduate students studying SEDEX, MVT, VMS, Archean Gold, and SSC-type mineralization. He was an adjunct professor at INRS-Géoresources, Université de Québec; and at the Carleton Univ.-Univ. of Ottawa, Centre for Graduate Studies, Derry-Rust Research Lab. In the 1980-90s, he was the Principal Investigator for a team of researchers who collaborated with mining companies exploring for deep-seated VMS deposits in the prolific Abitibi mining camp of Canada, employing new metallogenic concepts and deep seismic reflection methods. In 1986, he co-hosted a symposium on SSC-type

mineralization for the Geological Assoc. of Canada, resulting in a co-edited symposium volume (GAC Special Paper 36). During his academic years, Alex conducted research on SSCs during sabbatical leaves at the Geological Survey of Canada, Ottawa; University of Wales, Cardiff; CRPG, Nancy, France; University of California-Riverside; Dalhousie University, Halifax; and the Colorado School of Mines, Golden. His career awards include Gold Medal, Univ. of Western Ontario; Lindgren Award, Soc. of Economic Geologists; and Derry Award, Geological Assoc. of Canada. Since retirement, Alex has expanded on genetic models for SSC-type mineralization, contributing a number of scientific communications and oral presentations (2005-2012) to explain geochemical and geological constraints on conditions suitable for the formation of SSC deposits. His analyses suggest that low-temperature diagenetic SSC deposits result from the leaching of footwall rocks by evolved topography-driven meteoric water. He is currently preparing a chapter on SSCs for an Elsevier Treatise on the Geochemistry of Ore Deposits. He also consults intermittently for major and junior mining-and-exploration companies exploring for SSC-type mineralization.