Tuesday, August 6, 2013
POSTER SESSION: CASE STUDY OF THE SUDBURY STRUCTURE I
4:00 p.m. Alumni Hall

Lenauer I. Riller U.
Importance of Trishear Deformation for Mineral Exploration in the Southern Sudbury Basin, Ontario, Canada **[#3081]**
Post-impact deformation has changed the shape of the southern Sudbury Basin, marked by steeply dipping to overturned layer contacts in the Sudbury Igneous Complex. We discuss trishear deformation as a potential mechanism.

Salge T. Hecht L. Hansen B. Patzschke M.
Classification of Sulfides, Arsenides and Tellurides from the Sudbury Igneous Complex (SIC) Using Feature Analysis and Spectrum Imaging with Advanced EDS **[#3106]**
Developments in energy dispersive X-ray spectrometry offer advanced element analysis at high spatial resolution. Technological advances are demonstrated in representative samples for quantitative mineralogy and ore characterization.

Naumov M. V.
Sulfides in Impact Craters **[#3010]**
Data on sulfide mineralization in impact craters are generalized to show principal features of distribution and composition of sulfides within impact structures and to simulate impact-derived processes leading to the sulfide concentration.

Marion C. L. Osinski G. R. Grieve R. A. F. Bailey J. Péntek A. Smith D. Clayton J.
Mapping Sudbury Breccia in the North Range of the Sudbury Impact Structure, Canada **[#3093]**
Systematic mapping of the extent of Sudbury breccia in the North Range Footwall in collaboration with Wallbridge Mining Company Ltd. Preliminary results from small-scale mapping in summer 2012.

Osinski G. R. Ferrière L. Kring D. A. Anders D. Armstrong K. Baker D. Bamberg M. Beddingfield C. Gaither T. Harrison T. Huber M. S. Hurwitz D. Jaret S. Kramer G. Kuriyama Y. Lucas M. Marion C. L. Mercer C. Mount C. Neish C. Nuhn A. Ostrach L. Pickersgill A. Pilles E. Potter R. W. K. Ryan A. Sharp M. Swartz N. Thomson O. Veto M. Wielicki M. M. Wright S. Zanetti M.
Revisiting the Distribution and Properties of Shatter Cones at the Sudbury Impact Structure, Canada **[#3061]**
Here, we present the first results of a new multi-year research program that aims to systematically map the distribution of shatter cones and their physical properties around the Sudbury structure.

Hurwitz D. M. Zanetti M. Lucas M. P. Anders D. Kramer G. Thomson O. Kring D. A. Osinski G. R.
A Nested or Composite Shatter Cone Structure in the South Range of Sudbury **[#3111]**
In a recent survey of Sudbury shatter cones, we identified an outcrop of stacked, curvilinear foliations with well-developed, nested shatter cones that trend toward the apex of the foliations. We interpret this structure as a composite cone.

Anderson J. L. B. Beatty W. L. Kairies Beatty C. L.
Microstratigraphy of two Outcrops Within the Sudbury Impact Layer in Northern Minnesota **[#3034]**
The Sudbury Impact Layer (SIL) preserves ejecta deposited during the Sudbury impact. Two SIL outcrops in northern Minnesota were studied to create detailed micro-stratigraphic cross-sections. Implications for ejecta emplacement are discussed.

Fedorowich J. S. O'Connor C.
Modelling Cu-Ni-PGE Vein Arrays Within an Offset Dyke Environment of the Sudbury Igneous Complex **[#3094]**
Arrays of Cu-Ni-PGE veins are found in Offset Dykes and within the Footwall to the Sudbury Igneous Complex, and represent an important resource for mining over the last century. UDEC mechanical-hydraulic simulations of vein patterns are presented.

Beswick A. E.
SiO_2/Al_2O_3 Variations and Cross-Cutting Relationships in the Sudbury Igneous Complex: Evidence for Mixing of Multiple Endogenic Magmas **[#3016]**
Log Al_2O_3/Zr vs. log SiO_2/Zr diagrams demonstrate granophyres and norites of SIC have separate fractionation trends and transitional quartz gabbros lie along hybridization lines. This and cross-cutting relations indicate multiple magmas involved.