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Nota di contenuto	Cover; Title Page; Copyright Page; Dedication; Contents; Preface; Acknowledgments; Chapter 1 - Sudbury - an introduction to the ore deposits and the impact structure; Introduction to Sudbury; History of discovery and production at Sudbury; Position of the Sudbury Camp as a future producer of nickel; The geology of Sudbury in a nutshell; Terminology used to describe the geology of the Sudbury structure; The Igneous Rocks; The Target Country Rocks; Sudbury geology at the center of important Earth Science debates; Fundamental igneous petrology; Origin of the ore deposits The catastrophe that created the Sudbury rocksThe deep structure and deformation history of the SIC; Attempts to reconcile impact models with igneous processes; The impact process and the formation of the sulfide ores; Where do all the metals and sulfur in the ores come from?; Magmatic nickel sulfides - an introduction and overview; Process controls in the formation of magmatic sulfide ore deposits; Melting of the mantle; Migration of the magmas through the crust, and magmatic differentiation; Triggers to sulfur saturation of mafic magmas The Importance of gravity-assisted settling of dense magmatic sulfide, and pathways through the crustControls on the composition of sulfide magmas; Sulfide localization and concentration mechanisms in "container rocks"; Sulfide differentiation; Post magmatic deformation, metamorphism, and hydrothermal modification of sulfide mineralization; Evidence for impact origin of Sudbury; Compelling

evidence for an impact event; Supporting evidence for an impact event;  
Some features not resolved by the Sudbury Impact Model; Synthesis of  
the approach used in this book

Appendix 1.1 Synthesis of Sudbury BibliographyChapter 2 - A Synthesis  
of the Geology of the Sudbury Structure; Introduction; An Impact Event  
at the Southern Margin of the Superior Province Craton; An overview of  
the Regional Geological Setting of the Sudbury Structure; Geology of  
the Sudbury Structure; The target country rocks; Archean granitoid  
rocks and gneisses of the Superior Province; Huronian Supergroup  
metavolcanic and metasedimentary rocks; Mafic and ultramafic  
intrusive rocks in the Sudbury Region; Early Proterozoic East Bull Lake  
Type Intrusions; The Nipissing Diabase  
Sudbury Gabbro IntrusionsFelsic Intrusive Rocks in the Sudbury Region;  
Geology of the SIC; The Main Mass; The Geology of the North and East  
Range of the Main Mass; The Geology of the South Range of the Main  
Mass; Felsic Enclaves within the Norite Stratigraphy of the Main Mass in  
the South Range; Synthesis of the Geology of the Main Mass; The Offset  
Dykes; The Radial Offset Dykes; The Concentric Offset Dykes; The  
Discontinuous Segmented Offset Dykes; Comparative Geology of the  
Offset Dykes; The Contact of the Offset Dykes with the Country Rocks;  
Thickness and Continuity of the Offset Dykes  
Branching of the Offset Dykes

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